

Diesel Emissions Reduction Act (DERA) Program in SC: Reducing the Impact of Nonroad Emissions



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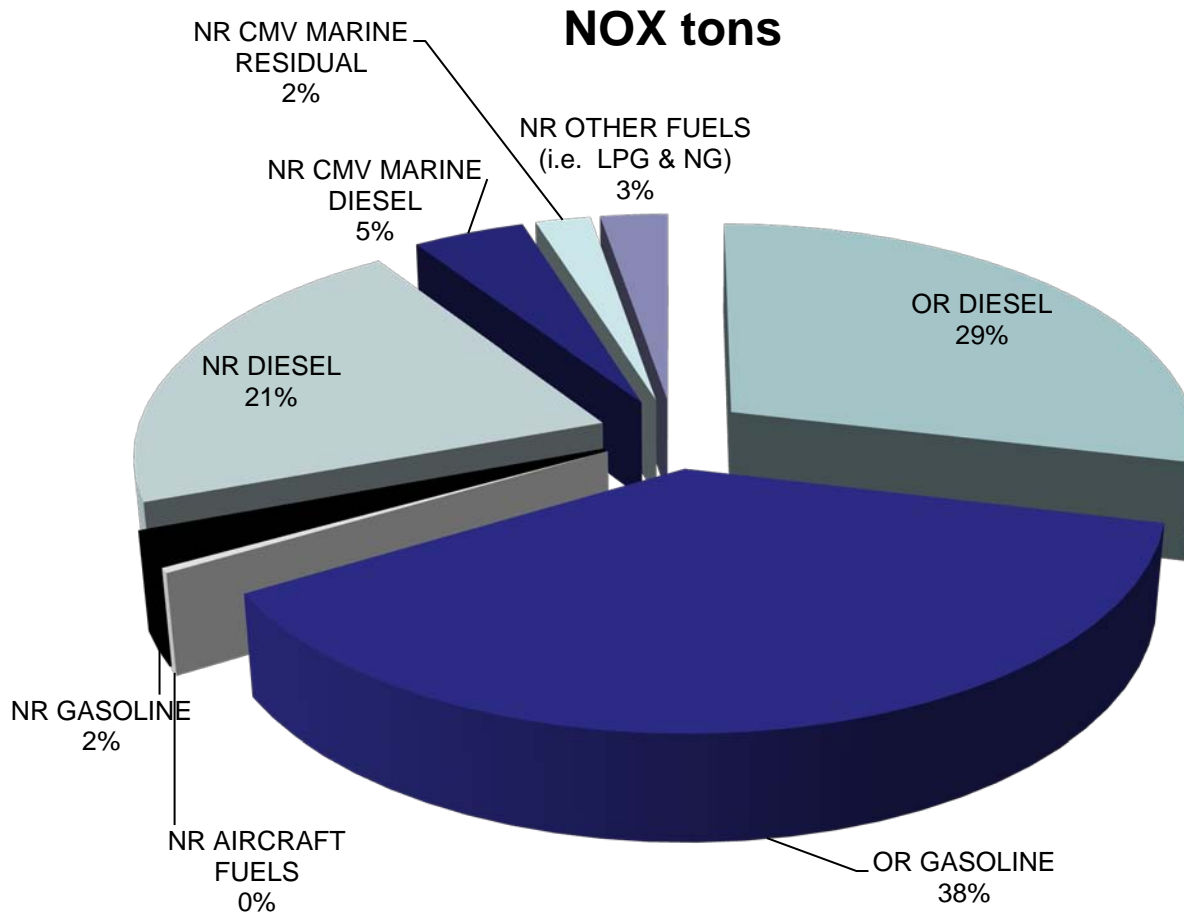


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Why Diesel Engines?

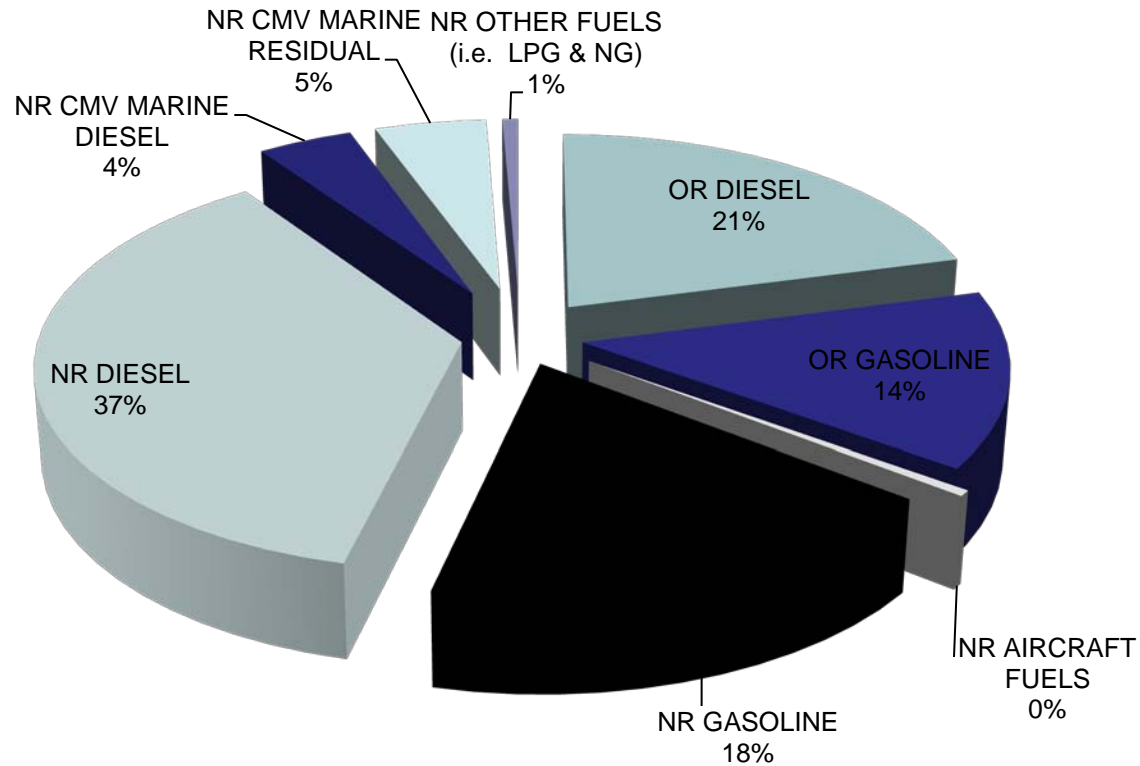
- Diesel engines can last (and pollute) for decades.
- Newer trucks (2007 and newer) and nonroad equipment (2014 and newer) reduce PM and NOx emissions by more than 95%.
- South Carolina could have ozone (NOx is a precursor) and PM issues as National Ambient Air Quality Standards (NAAQS) tighten and could face additional requirements.

Diesel Engines Emit More NOx



Diesel Engines Emit More PM

PM2.5 PRI tons



Diesel emissions have been linked to:

- Asthma
- Allergies
- Heart disease
- Lung disease
- Cancer
- Autism
- ...and can be especially harmful to vulnerable populations – children and the elderly.

Benefits of Reducing Diesel Emissions

For every dollar EPA has invested in clean diesel, the public has received \$7 - \$18 in health benefits (depending on vehicle type and technology).

- Improved health and quality of life.
- Fewer sick days from work and school.
- Fewer hospital visits.
- Diesel emissions can also damage crops, plants, animals and water resources.

History of DERA Program

- 2005 Energy Policy Act authorizes DERA funding – up to \$200M/yr for FY2008-11.
- Reauthorized in 2010 for funding through 2016.
- Purpose is to reduce emissions (NO_x, PM, air toxics, etc.) from legacy fleet of diesel engines.
- Public health concerns.
- Environmental Justice concerns.
- States receive first allocations in 2008. Annual allocations are declining.

DERA in South Carolina

- 2008-2011: State allocations total \$1,287,939 (match \$426,452)
- ARRA Award (2009): \$1,730,000 (match \$664,018)
- 2012: State allocation \$204,409 (match \$157,250)
- 2012: National (competitive) grant of \$2,066,582 (match \$4,280,496)
- 2013: State allocation \$118,287 (match \$424,000)

DERA in South Carolina cont'd

- Total amount of DERA funding (grants and match) invested in SC since 2008 is \$11,359,433.

\$5,407,217 grants \$5,952,216 match

- At \$13 in benefits for every federal dollar invested, *South Carolina has realized \$70,293,821 in health benefits.*
- State DERA 2008-11 and ARRA DERA achieved reductions of 2,000 tons of NOx and 78 tons of PM.

South Carolina Projects include:

- Repower of tugs and pilot boats
- Offset cost of biodiesel
- Replace transport trucks, farm tractors, diesel conveyor engines with electric motors, etc.
- Installation of three Truck Stop Electrification facilities
- Retrofit of passenger buses, school buses, city refuse trucks, emergency vehicles
- Upgrade of diesel locomotives
- Installation of GPS on school transportation vehicles

Current and Future Opportunities

- FY2014 State DERA funding (expected October 2014) of \$100,000.
- FY2014 National Grant (competitive). RFP opens today? SC will submit a proposal.
- Looking for other sources of funding to continue successful program (CMAQ?), such as GRADE (Grants to Replace Aging Diesel Engines), based in NC.
- CARE (Community Action for a Renewed Environment)
- EJ Grants
- SmartWay Financing
- US DOT TIGER grants

A few DERA guidelines:

- Technology must be EPA or CARB certified.
- The engines replaced must be destroyed or refurbished.
- The equipment must still have useful years of service.
- Emissions reduced must be significant.

Additional Resources

SmartWay - <http://www.epa.gov/smartway/>

Southeast Diesel Collaborative (SEDC) -
<http://www.southeastdiesel.org/>

Advance Reporting Tool (ART) -
[http://www.scdhec.gov/environment/baq/Advance/index.
asp](http://www.scdhec.gov/environment/baq/Advance/index.asp)

The SC DERA Team

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To keep up-to-date, get on our *BAQ Update* email listserve (send us an email) OR visit www.scdhec.gov/DERA or <http://www.epa.gov/cleandiesel/grantfund.htm>.