

# Greenhouse Gases & Energy Efficiency

## **MCIC Workshops**

Hickory, NC - March 24, 2011

Raleigh, NC - March 31, 2011

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## Topics Covered

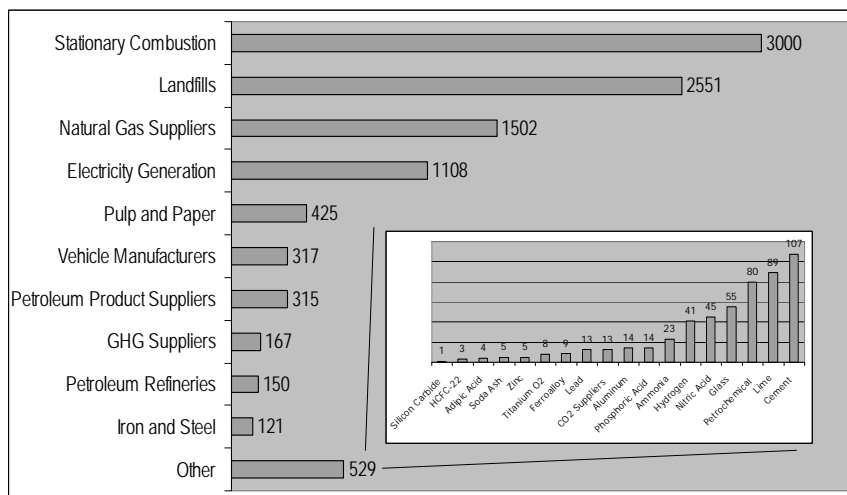
- EPA Greenhouse Gas (GHG) Emissions Reporting Program
- DAQ GHG Grant
- GHG Legislative Updates - state and federal

## Section 8 – Greenhouse Gases & Energy Efficiency Improvement Program

### EPA GHG Reporting Program

- Developed in response to FY08 congressional mandate.
- 40 CFR Part 98  
(<http://www.epa.gov/climatechange/emissions/CBI.html> )
- Requires reporting of GHG emissions from
  - 29 source categories
  - 5 types of suppliers of fuel and industrial GHGs
  - Motor vehicle and engine suppliers (except light duty sector)
- Generally affects facilities that emit 25,000 metric tons or more per year of GHGs.

### Approximately 10,000 US Facilities Covered



# Section 8 – Greenhouse Gases & Energy Efficiency Improvement Program

## Industries Included and Their Initial Reporting Year

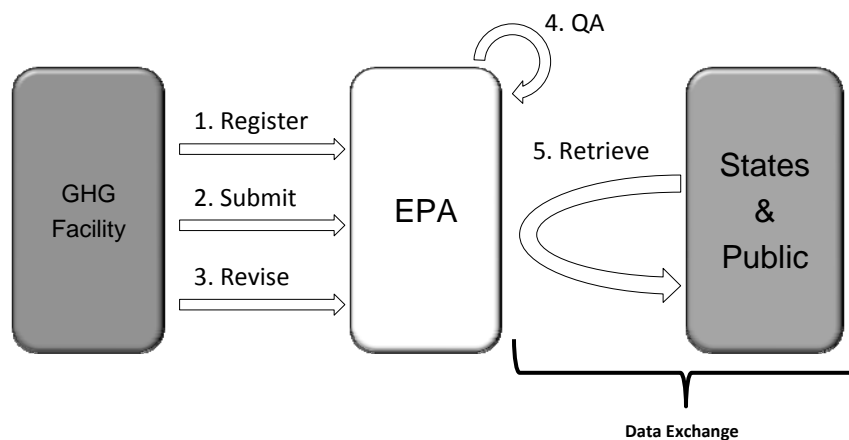
### Industries with Initial Reporting Year of 2010

- 98.1 Subpart A—General Provisions
- 98.3 Subpart C—General Stationary Fuel Combustion Sources
- 98.4 Subpart D—Electricity Generation
- 98.5 Subpart E—Adipic Acid Production
- 98.6 Subpart F—Aluminum Production
- 98.7 Subpart G—Ammonia Manufacturing
- 98.8 Subpart H—Cement Production
- 98.11 Subpart K—Ferroalloy Production
- 98.14 Subpart N—Glass Production
- 98.15 Subpart O—HFC-22 Production and HFC-23 Destruction
- 98.16 Subpart P—Hydrogen Production
- 98.17 Subpart Q—Iron and Steel Production
- 98.18 Subpart R—Lead Production
- 98.19 Subpart S—Lime Manufacturing
- 98.21 Subpart U—Miscellaneous Uses of Carbonate
- 98.22 Subpart V—Nitric Acid Production
- 98.24 Subpart X—Petrochemical Production
- 98.25 Subpart Y—Petroleum Refineries
- 98.26 Subpart Z—Phosphoric Acid Production
- 98.27 Subpart AA—Pulp and Paper Manufacturing
- 98.28 Subpart BB—Silicon Carbide Production
- 98.29 Subpart CC—Soda Ash Manufacturing
- 98.31 Subpart EE—Titanium Dioxide Production
- 98.33 Subpart GG—Zinc Production
- 98.34 Subpart HH—Municipal Solid Waste Landfills
- 98.38 Subpart LL—Suppliers of Coal-based Liquid Fuels
- 98.39 Subpart MM—Suppliers of Petroleum Products
- 98.40 Subpart NN—Suppliers of Natural Gas and Natural Gas Liquids
- 98.41 Subpart OO—Suppliers of Industrial Greenhouse Gases
- 98.42 Subpart PP—Suppliers of Carbon Dioxide

### Industries with Initial Reporting Year of 2011

- 98.9 Subpart I—Electronics Manufacturing
- 98.12 Subpart L—Fluorinated Gas Production
- 98.20 Subpart T—Magnesium Production
- 98.23 Subpart W—Petroleum and Natural Gas Systems
- 98.30 Subpart DD—Use of Electric Transmission and Distribution Equipment
- 98.32 Subpart FF—Underground Coal Mines
- 98.35 Subpart II—Industrial Wastewater Treatment
- 98.43 Subpart QQ—Imports and Exports of Equipment Pre-charged with Fluorinated GHGs or Containing Fluorinated GHGs in Closed-cell Foams
- 98.44 Subpart RR—Carbon Dioxide Injection and Geologic Sequestration
- 98.45 Subpart SS—Manufacture of Electric Transmission and Distribution Equipment
- 98.46 Subpart TT—Industrial Waste Landfills
- 98.47 Subpart UU—Injection of Carbon Dioxide

## GHG Data Flow



Source: Windsor Solutions, Inc. as part of GHG Integrated Project Team.

## Section 8 – Greenhouse Gases & Energy Efficiency Improvement Program

### Timeline For Reporting Year 2010

- **Certificate of Representation to EPA by ~~January 30, 2011~~**
  - New registration deadline – August 1, 2011
- **Annual GHG report to EPA by ~~March 31, 2011~~.**
  - Extended to September 30, 2011

### Registration

The screenshot shows the EPA e-GGRT (Electronic Greenhouse Gas Reporting Tool) registration page. The page features the EPA logo and the text "United States Environmental Protection Agency". The main heading is "Welcome to EPA's electronic Greenhouse Gas Reporting Tool". Below this, there is a section titled "About e-GGRT" which states: "E-GGRT supports facility and supplier reporting for the Mandatory Reporting of Greenhouse Gases Rule. The rule requires electronic reporting of greenhouse gas (GHG) emissions from large sources and suppliers in the United States." There is a link for "Additional information on e-GGRT". A "Warning Notice" is also present, stating that EPA's e-GGRT registration is part of a United States Environmental Protection Agency (EPA) computer system, which is for authorized use only. Unauthorized access or use of the computer system may subject violators to criminal, civil, and/or administrative action. All information on this computer system may be monitored, recorded, filed, stored, and disclosed by and to authorized personnel for official purposes, including law enforcement. Access or use of this computer system by any person, whether authorized or unauthorized, constitutes consent to these terms.

On the right side of the page, there is an "e-GGRT LOGIN" section with fields for "User Name:" and "Password:", and a "LOGIN" button. Below this, there is a link for "Forgot your User Name or Password?". A section titled "New e-GGRT Users Must Register" states: "New users must complete a one-time registration process. After establishing a user account you can register your facility." There is a "NEW USER REGISTRATION" button. Below that, it says "You are already registered if..." and "You have a CDX Account. If you have an existing CDX Web account, log in above with your CDX User Name and Password."

At the bottom of the page, there are links for "EPA Home", "Privacy and Security Notice", and "Contact Us". The footer text reads "e-GGRT RY2010.9.5 | UA1-1".

To access e-GGRT, go to: <https://ghgreporting.epa.gov>.

To access help, go to: <http://www.ccdsupport.com>.

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### Tools and Training Resources

- An applicability tool, training opportunities and other information about reporting GHG emissions to EPA can be found at:  
<http://www.epa.gov/climatechange/emissions/ghgrulemaking.html> .
- e-GGRT training webinars and presentations can be found at:  
<http://www.epa.gov/climatechange/emissions/training.html#eggrrt>

### EPA Actions on Confidential Business Information

1. Proposal to defer reporting of data elements that are inputs to emission equations for calendar years 2010, 2011, and 2012 until March 31, 2014.
2. Interim final rule to defer reporting of data elements that are inputs to emission equations for calendar year 2010 to August 31, 2011; it does not affect any other data elements under the rule.
3. Call for Information on Inputs to Emission Equations
  - How public availability of certain data elements could cause competitive harm.
  - Additional methods for calculating GHG emissions and conducting verification of reported data.

<http://www.epa.gov/climatechange/emissions/CBI.html>

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### GHG Grant

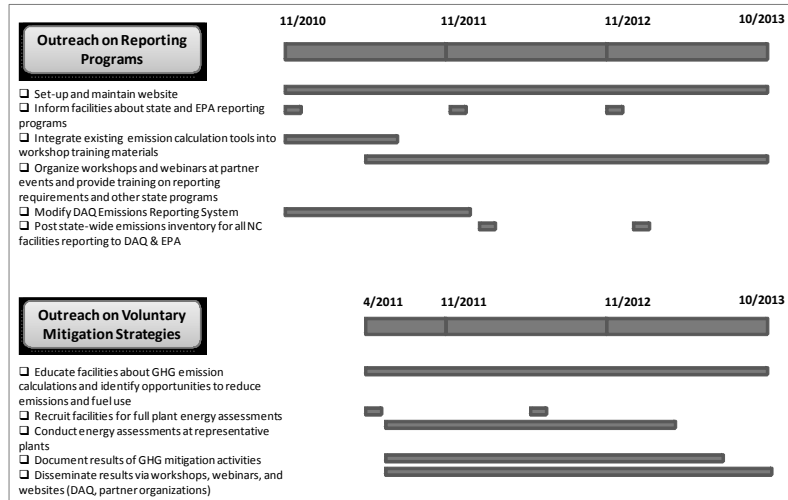
- Objectives
  1. Outreach on GHG reporting programs.
  2. Technical assistance on emission reduction strategies.
- March 2011 – Dec. 2013

### DAQ Partners



## Section 8 – Greenhouse Gases & Energy Efficiency Improvement Program

### Timeline



### Outreach on Emission Reduction Strategies

- Assist NC facilities in identifying all sources of GHG emissions (permitted and unpermitted) and provide advice on opportunities to reduce emissions.
- Assist NC facilities in analyzing their data and identifying mitigation measures that provide energy savings, cost savings, and environmental benefits.
- Conduct energy assessments at select NC facilities.
- Document emissions reduced, energy saved, and cost savings from implementation of energy conservation measures and process efficiency improvements at select plants.
- Disseminate results via workshops, webinars, training sessions, and web postings to encourage implementation by other facilities.

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### What is an Energy Assessment Report?

- Assessment reports include: specific project upgrade or retrofit information on efficiency specifications, cost estimates, and technical and performance descriptions.
- Serves as an education tool to pursue additional improvement to plant’s energy management program.
  - 1) situational analysis
  - 2) summary of energy savings opportunities
  - 3) engineering costs estimated
  - 4) technical analysis
  - 5) description of potential improvements
  - 6) financial resource guidance include utility rebate programs
  - 7) un-biased vendor list of resources
  - 8) environmental emission reductions
- Projects implemented are tracked through direct follow-up with the facility for at least one year after the audit is completed. Energy and emission reductions are estimated.

### Activities Related to Plant Energy Assessments

#### NCSU Industrial Assessment Center

- Energy Management Program (EMP)
- Energy Efficiency Workshop Program
- DOE “Save Energy Now” Program

#### Waste Reduction Partners Program

- 64 highly experienced staff and volunteer retired engineers, architects and scientists.
- 1,300 on-site assessments, savings of more than \$36 million in utility costs since 2000.

<u>Milestones</u>	<u>Target Dates</u>
NCSU EMP - energy assessments and mitigation reports (about 40)	Throughout project period
NCSU IAC Program - energy assessments and mitigation reports (about 24)	Throughout project period
Waste Reduction Partners - energy audits and mitigation reports (about 15)	Throughout project period
NCSU Energy Efficiency Workshops (about 20 technical & 2 management)	Throughout project period
NCSU Save Energy Now Workshops (about 6, depending on DOE)	Throughout project period
MAE Internship Program for Preparing Students for Careers in Energy (about 48 interns trained)	Throughout project period



## Section 8 – Greenhouse Gases & Energy Efficiency Improvement Program

### GHG Legislative Updates

- State
  - Prevention of Significant Deterioration Requirements for Greenhouse Gases (15A NCAC 02D .0544)
  - Governor Perdue’s Executive Order #81
  - Proposed Senate Bill 308 in the NC General Assembly (State Regulation of Greenhouse Gas Emissions)

### GHG Legislative Updates

- Federal - Congressional Actions to Limit EPA’s Authority

S. 482: Requires amendment to the Clean Air Act to prohibit the EPA from promulgating any regulation concerning, taking action relating to, or taking into consideration the emission of a greenhouse gas to address climate change, and for other purposes.

H.R. 910: Proposes to amend the Clean Air Act to prohibit the EPA from promulgating any regulation concerning, taking action relating to, or taking into consideration the emission of a greenhouse gas to address climate change, and for other purposes.

H.R. 1: Prohibits the EPA from spending funds to issue or enforce GHG regulations or implement a number of GHG-related programs, such as renewable fuels mandates, GHG reporting and energy efficiency programs. The bill passed the House and is being addressed in the U.S. Senate.

H. R. 153: Proposes to prohibit funding for the EPA to implement or enforce a cap-and-trade program for GHGs, and for other purposes.

Others ...

## Section 8 – Greenhouse Gases & Energy Efficiency Improvement Program

### DAQ Contacts

- General  
Sushma Masemore (919-715-7566)
- Emissions Reporting  
Tammy Manning (919-715-0664)
- GHG Grant Activities  
Paula Hemmer (919-715-4207)

Thank you!