
Greenhouse Gas Emissions Inventory and the Natural Gas STAR Program

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Overview



- Program at DTE Energy
- Importance of Inventory
- Uses of the Inventory
- Using the Inventory to Accrue Emission Credits

DTE Energy - MichCon

- **MichCon** is a principal operating subsidiary of DTE Energy.
- **MichCon** is the fifth largest natural gas utility in the U.S., founded in 1849.
- **MichCon** safely delivers natural gas to 1.2 million Michigan families and businesses in a 14,700-mile service area.
- **MichCon** is able to store up to 130 billion cubic feet of gas in naturally occurring, underground rock formations.

Voluntary Programs

- Global Climate Change Action Plan (2002)
- Voluntary Innovative Sector Initiatives: Opportunities Now (VISION)
- American Petroleum Institute (API) Commitment
- Natural Gas Supply Association
- Natural Gas STAR Program

DTE Energy GHG Program

- Reductions from DTE Energy-Gas
- Carbon Sequestration
- Carbon Injection
- Coal Bed Methane Recovery
- Biomass Energy Facilities
- Detroit Edison did reduce GHG emissions by 2000 to below 1990 levels, despite risk of lost credits

Emissions Inventories



- Enable proper reporting under 1605(b)
- Enable STAR Reporting
- Help identify opportunities for emission reductions

Emissions Inventories

- May help to ensure credits for emission reductions under any future trading section



Reduction Verification

- Current DOE Program requires that reductions meet the following criteria:
 - Accuracy
 - Reliability
 - Verifiability
 - Practical Application

Estimation Method Ratings

Rating	Points	Characterization	Typical Description
A	4	Most accurate available	Direct measurement of actual emissions source; emissions factor based upon repeated direct measurement of source multiplied by activity data
B	3	Very good accuracy	Emissions factor based cluster of direct measurements of source or representative sample multiplied by activity data
C	2	Adequate accuracy	Default emissions factor multiplied by measured activity data; emissions factor based on single measurement multiplied by estimated activity data
D	1	Better than omitting the source	Default emissions factor multiplied by estimated activity data or static one-time equipment count

Estimation Method Ratings

Entities seeking to register reductions must maintain a weighted average rating of greater than 3.0



Leak Detection

While leak detection is a method for identifying opportunities to reduce emissions, there may be a need to quantify the leaks and verify leak repair



Leak Detection

- Quantifying leaks allows the company to verify the leak has been repaired
- It may also allow easier registration under any of the existing or future programs
- Companies may be able to develop a database to enable less monitoring

Emission Factors

- GRI has developed emission factors that can be used to estimate emissions from other gas company sources



Other Natural Gas STAR Activities

- In-service tapping or plugging
- Minimizing pressure at Compressor Station and City Gates
- Free-flow gas to nearby lines
- Use of portable compressors to minimize pressure
- Flaring



Project Tracking

Dates	Costs	Project Duration	Total Natural Gas Reduction	Total Natural Gas Vented	Method for Estimate	Project Description
10/18-10/22	\$4450 for flare rental	One week	244,990 scf	63,160 scf	Calculation (based on start and end pressure and length of line)	Abandonment and removal of 6" Coldwater- Mt. Pleasant Pipeline
11/5-11/8	Fuel - \$2500 Labor - \$3000	72 hours	37.05 MMSCF	10.696 MMSCF	Calculation	Lower pressure in E Line between MLV #3 (575 to 175 psig) to MLV #5 (175 to atmosphere)

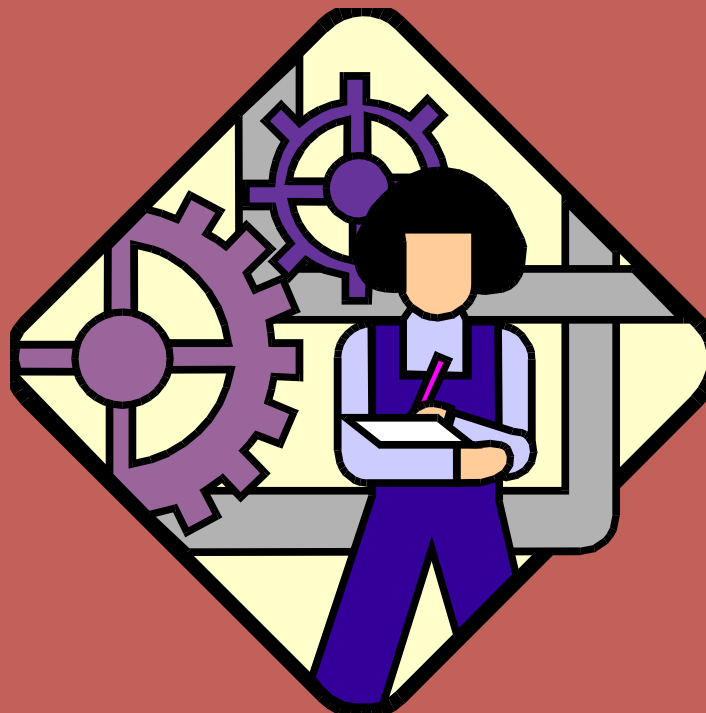
Opportunities for Reductions

- Once you have an accurate inventory, you can identify areas to reduce natural gas emissions



Opportunities for Projects

- STAR Web Site includes some Case Studies that can be used
- Field personnel may have some good ideas



Opportunities for Projects

 Even in cases where it is not cost-effective to do a project now, provisions for future reductions can be made



Emissions Inventories

■ Potential opportunities for credit registration:

- Chicago Climate Exchange
- California Climate Action Registry
- Regional Greenhouse Gas Initiative



Finally – Why?

 Emissions Report prepared as requested by DTE Energy stockholders – located at www.dteenergy.com



 Questions?

