

U.S. EPA Region 2 Clean & Green Policy: Touchstone Practices and Metrics

Touchstone Practices:

- [Use of 100% of electricity from renewable sources](#)
- [Clean diesel fuels and technologies](#)
- [Methane capture at landfill sites](#)
- Material Reuse, Reduction or Recycling
 - [Industrial materials reuse or recycling within regulatory requirements](#)
 - [Concrete made with Coal Combustion Products \(CCP\)](#)
 - [Construction and Demolition materials](#)
 - [Organic materials generated on site](#)
- [Capture geothermal energy with pump and treat remediation systems to heat/cool structures.](#)

Metrics:

The five green remediation practices itemized below are the touchstones of the Region 2 response action within the Region 2 Clean and Green Policy:

1. GOAL: Use of 100% renewable sources of energy

Data Needed: Kilowatt-hours (kWh) of electricity used and the zip code of site where energy is supplied (will be required, regardless of renewable energy availability).

Environmental Metrics: The information will then be entered into EPA's [Power Profiler](#) to determine the amounts of nitrogen oxides, sulfur dioxides and carbon dioxides avoided by utilizing renewable sources of electricity.

2. GOAL: Use of "green concrete"

Data Needed: Tons of fly ash used in concrete at your site.

Environmental Metrics: The information will then be entered into EPA's [Waste Reduction Model](#), to determine the amounts of carbon dioxide avoided by substituting fly ash for cement in concrete.

3. GOAL: Use of clean diesel fuels and technologies

Data Needed: The following information is needed to determine the emission reductions achieved from clean construction practices:

Fleet Information:

- Number of vehicles in fleet
- Vehicle/equipment type, sector, application, horsepower rating and model year
- Fuel type and annual fuel usage
- Usage rate (hours/vehicle/year)

Technology Information:

- Number of vehicles in fleet to be retrofitted
- Retrofit technology type and model year

(Note: If this information cannot be obtained there are a set of default values that may be applied by EPA staff.)

Environmental Metrics: In order to generate the emissions reductions resulting from application of clean diesel technologies (exhaust retrofits and cleaner fuels), EPA's [Diesel Emissions Quantifier](#) (DEQ) will be utilized.

The metrics are (a) number of clean diesel retrofits, and (b) mass of air pollutants reduced (nitrogen oxides, particulate matter, hydrocarbons, carbon monoxide and carbon dioxide).

EPA Region 2's Mobile Source Team will assist RPM's in running the DEQ and will ultimately track the emission reduction estimates through the National Clean Diesel Campaign Database (see attached example).

4. GOAL: Recovery of methane from landfills

Data Needed: The cubic meters (feet) or metric tons captured for reuse or flared and therefore not entering the atmosphere as methane (a more potent greenhouse gas than CO₂ by a factor of 21).

Environmental Metrics: A simple calculation (metric tons of methane x 21 = metric tons of CO₂) will provide the amount of CO₂ avoided. In addition, the information may also be entered into EPA's [Landfill Gas Energy Benefits Calculator](#) to determine the direct, avoided and total greenhouse gas reductions, as well as environmental and energy benefits from methane capture.

1.0 cubic meter of methane = 0.49 kg carbon or 0.00049 metric ton (tonne).

5. GOAL: Maximize the amount of materials reduced, reused or recycled

Data Needed: 1) for materials reduced, the amount (in tons) and type (steel, wood, glass, plastic, paper, etc.) of materials reduced through purchase of products with recycled content (e.g. tons of steel); 2) for materials reused or recycled, the amount (in tons) and type (steel, wood, glass, concrete, construction and demolition debris, organic, etc.) of materials reused or recycled.

Environmental Metrics: The amount of material reduced through purchase or use of items with recycled content will be entered into EPA's [ReCon Tool](#) to calculate the greenhouse gas benefits of this practice. The amount of materials reused or recycled will be entered into EPA's [Waste Reduction Model](#) to determine the amounts of carbon dioxide avoided by reusing, or recycling various materials at Superfund sites.

Notes: Contractor support has been obtained to develop a tool to track the above metrics. The use of CO₂ as a universal metric focuses on the goal of reducing greenhouse gases.