

**AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009**

**ENVIRONMENTAL PROTECTION AGENCY RECOVERY ACT PROGRAM PLAN:  
DERA PROGRAM  
MAY 15, 2009**

**a) Funding Table by program, project, and activity categories:**

| <b>EPA Program-Specific Recovery Act Plan<br/>Diesel Emissions Grants (DERA)</b> |                           |                         |  |                            |
|--|---------------------------|-------------------------|--|----------------------------|
| <b>Treasury Symbol</b>   | <b>Appropriations</b>     | <b>Program</b>          | <b>Sub-program</b>                                       | <b>Total Appropriation</b> |
| 689/00102  | STAG - Recovery Act       | DIESEL EMISSIONS GRANTS | Recovery Act: Clean Diesel Emerging Technologies Program | \$20,000,000               |
|  |                           |                         | Recovery Act: Clean Diesel Innovative Financing          | \$30,000,000               |
|  |                           |                         | Recovery Act: Clean Diesel National Program              | \$155,770,000              |
|  |                           |                         | Recovery Act: Clean Diesel State Grant & Loan Program    | \$88,230,000               |
| 689/10108  | EPM (M&O) -- Recovery Act | DIESEL EMISSIONS GRANTS | Recovery Act: EPA (Headquarters & Regions)               | \$6,000,000                |
| <b>Total</b>   |                           |                         |  | <b>\$300,000,000</b>       |

Note: \$3,000,000 (one half of the Management and Oversight funds) were not made immediately available for obligation but held in reserve for future years. Thus, the current total funds available for obligation in EPA's financial system is \$297,000,000.

## **b) Objectives:**

The objective of the program is to reduce diesel emissions while using American Recovery and Reinvestment Act (Recovery Act) funding to maximize job preservation and/or creation and economic recovery through a variety of diesel emission reduction strategies.

Diesel engines power the movement of goods across the nation, help construct the buildings in which we live and work, help build the roads on which we travel, and carry millions of children to school each day. While diesel engines provide mobility and are critical to the nation's economy, exhaust from diesel engines contains pollutants that negatively impact human health and the environment. More than 11 million diesel engines in operation today do not meet EPA's new clean diesel standards, yet these engines have an average lifetime of 20 to 30 years. Diesel engines emit large amounts of nitrogen oxides, particulate matter and air toxics, which contribute to serious public health problems, including asthma, lung cancer and various other cardiac and respiratory diseases. These problems result in thousands of premature deaths, millions of lost work days, and numerous other negative health and economic outcomes every year.

To meet the challenge of reducing exhaust from diesel engines, EPA established the National Clean Diesel Campaign (NCDC). The NCDC's goal is to accelerate emission reductions from older diesel engines to provide more immediate air quality benefits and improve public health. EPA will use Recovery Act funding to support the goals of the Recovery Act and NCDC.

**Recovery Act Funding Priorities:** A principal goal and priority of the assistance under this opportunity is to promote job creation and/or preservation and economic recovery.

Recipients will demonstrate in their applications how the proposed project:

- a.** Preserves and/or creates jobs and promotes economic recovery;
- b.** Maximizes job creation and economic benefit;
- c.** Assists those most impacted by the current economic conditions;
- d.** Provides investments needed to increase economic efficiency by spurring technological advances in science and health;
- e.** Invests in transportation, environmental protection and other activities that will provide long-term economic benefits;
- f.** Will be commenced as quickly as possible consistent with prudent management;
- g.** Tracks, measures, and reports on the recipient's progress towards achieving the Recovery Act priorities.

**National Programmatic Priorities:** The national programmatic priorities apply to all new NCDC projects across the country. In addition to the Recovery Act priorities, a principal objective of this program is to achieve significant reductions in diesel emissions in terms of tons of pollution produced and reductions in diesel emissions exposure, particularly from vehicles, engines and equipment operating in areas designated by the Administrator as poor air quality areas. Funded projects will:

- a.** Maximize public health benefits;
- b.** Be the most cost-effective;

- c. Be in areas with high population density, that are poor air quality areas (including nonattainment or maintenance of national ambient air quality standards for a criteria pollutant; Federal Class I areas, or areas with toxic air pollutant concerns);
- d. Be in areas that receive a disproportionate quantity of air pollution from diesel fleets, including truck stops, ports, rail yards, terminals, and distribution centers or that use a community-based multi-stakeholder collaborative process to reduce toxic emissions;
- e. Maximize the useful life of any certified engine configuration or verified technology used;
- f. Conserve diesel fuel; and
- g. Utilize ultra low sulfur diesel fuel (15 parts per million of sulfur content) ahead of EPA's mandate (for non-road projects).

### **Benefits of the National Clean Diesel Campaign**

Public health benefits are immediate when emissions control strategies are applied to older diesel engines. Diesel retrofit technologies reduce pollution from the existing diesel engine fleet by up to 90% for particulate matter (PM), up to 50% for nitrogen oxides (NOx), and up to 90% for volatile organic compounds. New on-highway heavy-duty vehicles are up to sixty times cleaner than those manufactured prior to 1990.

In 2008 with an appropriation of nearly \$50 million, DERA's first year of operation, lifetime air quality benefits were estimated for four criteria pollutants and also for CO<sub>2</sub>. Over the lifetime of these grants, approximately 46,000 tons of NOx and 2,200 tons of PM will be reduced. These emission reductions translate into a significant public health benefit of approximately \$580 million to \$1.4 billion in quantifiable PM-related health benefits.<sup>1</sup> Given these estimated benefits, Recovery Act funding is likely to lead to reductions of hundreds of thousands of tons of pollution resulting in billions of dollars in health benefits. In addition, Recovery Act funding for DERA will also create jobs and promote economic recovery.

**Linkage to EPA Strategic Plan:** Funded projects must support Goal 1 of EPA's 2006-2011 Strategic Plan, Clean Air and Global Climate Change; Objective 1.1: Healthier Outdoor Air, which states, "Through 2011...[EPA will]...protect human health and the environment by attaining and maintaining health-based air-quality standards and reducing the risk from toxic air pollutants." Projects funded under the DERA program must reduce emissions from diesel fleets, thereby reducing local and regional air pollution.

### **c) Activities:**

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<sup>1</sup> The monetized health benefits estimations are in 2006 dollars with an assumption of a 3 percent discount rate throughout the lifetime of the program. They were estimated using PM<sub>2.5</sub>-related benefit-per-ton (BPT) estimates. The BPT estimates are based on a suite of peer-reviewed studies on the relationship between PM<sub>2.5</sub> and health impacts (including both mortality and morbidity endpoints), which are then monetized based on unit values derived from the valuation literature. It should be noted that two different BPT estimates were used to reflect different assumptions about the relationship between PM<sub>2.5</sub> and premature mortality: the lower bound estimate is based on the American Cancer Society Cohort study (Pope et al., 2002) and the Six-Cities study (Laden et al., 2006).

The NCDC program is authorized by the Diesel Emissions Reduction Program in the Energy Policy Act of 2005, or “DERA.” DERA directs EPA to implement the program through two different components: a National competition and a State allocation program. The National Program, with 70 percent of the funding available, consists of three separate competitions: 1) the National Clean Diesel Funding Assistance Program [\$156M]; 2) the National Clean Diesel Emerging Technologies Program [\$20M]; and 3) the SmartWay Clean Diesel Finance Program [\$30M]. The State Clean Diesel Grant Program utilizes the remaining 30 percent of the funding [\$88M]. Finally, the Recovery Act allows EPA to allocate up to \$6 million to support various administrative activities, such as personnel costs.

EPA will award grants to address the emissions of in-use diesel engines by promoting a variety of cost-effective emission reduction strategies, including switching to cleaner fuels, retrofitting, repowering and/or replacing eligible vehicles and equipment, and idle reduction strategies. EPA will continue to work with a broad group of partners, including State and local governments, transportation officials, engine manufacturers, emission technology vendors, fuel suppliers, private fleet owners and environmental groups, to accomplish this goal. Grant awards will be evaluated against Recovery Act Funding Priorities and National Programmatic Priorities.

**d) Characteristics:**

| <b>Type of Financial Award</b>  | <b>Type of Recipient/Beneficiary</b>  | <b>Estimated Dollar Amount</b> | <b>Methodology for Award Selection</b>                |
|---|---|--------------------------------|---|
| Formula Grant<br>(State Clean Diesel Grant Program)                             | States and the District of Columbia   | \$88.2 M                       | Non-competitive allocation grants                     |
| Competitive Grant Program<br>(National Clean Diesel Funding Assistance Program) | State<br>Local<br>Private Non-Profit<br>Public Non-Profit<br>Federally Recognized Indian Tribal<br>Native American Organization (Regional, local, State, port and Tribal agencies and certain nonprofit organizations*) | \$155.8 M                      | Competition through a 40-day Request for Applications |
| Competitive Grant Program<br>(SmartWay Clean Diesel Finance Program)            | State<br>Local<br>Private Non-Profit<br>Public Non-Profit<br>Federally Recognized Indian Tribal<br>Native American Organization (Regional, local, State, port and Tribal agencies and certain                           | \$30 M                         | Competition through a 40-day Request for Applications |

|   |  |        |   |
|---|--|--------|---|
|   | nonprofit organizations*)  |        |   |
| Competitive Grant Program<br>(Emerging Technologies Clean Diesel Program) | State<br>Local<br>Private Non-Profit<br>Public Non-Profit<br>Federally Recognized Indian Tribal<br>Native American Organization<br>(Regional, local, State, port and Tribal agencies and certain nonprofit organizations*) | \$20 M | Competition through a 47-day Request for Applications |

Note: EPA’s Recovery Act DERA program can expend up to 2%, or \$6 million, on administrative costs.

\* The DERA legislation has a specific definition of eligible entities.

**e) Delivery Schedule:**

Timeline of Major Milestones:

**State Clean Diesel Grant Program**

State Program *Notice of Intent to Apply* sent out: February 26, 2009  
 State Program Grant Work Plans and grant documents due to EPA: March 20, 2009  
 State Program Grants awarded: By April 17, 2009  
 State Grant Project Period: April, 2009 – September 30, 2010  
 Wrap-up and Close-out: October 1, 2010 – December 31, 2010

**National Clean Diesel Funding Assistance Program**

RFA posted: March 19, 2009  
 RFA closed: April 28, 2009  
 Award: June, 2009  
 Project Period: June, 2009 – September, 2010  
 Wrap-up and Close-out: October 1, 2010 – December 31, 2010

**SmartWay Clean Diesel Finance Program**

RFA posted: March 19, 2009  
 RFA closed: April 28, 2009  
 Award: June, 2009  
 Project Period: June, 2009 – September, 2011  
 Wrap-up and Close-out: October 1, 2010 – December 31, 2011

**Emerging Technologies Clean Diesel Program**

RFA posted: March 19, 2009

RFA closed: May 5, 2009

Award: June, 2009

Project Period: June, 2009 – September, 2010

Wrap-up and Close-out: October 1, 2010 – December 31, 2010

**f) Environmental Review:**

In accordance with the U.S. Environmental Protection Agency’s (EPA) procedures for implementing the National Environmental Policy Act (NEPA) (40 CFR Part 6), EPA has completed an environmental review of the DERA program.

The Finding of No Significant Impact (FONSI) document was posted on EPA’s Web site on March 23, 2009, along with the Preliminary Environmental Assessment. The environmental review process, which is documented by the Preliminary Environmental Assessment, indicates that no potential significant adverse environmental impacts are anticipated from the proposed action. A 30-day public comment period ended April 22, 2009. As there were no significant comments from the public by that date, the FONSI is final.

**g) Performance Measures and Accountability:**

The DERA Program will be using the following measures to quantify program performance:

|   |  |
|---|--|
| 1 | Number of Recovery Act projects <sup>2</sup> implemented that promote diesel emissions reductions  |
| 2 | Amount (in dollars and %) of EPA Recovery Act funds drawn on each clean diesel award   |
| 3 | Status of requests for applications, procurements, bids, loans, subgrants, contract or subcontracts as applicable for each Recovery Act award                |
| 4 | Number of existing heavy duty diesel engines (including school bus engines) that have been retrofitted, replaced or retired under Recovery Act DERA projects |
| 5 | Lifetime reductions of NO <sub>x</sub> , PM, HC, CO, CO <sub>2</sub> -equivalents (by pollutant) from the Recovery Act DERA projects                         |

Emissions reduction estimates will be calculated when the grants are awarded. Upon completion of the work, final emissions reductions will be calculated based upon the Final Technical Report submitted by the grantee (approximately 18 months after the grants are awarded). EPA estimates emissions reductions by using the program’s Diesel Emission Quantifier. The web-based Quantifier is also used by grantees and applicants to calculate preliminary emissions benefits.

<sup>2</sup> A “project” is defined as single grant or cooperative agreement.

To report on interim progress, grantees are required to report, on a quarterly basis, progress on activities such as number of contracts awarded, number of engines retrofitted or replaced by sector<sup>3</sup> (e.g. school buses, rail, or ports), the technology used for the retrofit and amount of EPA funds expended. Progress on these activities will ultimately lead to the installation of diesel engine retrofit technology which will then result in reduced emissions from diesel engines as well as job creation/retention. EPA grant recipients will report on the number of jobs created and/or retained, by full-time equivalencies, according to the latest OMB guidance provided for such reporting. EPA will track the implementation of these projects in the NCDC Database and on the recovery.gov website.

In addition, EPA evaluates diesel emission reduction technologies through its Verified Technology Program. The purpose of this program is to evaluate the emission reduction capabilities of a given technology and publicize those findings to fleet managers and other stakeholders. Through this process, EPA helps to instill confidence in our stakeholder community that the verified emission reductions will be achieved. The verification process includes a thorough technical review of the technology as well as tightly controlled testing to quantify emission reductions. EPA also evaluates technologies in the field through its Technology In-Use Testing Program.

#### **h) Monitoring/Evaluation:**

Overall, the DERA program will adhere to the Agency's Stewardship plan. EPA will be using a combination of quarterly reporting from grantees and on-site and off-site monitoring by EPA Project Officers and auditors to evaluate the progress of each Recovery Act DERA grant. Information will be gathered from grantees on a quarterly basis, including progress on grant milestones. In order to measure progress, the EPA Project Officers will compare the grant work plan to the quarterly reports to make sure the project's milestones and activities are being completed on time.

EPA is using a nationally coordinated effort for the overall management of the DERA grants. The Office of Air and Radiation (OAR) staff located in both Headquarters and the Regions will be providing overall grants management guidance as well as the programmatic expertise in reviewing and recommending the DERA grant awards and managing and monitoring the individual grants. The DERA project officers will interact with grant recipients on a regular basis monitoring the progress of grants and resolving programmatic issues that arise. The OAR team will work in conjunction with the Office of Grants and Debarment and their Headquarter and Regional counterparts as the grants work their way through the administrative process to be awarded. The monitoring and management of these grants will be undertaken by both program and administrative staff. The Agency has established a Steering Committee to oversee the implementation of the Recovery Act.

Problems encountered will be recognized and resolved as the project period progresses.

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<sup>3</sup> Sector information is reported by grantees through their initial application for funds, quarterly reports and a final report. EPA tracks the sector information in a database.

- The Project Officers will identify issues through monitoring quarterly progress reports against the work plan and reviewing the resources drawn downs.
- If problems are identified a corrective action plan will be developed by the Project Officer in conjunction with the Agency’s Office of General Counsel and Office of Grants and Debarment to get the project back on track. The Project Officer will actively monitor actions by the recipient to ensure the recommendations/findings in the corrective action plan are resolved.

EPA’s on-site and off-site grant monitoring program will be a key component of its on-going evaluation of grants.

- The Project Officers will be required to conduct the following reviews to evaluate the grant: monthly resource utilization, quarterly reports, and baseline monitoring. In some cases, the project officers will have to conduct on-site monitoring to ensure the grantees have the appropriate documentation to justify draw downs and are adhering to administrative policies.

**i) Transparency:**

The DERA Program is positioned to provide information on clean diesel projects funded through the Recovery Act. EPA will track specific outputs and outcomes as described in Section (g) above and can provide that information on a quarterly basis once the recipients begin reporting progress/accomplishments to EPA.

| <b>Recipient Level</b>         | <b>Amount of Funding</b> | <b>Performance Measure</b>  |
|--------------------------------|--------------------------|---|
| State Program: States and D.C. | \$88.2 million           | Number of projects, number of engines by sector, number of technologies applied, emission reductions achieved |
| National Program*              | \$155.8 million          | Number of projects, number of engines by sector, number of technologies applied, emission reductions achieved |
| SmartWay Finance Program*      | \$30 million             | Number of projects, number of engines by sector, number of technologies applied, emission reductions achieved |
| Emerging Technology Program*   | \$20 million             | Number of projects, number of engines by sector, number of technologies applied, emission reductions achieved |

\* Eligible recipients include regional, local, State, port and Tribal agencies and certain nonprofit organizations (transportation-related).

“Projects” are defined as a single grant or cooperative agreement.

“Sector” is a descriptive category of diesel vehicles or equipment, such as “school buses,” “rail” or “ports.”



Recipients will report the number of engines by sector and number of technologies applied for their grant projects. EPA will calculate lifetime emissions reductions benefits by pollutant (Particulate Matter [PM], Oxides of Nitrogen [NOx], Hydrocarbons [HC], Carbon Monoxide [CO] and Carbon Dioxide [CO<sub>2</sub>] -equivalents) based on this reported information.

**j) Accountability:**

The Recovery Act DERA program will ensure that the expenditure and monitoring of Recovery Act funds is transparent and that appropriate, qualified and trained staff are overseeing the Recovery Act resources. Working within established Agency and Recovery Act guidelines, the Recovery Act DERA program will ensure that it monitors and reports its resource utilization and project progress in an effective and timely manner. EPA senior managers will have timely and regular meetings to assess progress of implementation and resolution of any issues related to Recovery Act funded projects.

In compliance with the Federal Managers' Financial Integrity Act (FMFIA) EPA's ongoing management integrity program requires us to develop a multiyear program review strategy, conduct systematic and rigorous assessments of internal controls over our programmatic and financial operations, and report on the effectiveness of those controls in our annual letter of assurance to the Administrator. For FY 2009, we will be addressing the integrity of Recovery Act programs and including an additional assurance statement regarding ARRA funds and activities as part of our annual assurance letter to the Administrator.

Oversight function by EPA's Office of Air and Radiation (OAR) Senior Resource Official, Office of Program Management and Operations and Office of Transportation Air Quality will consist of the following components in an effort to provide proper oversight and management of the DERA grants:

- Provide a "tool kit" to serve as a reference guide for grants management of the ARRA projects to the Project Officers. Information provided in this "tool kit" will contain step-by-step guidance detailing the responsibilities in performing effective grants management for ARRA grants. An example of information contained in the "tool kit" will be checklists that project officers will need to complete to ensure they have the proper information such as quarterly reports, reviewing drawn downs contained in a grants file. The information will consist of pre-award and post-award information..
- Compete all the resources as required by the DERA statute, OMB guidance and Recovery Act guidance and collaborate with the Office of Grants and Debarment and Office of General Counsel as needed.
- Ensure that programmatic baseline monitoring by Project Officers (POs) will be performed on all Recovery Act grants. Programmatic baseline monitoring is a series of questions that includes recipient compliance with terms and conditions, submitting timely progress reports and changes to the budget. EPA Order 5700.6A contains the policy

regarding baseline monitoring. Depending on the length of grant, baseline monitoring must be conducted within 6 to 12 months of award and then annually. OAR Project Officers will be performing advanced monitoring review of Recovery Act grants in accordance with Agency policies as well as OMB guidance and Recovery Act.

- Monitor resource utilization on the Agency financial systems and review quarterly progress reports to ensure they are in line with the work plan and budget.

The Agency will follow EPA Order 5700.5A1 “Policy for Competition of Assistance Agreements” which provides the procedures to follow should an unsuccessful applicant file a dispute to the Agency.

Should an awardee misspend their award, the Project Officer will notify the Grants Management Office Awarding Official who will then coordinate with the Office of General Counsel to determine the appropriate steps to remedy the situation using the following options:

- Impose special conditions on the award
- Issue stop work orders
- Withhold payment of funds
- Terminate award
- Initiate an investigation to determine if further action is necessary

Finally, if all administrative remedies are exhausted, the EPA Debarment Official may suspend and/or debar any person or organization from participation in all EPA assisted activities for a specified period of time.

#### **k) Barriers to Effective Implementation:**

The Recovery Act DERA program has identified several challenges. Our immediate concern is the learning curve of new grantees. It is expected that a significant portion of grants will be awarded to grantees which have never received an EPA award, or perhaps any other federal assistance. While this development is in line with the goals of the Recovery Act, these grantees will have to be assisted and monitored closely to ensure efficient project management.

Another concern is the accurate reporting of job creation and/or preservation information by grantees and subgrantees/subcontractees. However, when OMB Guidance is final on how this metric is to be calculated, this challenge will be addressed through targeted training to staff and Recovery Act recipients to ensure accurate recipient and subcontract/subgrant reports.

#### **l) Federal Infrastructure Investments:**

DERA projects are generally not infrastructure investments.