

Company Information

**Annual Report
2007**



**Gathering and
Processing
Sector**

Company Name: _____

Gas STAR Contact: _____

Title: _____

Address: _____

City, State, Zip Code: _____

Telephone: _____

Fax: _____

E-mail: _____

Business Units/
Locations Reporting: _____

Annual Report Summary

Please mark the activities your company executed and submit a report page for each facility/location it was implemented

- BMP 1: Convert gas pneumatics to instrument air systems
- BMP 2: Install flash tank separators on glycol dehydrators
- BMP 3: Directed inspection and maintenance at gas plants and booster stations
- Partner Reported Opportunities (*please specify*):

Period covered by report: From: _____ To: _____

Signature: _____ Date: _____

- Gas STAR allows certain technologies/practices to count towards a company's emission reductions beyond the year they were initially implemented. For example, a technology implemented in 2007 can accrue emission reductions in future years. Gas STAR designates the length of time that these reductions accrue as "sunset dates." The Appendix lists these sunset dates. Companies can choose to allow EPA to apply the sunset dates or choose to report each technology/practice on an annual basis (i.e. not using sunset dates).
- In addition to reporting methane emissions reductions, you are welcome to include other information about your company's participation in Natural Gas STAR in the "Additional Program Accomplishments" section of this form. The Natural Gas STAR Program will use any information entered in this section to recognize the efforts and accomplishments of outstanding partners.



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OMB Control No. 2060-0328
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BMP 1: Convert Gas Pneumatics to Instrument Air Systems

Current Year Activities

A. Facility/location identifier information:

(Note: Each facility requires its own reporting form) _____

B. Facility summary:

Number of instrument air systems installed: _____ systems

Total number of high-bleed devices in systems converted to instrument air, if known: _____ devices

Total number of low-bleed devices in systems converted to instrument air, if known: _____ devices

Percentage of facilities using instrument air: _____ %

C. Cost summary:

Estimated cost of converting to instrument air (including equipment and labor): \$ _____ /replacement

D. Methane emissions reduction: _____ Mcf

E. Are these emissions reductions a one-year reduction or a multi-year reduction? One-year Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration (BMP 1 has a sunset period of 10 years).

Partner will report this activity annually.

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

Direct measurement

Total volume of gas used per year prior to converting to instrument air:

Other (please specify): _____

Standard calculation

Methane emissions reduction = [Average high-bleed device annual emissions (Mcf/yr) x Number of high-bleed devices converted to instrument air] + [Average low-bleed device annual emissions (Mcf/yr) x Number of low-bleed devices converted to instrument air]

*If annual emissions are not known, use default values of 138 Mcf/yr for high-bleed device emissions and 14 Mcf/yr for low-bleed device emissions

Please specify your data source:

Field measurement

Manufacturer specifications

F. Total value of gas saved:

Total value of gas saved = Methane emissions reduction (in Mcf) x Gas value (in \$/Mcf) [If not known, use default of \$7.00/Mcf]

\$ _____

G. How many instrument air replacements are planned for next year?

_____ installations

Previous Years' Activities

Use the table below to report any past activities implemented, but not previously reported to the Natural Gas STAR Program

Year	# Units Replaced	Total Cost of Replacements (incl. equipment and labor) (\$)	Estimated Reductions (Mcf/yr)	Value of Gas Saved (\$)

BMP 1 Comments: Please use the back of the page for additional space if needed.



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BMP 2: Install Flash Tank Separators on Glycol Dehydrators

Current Year Activities

A. Facility/location identifier information:

(Note: Each facility requires its own reporting form) _____

B. Facility summary:

Number of flash tank separators installed: _____ separators

Percent of dehydrators in system equipped with flash tank separators: _____ %

D. Methane emissions reduction: _____ Mcf

C. Cost summary:

Estimated cost per flash tank separator installation (including equipment and labor): \$ _____ /installation

E. Are these emissions reductions a one-year reduction or a multi-year reduction? One-year Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration (BMP 2 has a sunset period of 10 years).

Partner will report this activity annually.

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

Standard calculation

Methane emissions reduction per flash tank installation = [TEG circulation rate (in gal/hr) x Methane entrainment rate (in scf/gal) x hours of operation (in hrs/yr) x 0.90] / 1,000*

Please specify your data source:

- Field measurement
- Manufacturer specifications

Calculation using default

Methane emissions reduction = [Average gas throughput (in MMcf/yr) x 170 scf/MMcf x 0.90] / 1,000
**If methane entrainment rate is not known, use a default value of 3 scf/gal for energy exchange pumps or 1 scf/gal for electric pumps*

Other (please specify): _____

F. Total value of gas saved: \$ _____

Total value of gas saved = Methane emissions reduction (in Mcf) x Gas value (in \$/Mcf) [If not known, use default of \$7.00/Mcf]

G. How many flash tank separators do you plan to install next year? _____ flash tanks

Previous Years' Activities

Use the table below to report any past activities implemented, but not previously reported to the Natural Gas STAR Program

Year	# Flash Tank Separators Installed	Total Cost of Installation (incl. equipment and labor) (\$)	Estimated Reductions (Mcf/yr)	Value of Gas Saved (\$)

BMP 2 Comments: *Please use the back of the page for additional space if needed.*



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BMP 3: Directed Inspection and Maintenance at Gas Plants and Booster Stations

Current Year Activities

A. Facility/location identifier information:

(Note: Each facility requires its own reporting form) _____

B. Leak summary:

Total number of leaks found: _____ leaks found Total number of leaks repaired: _____ leaks repaired

C. Cost summary:

Total cost of surveys conducted: \$ _____ Total cost of leak repairs: \$ _____

D. Methane emissions reduction:

_____ Mcf *BMP 3 must be reported on an annual basis.

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations**

- Actual field measurement Other (please specify):

**Currently, no default value has been developed. If desired, you may estimate reductions based on a similar facility.

E. Total value of gas saved: \$ _____

Total value of gas saved = Methane emissions reduction (in Mcf) x Gas value (in \$/Mcf) [If not known, use default of \$7.00/Mcf]

F. How many facilities do you plan to survey next year?

_____ facilities

Previous Years' Activities

Use the table below to report any past activities implemented, but not previously reported to the Natural Gas STAR Program

Year	Total Cost of Surveys (\$)	Total Cost of Repairs (\$)	Estimated Reductions (Mcf/yr)	Value of Gas Saved (\$)

BMP 3 Comments: Please use the back of the page for additional space if needed.



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Partner Reported Opportunities (PROs) (For more details on PROs, visit epa.gov/gasstar/techprac.htm)

Current Year Activities

A. Facility/location identifier information:

(Note: Each facility requires its own reporting form)

B. Activity description: Please provide a separate PRO reporting form for each activity and facility reported

Please specify the technology or practice that was implemented (choose from the list in the appendix or describe your own):

Please describe how your company implemented this activity:

C. Level of implementation (check one):

- Number of units installed: _____ units
 Frequency of practice: _____ times/year

D. Are emissions reductions a one-year reduction or a multi-year reduction? One-year Multi-year

If Multi-year:

- Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration*.
 Partner will report this activity annually.

E. Methane emissions reduction: _____ Mcf

F. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): \$ _____

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- Actual field measurement Other (please specify):
 Calculation using manufacturer specifications/other source

G. Total value of gas saved: \$ _____

Total value of gas saved = Methane emissions reduction (in Mcf) x Gas value (in \$/Mcf) [If not known, use default of \$7.00/Mcf]

H. To what extent do you expect to implement this practice next year?

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) (\$)	Estimated Reductions (Mcf/yr)	Value of Gas Saved (\$)

PRO Comments: Please use the back of the page for additional space if needed.

* Gas STAR allows certain technologies/practices to count towards a company's emission reductions beyond the year they were initially implemented. For example, a technology implemented in 2007 can accrue emission reductions in future years. Gas STAR designates the length of time that these reductions accrue as "sunset dates." The Appendix lists these sunset dates. Companies can choose to allow EPA to apply the sunset dates or choose to report each technology/practice on an annual basis (i.e. not using sunset dates).



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Additional Program Accomplishments

The Natural Gas STAR Program will use any information entered here to recognize the efforts and achievements of outstanding partners.

Please include any additional information you would like to share about your company's participation in Natural Gas STAR. Examples may include:

- Activities to strengthen your program (e.g., training/education, innovative technologies or activities, pilot projects, employee incentive programs).
- Efforts to communicate your participation and successes (e.g., internal newsletters, press releases, company Web site).
- Participation in Natural Gas STAR program activities (e.g., contributions to case studies, presentation at annual workshop).

Additional Accomplishments:

Additional Accomplishments Comments: *Please use the back of the page for additional space if needed.*



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Appendix

Methane Emission Reduction Technologies & Practices— Gathering and Processing Sector

The list below describes a variety of methane emission reduction technologies that Natural Gas STAR partners in the gathering and processing sector have implemented and reported to Natural Gas STAR. You may use this list as a guide when completing your annual report. Sunset dates (i.e. the length of time a technology or practice can continue to accrue emission reductions after implemented) are one year in duration unless otherwise noted in parentheses. An asterisk (*) indicates that a technical document related to the technology or practice is available online at epa.gov/gasstar/techprac.htm.

Compressors/Engines

- Eliminate unnecessary equipment and/or systems*
- Install electric compressors (10 years)*
- Install electric starters (10 years)*
- Redesign blowdown systems and alter ESD practices*
- Reducing emissions when taking compressors off-line*
- Replace gas starters with air (10 years)*

Dehydrators

- Install condensers on glycol dehydrators (10 years)
- Install flares (10 years)*
- Optimize glycol circulation and install of flash tank separators in dehydrators*
- Replace glycol dehydration units with methanol injection (10 years)*
- Replacing gas-assisted glycol pumps with electric pumps (10 years)*
- Reroute glycol skimmer gas*

Directed Inspection & Maintenance

- DI&M at compressor stations*
- DI&M: aerial leak detection using laser and/or infrared technology
- DI&M: leak detection using IR camera/optical imaging
- Improve measurement systems to track gas loss
- Inspect and repair compressor station blowdown valves*

Pipelines

- Composite wrap for non-leaking pipeline defects*
- Pipeline replacement and repair
- Recover gas from pipeline pigging operations*
- Revise pigging schedule to reduce methane emissions
- Use inert gases and pigs to perform pipeline purges*
- Using hot taps for in-service pipeline connections*
- Using pipeline pumpdown techniques to lower gas line pressure before maintenance*

Pneumatics/Controls

- Install back-up power at booster sites to prevent venting (10 years)
- Install no bleed controllers (10 years)

Tanks

- Install hydrocarbon liquid stabilizer (10 years)
- Install pressurized storage of condensate (10 years)*
- Installing VRUs on crude oil storage tanks (10 years)*
- Reduce excess blanket gas blow-by to the atmosphere
- Reduce vapors vented out of drip tanks
- Route inlet flash vapors to station suction (10 years)

Valves

- Convert gas operated valves to hydraulic operation (10 years)
- Heat tracing to prevent control valves from freezing open
- Rupture pin shutoff device to reduce venting (10 years)

Other

- Install flares (10 years)*
- Nitrogen rejection unit optimization*
- Process/re-route acid gas to reduce venting

The public reporting and recordkeeping burden for this collection of information is estimated to average 60 hours for each new response and 27 hours for subsequent responses. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.