Energy Efficiency/Renewable Energy (EE/RE) Measures for Early Action Compacts

Clean Air Through Energy Efficiency Workshop
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Air Quality Planning Section

Presentation Overview

- Air Quality in San Antonio
- Early Action Compact Initiative
- EE/RE and Air Quality
- TCEQ Guide for Crediting EE/RE

San Antonio’s EAC Initiative

- Areas in nonattainment of national air quality standards required to submit State Implementation Plan (SIP)
- SA monitoring nonattainment of national 8-hr ozone standard
- SA took Early Action Compact initiative
  - Early planning, implementation and emission reductions leading to expeditious attainment and maintenance of the national 8-hr ozone standard
  - Local control of the measures to be employed
  - State support to ensure technical integrity of the early action plan
  - Formal incorporation of the early action plan into the SIP

Air Emissions in San Antonio

San Antonio EAC counties, Sept. 1999
NOx Emissions

- Required to submit SIP by December 31, 2004
- EAC Plan due March 31, 2004
- State puts into SIP by December 31, 2004
- EAC can include energy efficiency as a measure!
**Air Emissions and Energy Production**

Point Source NOx Emissions in the San Antonio Area by Source (1999)

- Non-Road Point Source: 28%
- Power Plants: 72%

**Source**: DOE/EIA-0214(99), May 2001, "State Energy Data Report 1999"

**Air Emissions Growth in San Antonio**

- Major growth projects related to power plants in San Antonio region
  - City Public Service planned coal power plant
    - 5.92 tpd NOx by 2012
  - CPS planned natural gas plant
    - 0.72 tpd NOx by 2012
  - Guadalupe county natural gas power plants
    - 7.58 tpd NOx by 2012

**Energy Consumption by Source**

Texas Electrical Energy Consumption (1999)

- Industrial: 33%
- Residential: 36%
- Commercial: 31%

**Source**: DOE/EIA-0214/99, NEI-2001, "State Energy Data Report 1999"

**Air Emissions and Energy Efficiency**

- Not a direct relationship for several reasons
  - Power plants may be outside the SA region
  - Power plants emit different levels
  - Some plants easier to "power down" than others
  - Transmission loss
- How to calculate for EAC?

**History of Efforts to Calculate**

- Dec 2002 HGA SIP included protocol for calculating NOx reductions from implementing SB 5 and SB 7 projects
- TCEQ contracted with Energy Systems Laboratory (ESL) to develop a calculator to estimate emission reductions
  - To be completed by August 2004
- TCEQ developed an interim process which is outlined in Incorporating Energy Efficiency/Renewable Energy (EE/RE) Projects into the STP - A Guide for Local Entities
Purpose of Guide

- To inform local areas working on EACs and SIPs that they can get credit for energy efficiency measures*
- To give examples of the types of EE/RE projects and technologies creditable
- To outline the process and players involved in including EE/RE as a measure in the SIP
- To describe the role of the local entity in this process
  *With the exception of the Houston/Galveston area which is under a mass cap and trade program.

1. Report projects to SECO*

   - Collect/report information on eligible EE/RE projects to SECO
   - SB 5 reporting requirement is foundation for TCEQ’s data collection
   - ESL and SECO have expanded SECO’s reporting website to allow users to submit more information
   - The additional information allows your region to take more credit in the SIP for your efforts

2. Estimate Energy Savings
   3. Calculate Emissions Reductions

   - Assistance is available from ESL

*Key role played by political subdivisions

Process

1. Report projects to SECO*
2. Estimate associated energy savings
3. Calculate associated emissions reductions
4. Demonstrate that EPA criteria are met
5. Monitor and report results*

*Key role played by political subdivisions
4. Demonstrate that EPA criteria are met

- TCEQ to work with EPA to determine the documentation required
- TCEQ to work with political subdivisions to collect the required additional documentation
- TCEQ to work with ESL and EPA to ensure that calculations are acceptable to EPA

5. Monitor/Report Results

- EPA requires evaluation of effectiveness of project/program
- Collect data on program/project performance (i.e., participation levels, actual energy usage)
- In the future, the web reporting forms will allow you to report post-project results on an annual basis

A Look to the Future

- Including EE/RE projects/programs from more energy users into the SIP
  - Federal entities (significant for San Antonio!)
  - Private corporations
  - Political subdivisions not currently required to report to SECO under SBS
- ESL Calculator scheduled to be completed by summer 2004

Process

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*Key role played by political subdivisions

What’s in it for me?

- Currently tradable/sellable credits cannot be generated from EE/RE projects
- Clean air/health
- Attainment of National Ambient Air Quality Standards (NAAQS)
  - Avoid stringent requirements
  - Prevent loss of federal highway funds
  - Prevent businesses from locating elsewhere

For More Information

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