The Natural Gas STAR Program is a flexible, voluntary partnership between EPA and the oil and natural gas industry designed to cost-effectively reduce methane emissions from natural gas operations.
**U.S. Industry Participation**

- **118 Program Partners**
  - 62% of transmission
  - 26 partners
- **60% of distribution**
  - 48 partners
- **51% of production**
  - 32 partners
- **63% of processing**
  - 12 partners

![Bar chart showing U.S. Industry Participation](chart.png)
Natural Gas STAR Program
Endorsers

- American Gas Association (AGA)
- American Petroleum Institute (API)
- Domestic Petroleum Council (DPC)
- Gas Processors Association (GPA)
- Gulf Coast Environmental Affairs Group (GCEAG)
- Independent Producers Association of Mountain States (IPAMS)
- Interstate Natural Gas Association of America (INGAA)
- National Association of Regulatory Utility Commissioners (NARUC)
- Natural Gas Supply Association (NGSA)
- New York State Energy Research and Development Authority (NYSERDA)
- Southern Gas Association (SGA)
Methane Emissions in the Oil and Gas Industry
U.S. Greenhouse Gas Emissions
All Sources

CO₂
85%

CH₄
8%

N₂O
5%

HFCs, PCs, & SF₆
2%

U.S. Greenhouse Gas Emissions
Methane

- Oil & Natural Gas Systems: 26%
- Enteric Fermentation: 21%
- Landfills: 24%
- Coal Mining: 10%
- Other: 19%

Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990 – 2003, USEPA, April, 2005
U.S. Oil and Gas Industry Methane Emissions (Annual)

Bcf (billion cubic feet)

Transmission & Storage 101 Bcf

Processing 36 Bcf

Distribution 68 Bcf

Oil & Gas Production 148 Bcf

U.S. oil and natural gas industry methane emissions account for 2% of total U.S. greenhouse gas emissions.

Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990 – 2003, USEPA, April, 2005
Methane Emissions Reduction Successes
Natural Gas STAR Partner Accomplishments

★ 338 Bcf in methane emissions reductions since 1993!
Methane emissions (solid) and reductions (*italics*) in each sector of the U.S. natural gas industry.

**Natural Gas Industry Emissions**

- **Production**: 148 Bcf
- **Transmission / Storage**: 101 Bcf
- **Processing**: 36 Bcf
- **Distribution**: 68 Bcf
- **1 Bcf (pr.)**: *
- **24 Bcf (p)**
- **18 Bcf (t/s)**

Gas STAR Emission Reductions

★ Emission reductions are achieved when partners implement:
  - **Best Management Practices (BMPs)**
    - Industry consensus on proven emission reduction practices
  - **Partner Reported Opportunities (PROs)**
    - Emission reduction technologies and practices undertaken by individual partners
★ BMP and PRO technical documents posted on epa.gov/gasstar
Reductions from BMPs and PROs

★ Majority of Gas STAR reductions from Partner Reported Opportunities

$1 Billion in Methane Savings

BMPs 35%

PROs 65%
Top Gas STAR PROs

★ Replace Wet Seals with Dry Seals
  ★ 18.4 Bcf savings from 6 companies

★ Use Compressors for Pipeline Pumpdown
  ★ 17.1 Bcf savings from 20 companies

★ Install Vapor Recovery Units
  ★ 48.7 Bcf savings from 20 companies

★ Conduct Leak Survey
  ★ 1.0 Bcf savings from 10 companies

★ Eliminate Unnecessary Equipment or Systems
  ★ 3.1 Bcf savings from 15 companies
Workshops

★ Technology Transfer Workshops (5 to 6 per year)
  ▪ Production: Oklahoma City, OK – April 20, 2005
    Houston, TX – October 27, 2005
    Gillette, WY – August, 2005
  ▪ Processing: Oklahoma City, OK – April 22, 2005
  ▪ Transmission: Midland, TX – June 8, 2005
  ▪ Distribution: Teleconference, May 17, 2005

★ Annual Implementation Workshop
  ▪ Houston, TX – October 25 to 26, 2005
Five year activity to develop verifiable methane emissions reduction projects at landfills, coal mines and natural gas systems.

Goal is to build long-term capacity within developing countries and economies in transition.

Countries include: Argentina, Australia, Brazil, China, Colombia, India, Italy, Japan, Mexico, Nigeria, Russia, Ukraine and UK.

Gas STAR will lead natural gas system-related activities. The Program welcomes Gas STAR Partner participation.

epa.gov/methanetomarkets
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