



# NiSource Natural Gas STAR Workshop Introduction to Online Tools

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# Natural Gas STAR Online Tools Suite

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- ★ Online Reporting
- ★ Data Collection and Management Tool
- ★ BMP/PRO Economic Analysis Tool

# Online Reporting

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*Enhances and streamlines the annual reporting process by allowing Natural Gas STAR partners to submit reports via the Web.*



- ★ Provides secure data transfer.
- ★ Calculations are performed automatically.
- ★ Online instructions are provided.
- ★ Users may view and print their report prior to submitting.

Gas STAR Online Tools Suite:

**Online Reporting**

Data Collection and Management Tool

BMP/PRO Economic Analysis Tool

# Data Collection and Management Tool

*Allows Gas STAR partners to collect and manage methane emissions reduction information for numerous locations.*



- ★ Allows partners to continuously track/collect/manage data.
- ★ IMs have complete control of data and users.
- ★ System can be modified to fit company's unique data collection needs .
- ★ Various summary reports are available.

Gas STAR Online Tools Suite:  
Online Reporting  
**Data Collection and Management Tool**  
BMP/PRO Economic Analysis Tool

# BMP/PRO Economic Analysis Tool



*Allows users to quickly generate estimates of the economic attractiveness and environmental benefits of methane reduction practices.*

- ★ Based on Natural Gas STAR BMPs and PROs.
- ★ Anyone may use the tool.
- ★ Quick and easy: many fields are pre-populated with industry-wide default values that users can accept or modify to fit site-specific conditions.

Gas STAR Online Tools Suite:  
Online Reporting  
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**BMP/PRO Economic Analysis Tool**

# BMP/PRO Economic Analysis Tool

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## *Cost Engineering Functions and Attributes*

- ★ Capital costs and O&M costs calculated using an incremental analysis approach.
- ★ Default values provided for critical capital and annual cost factors, methane emission reduction factors, and other operating assumptions.
- ★ Cash flows projected over the first five years of operation.
- ★ Cost estimates obtained from Marshall & Swift (capital) and Producer Price (O&M) indices.

# BMP/PRO Economic Analysis Tool

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## *Economic Factors and Attributes*

- ★ Key economic parameters are supplied by the user.
- ★ Capital investment measures include:
  - Net present value
  - Discounted cash flow internal rate of return
  - Simple payback period
  - Simple return on investment
- ★ Escalation allowed for O&M and gas price.
- ★ Results calculated both before and after taxes.

# BMP/PRO Economic Analysis Tool

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## *Programming Functions and Attributes*

- ★ Users may enter site-specific values or accept default values.
- ★ Results displayed in graphical and tabular format with various levels of detail.
- ★ Results from multiple calculations may be displayed and compared (sensitivity analysis).
- ★ Users may print results and/or save for later access and use.



# BMP/PRO Economic Analysis Tool



## *Transmission and Distribution BMPs/PROs*

- ★ **DI&M at compressor stations**
- ★ DI&M at gate stations and surface facilities
- ★ **Reducing methane emissions from pneumatic devices**
- ★ Convert engine starting to nitrogen
- ★ Replace wet seals with dry seals in centrifugal compressor
- ★ Use inert gas and pigs to perform pipeline purges
- ★ Use hot taps for in-service pipeline connections
- ★ **Use pipeline pumpdown techniques to lower gas line pressure before maintenance**
- ★ Install static pacs at compressor stations
- ★ Install electric compressors
- ★ Install electric starters
- ★ Install flares
- ★ Install vapory recovery units on crude oil storage tanks
- ★ Increase walking survey from 5- to 3-year basis
- ★ Recycle line recovers gas during condensate loading
- ★ Reduce emissions when taking compressors off-line
- ★ Reduce emissions from compressor rod packing systems
- ★ Convert gas pneumatic controls to instrument air

# BMP/PRO Economic Analysis Tool

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Live Demonstration