• Included in the Energy Policy Act of 2005
• Funds appropriated every year since 2008
• Reauthorized in 2011
• Authorizes up to $100 million per year to replace and upgrade heavy duty diesel equipment, e.g.:
  • Vehicle Replacements
  • Repowers (replacements of engine only)
  • Retrofits (after-treatment devices to reduce tailpipe emissions)
  • Anti-idling technology
  • Engine Upgrades
  • Clean Fuels (NO stand alone)
  • Aerodynamic/Low Rolling Resistance technology
• On-road, non-road, marine, locomotive
2009-2013, including ARRA

Highlights from the Diesel Emission Reduction Program

- Reduced 335,200 tons of NOx
- Reduced 14,700 tons of PM
- Saved 450 million gallons of fuel
- Prevented 4.8 million tons of CO2 emissions – equivalent to the annual CO2 emissions from more than 900,000 cars
- Clean diesel funding generates up to $13 of public health benefit for every $1 spent on diesel projects

https://www.epa.gov/cleandiesel/reports-congress
HEAVY POLLUTING DIESEL ENGINE TURNOVER BY YEAR IN THE U.S.
DIESEL AND HEALTH

Pollutants:
• Particulate Matter
• Ozone Precursors
• Carbon Monoxide

Health Impacts Include:
• Heart Disease
• Lung Disease (e.g. Asthma)
• Probable Carcinogen
DERA Funding Has Provided a Broad Range of Benefits

Since 2009, the DERA program has achieved impressive outcomes and a range of benefits, summarized in Exhibit 1. See Exhibit 4 for cumulative impacts.

**Exhibit 1**: DERA Program Benefits and Accomplishments (FYs 2009-2013)

<table>
<thead>
<tr>
<th>Investment of DERA Program</th>
<th>Emission and Fuel Reductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>$520 million funds awarded</td>
<td>312,500 tons of NO&lt;sub&gt;x&lt;/sub&gt;</td>
</tr>
<tr>
<td>58,800 engines retrofitted or replaced</td>
<td>12,000 tons of PM</td>
</tr>
<tr>
<td>Up to $11 billion in monetized health benefits</td>
<td>18,900 tons of hydrocarbon</td>
</tr>
<tr>
<td>Up to 1,700 fewer premature deaths</td>
<td>58,700 tons of carbon monoxide</td>
</tr>
<tr>
<td>81% of projects targeted to areas with air quality challenges</td>
<td>4,836,100 tons of carbon dioxide</td>
</tr>
<tr>
<td>3:1 leveraging of funds from non-federal sources</td>
<td>431 million gallons of fuel</td>
</tr>
</tbody>
</table>
NATIONAL DERA FUNDED SECTORS 2009-2013 (INCLUDES ARRA)
NATIONAL DERA PROJECTS 2008-2013
**MID ATLANTIC DERA PROJECTS 2008-2015**

<table>
<thead>
<tr>
<th>Total pieces</th>
<th># Grants</th>
<th>NOx Lifetime (tons)</th>
<th>PM lifetime (tons)</th>
<th>CO lifetime (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,090</td>
<td>85</td>
<td>30,334</td>
<td>1,530</td>
<td>5,813</td>
</tr>
</tbody>
</table>

Between 2008 and 2015, Region 3 awarded approximately $64 million in DERA grants.
MWCOG AMTRAK SWITCHER LOCOMOTIVE - CIRCA 1970
MWCOG AMTRAK SWITCHER LOCOMOTIVE-
REPOWERED
FUTURE OF DERA

Reauthorization currently in Environment and Public Works Committee

- Legislation introduced 4/19 in EPW Committee to Reauthorize thru 2021
- Virtually identical language
- $100 million authorization level

Bipartisan support

Don’t anticipate major changes to future RFPs or programs in near future