

# Emission Calculators

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Mobile, Non-road and Fuels

Grants Training

February 12, 2009



# Presentation Outline

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- Will identify additional emission calculation tools for projects/portions of projects that the DEQ does not have fields for
- Will not provide training on how to use each of these tools
- Will provide source for technical assistance



# Rule to Remember

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- If the Diesel Emission Quantifier (DEQ) will generate emissions benefit for a particulate project (or portions) – it **MUST** be used for DERA grant applications.



# Trucking Projects

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- Smartway FLEET Performance Model
  - To quantify estimated emission reductions for trucking projects that utilize add-on controls and fuels (except biodiesel).
  - Assistance: Annie Kee, OTAQ (202) 343-9218
  - <http://www.epa.gov/smartway/transport/partner-resources/resources-complete.htm#tools>



# Non-Trucking Emissions

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- National Mobile Inventory Model
  - The mobile sources for which inventory and emission calculation procedures are presented in this document are highway vehicles, nonroad mobile sources, aircraft, and locomotives. Recreational marine equipment and commercial marine vessels are discussed in the nonroad mobile source section.
  - Provides the median life, annual activity, and load factor values for nonroad engines (note: DEQ and/or Nonroad Model calculates the emissions)



# Nonroad Engines

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- Nonroad Diesel Engine Database and NO<sub>x</sub> Control Technology Evaluation
- Nonroad diesel engines >50 hp
  - Construction equipment
  - Harbor vessels
- Technologies
  - SCR
  - LNT
  - LNC
  - Combinations
- Rick Baker - ERG, Inc. & Michael Block – Emisstar LLC



# Biodiesel Projects

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- National Biodiesel Board emission calculator
  - Gives a general idea of emissions in percentage and in lbs based on the amount of fuel used and the percent BD blend.
  
- Biodiesel Calculator
  - Designed to compare diesel fuel oil to 100% biologically derived oils. This tool will quantify emission reductions for biodiesel projects
  - Technical assistance, contact: John Brock (415) 972-3999

# Truck Stop Electrification Projects

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- Guidance for Quantifying and Using Long Duration Truck Idling Emission Reductions for State Implementation Plans and Transportation Conformity.



[http://www.epa.gov/ttn/oarpg/t1/memoranda/rie\\_qvldti\\_tg.pdf](http://www.epa.gov/ttn/oarpg/t1/memoranda/rie_qvldti_tg.pdf)

- **Contact: David Solomon**  
919-541-5375



# Smartway Calculator

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- This tool is designed to help truck owners compare the costs and estimates associated with various efficiency technologies.
- Designed for owners of single as well as multiple-truck fleets
- <http://www.epa.gov/SmartwayLogistics/transport/calculators/>



# LP or CNG Fuel

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- ❑ Emission standards that that vehicle/fuel configuration is certified to
- ❑ EPA Ann Arbor certification Lab/or website
- ❑ Marty Reineman (734) 214-4430

# Locomotive Idling Projects

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- Guidance for Quantifying and using Long Duration Switch Yard Locomotive Idling Reductions in State Implementation Plans.



[http://www.epa.gov/ttn/oarpg/t1/memoranda/rie\\_quldsyl\\_tg.pdf](http://www.epa.gov/ttn/oarpg/t1/memoranda/rie_quldsyl_tg.pdf)

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# Airport Ground Support Projects

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- Airport Ground Support Equipment (GSE) Model: This is a spreadsheet tool that provides users with a quick analysis of the emission benefits and effectiveness of controlling GSE emissions.
- <http://www.epa.gov/otaq/aviation.htm> Voluntary Emission Reduction Program for Airport Ground Support Equipment
- A report and model by EPA to estimate the potential emission benefits of air quality strategies involving ground support equipment at airports.
- [http://www.faa.gov/regulations\\_policies/policy\\_guidance/envir\\_policy/airquality\\_handbook/media/App\\_F.PDF](http://www.faa.gov/regulations_policies/policy_guidance/envir_policy/airquality_handbook/media/App_F.PDF): Methodology for calculating exhausts emissions from GSE that service aircraft, airports and air bases.

# Energy Projects

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- Clean Energy Environmental Guide to Action (5/8/2006): Provides, policies, best practices and actions for States.
- [Energy Efficiency Benefits Calculator](#). This calculator can be used to help educate stakeholders on the broad benefits of energy efficiency. It provides a simplified tool to demonstrate the business case for energy efficiency from the perspective of the consumer, the utility, and society. It can be adapted to apply to various utility structures, policy mechanisms, and energy growth scenarios.



## Energy Projects Cont.

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- EGRID – is a comprehensive inventory of environmental attributes of electric power systems. (NO<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub>, Hg and CH<sub>4</sub>)
- Power Profiler- helps you figure out how clean the electricity you are using is- based on zip code. Will provide emissions impacts of electricity in use in your home or business and compare fuel mix and emissions rates to national averages.



# In conclusion

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- Variety of sources to obtain emissions benefit data
  
- Google EPA.gov