

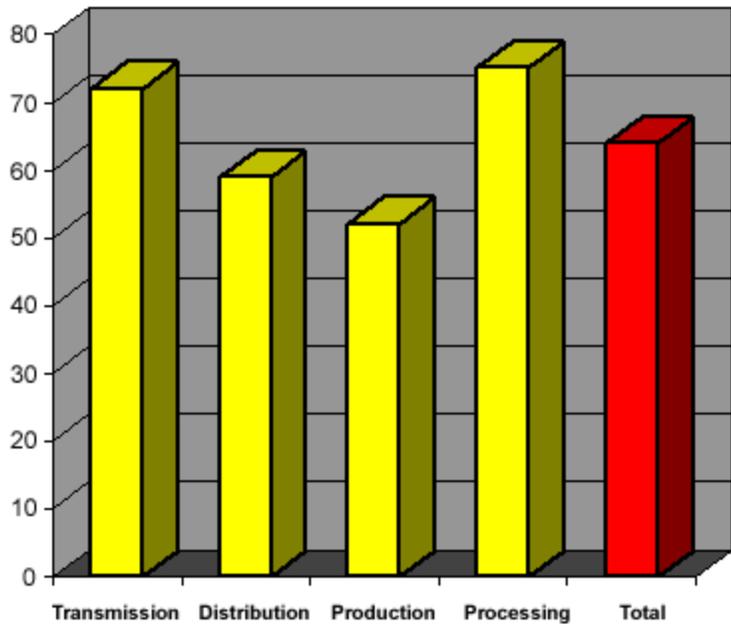


# EPA Natural Gas STAR Accomplishments 2002

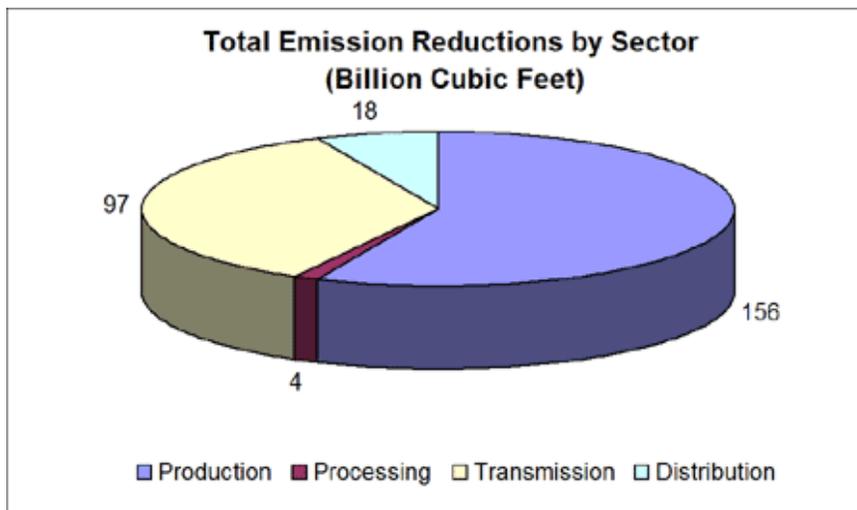
By working together to prevent gas losses, EPA and the natural gas industry are successfully protecting the environment and improving profitability. Participation in Natural Gas STAR cuts across all of the major industry sectors, including gas production, processing, transmission and distribution. As of 2002, the companies participating in Natural Gas STAR represent almost 65% of the natural gas industry in the U.S. The graph below details participation by industry sector. Today, the program has over 100 partner companies and is endorsed by 12 major industry trade associations.

Since the Program began in 1993, Natural Gas STAR partners have eliminated more than 275 billion cubic feet (Bcf) of methane emissions through the implementation of the Program's core Best Management Practices (BMPs), as well other activities identified by partner companies (referred to as Partner Reported Opportunities - or PROs) (see charts below). This is the equivalent of removing more than 20 million cars from the road for one year or planting 25 million acres of trees. At the same time, partner companies have saved \$825 million by keeping more gas in their systems for sale in the market.

**% of Industry in Natural Gas STAR Program**

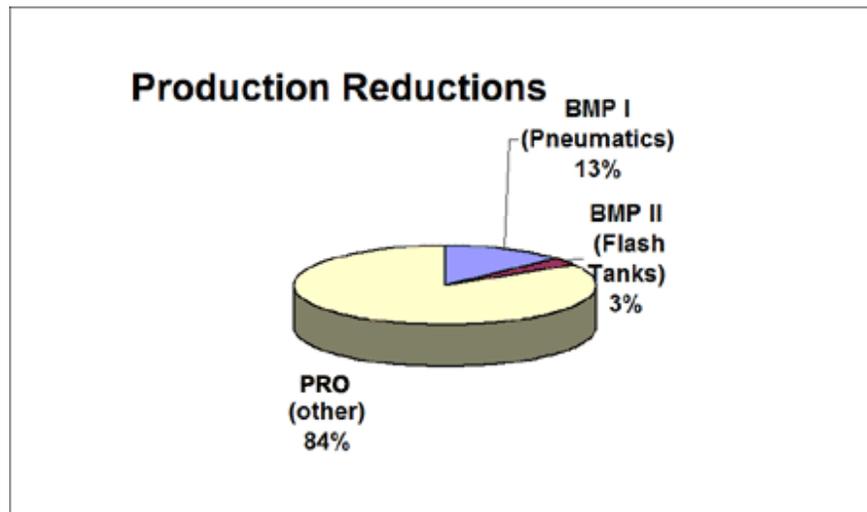


The following pie chart shows the breakdown of reported emission reductions by industry sector:



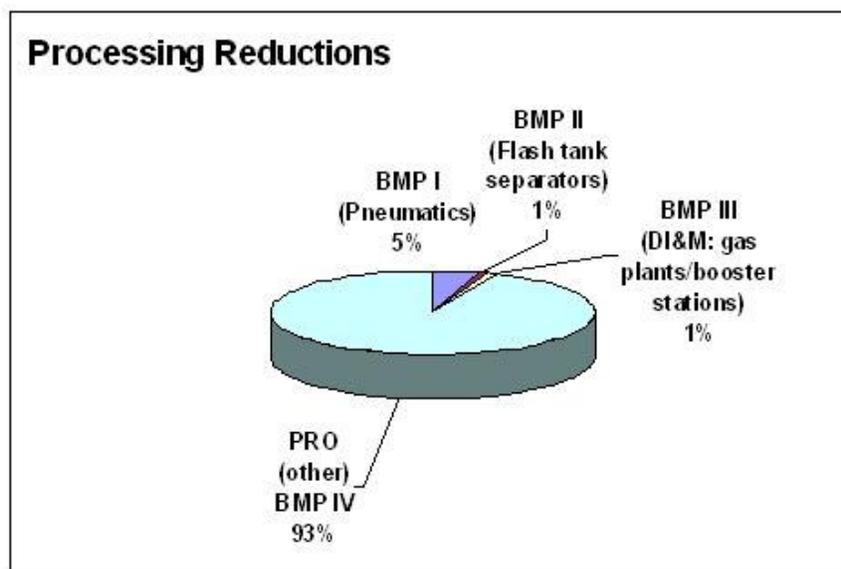
Production sector partners reported 24.9 Bcf of methane emission reductions in 2002 - and a total of 156 Bcf since 1990. The figure below shows that most of the reductions in this sector for 2002 were from PROs, with relatively small percentages attributable to the core BMPs: replacing high-bleed pneumatic devices and installation of flash tank separators. Top PROs reported by production sector partners in 2002 included:

- Installing vapor recovery units
- Installing plunger lifts
- Installing flares



Gathering and Processing sector partners reported over 800,000 Mcf of methane reductions in 2002 - and a total of 4 Bcf of reductions since 1990. Top PROs reported by gathering and processing sector partners include:

- Installing larger wet stabilizer reboiler to reduce vapor pressure
- Modifying compressor shutdown logic
- Installing vapor recovery on slug catcher



Transmission and distribution sector partners reported 25.6 Bcf of reductions in 2002 - and a total of 116 Bcf since 1993. The figure below shows that the largest percentage of reductions are attributable to PROs, with Directed Inspection and Maintenance (DI&M) at gate stations, DI&M at compressor stations, and replacement of high-bleed pneumatics contributing 18, 18, and 13 percent respectively. Reductions from pipeline repair and installation of turbines contribute less than five percent each. Top PROs reported by transmission and distribution sector partners in 2002 included:

- Installing vapor recovery units
- Replacing wet gas seals with dry seals
- Installing excess flow valves
- Optimizing high-pressure system operation

