



Natural Gas STAR Program

Producers Technology Transfer Workshop

Oklahoma City, OK
April 20, 2005



epa.gov/gasstar

The Natural Gas STAR Program



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



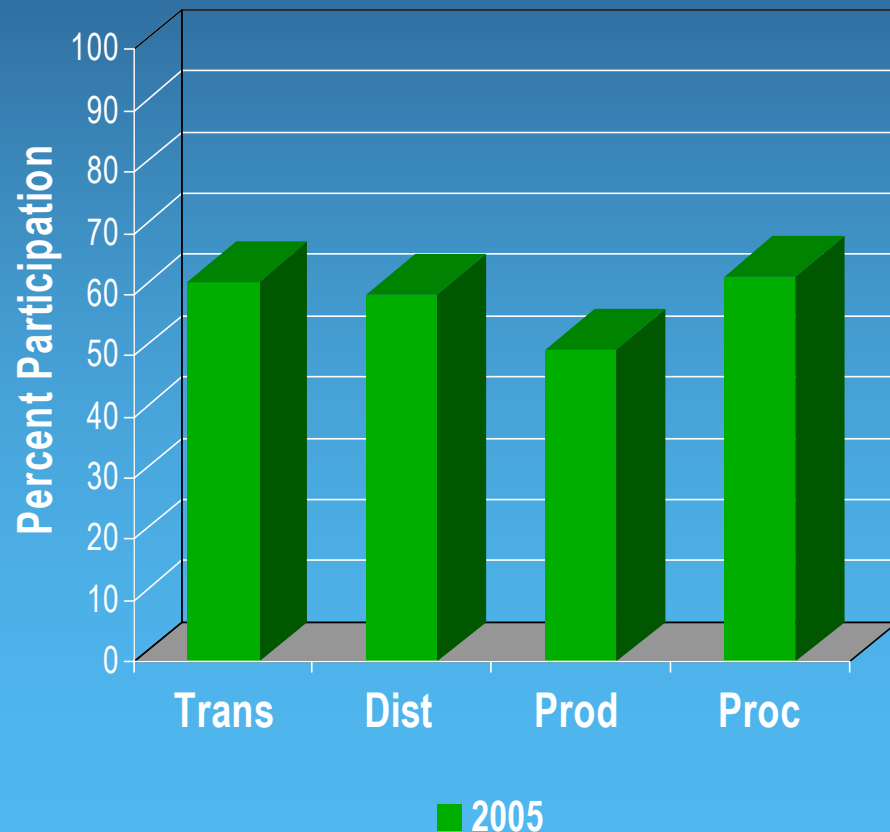
★ 117 Program Partners

- ★ 62% of transmission
- ★ 26 partners

- ★ 60% of distribution
- ★ 48 partners

- ★ 51% of production
- ★ 31 partners

- ★ 63% of processing
- ★ 12 partners



Production Sector Gas STAR Partners



Company	U.S. Production (Bcf)
BP	1278
ExxonMobil	999
ChevronTexaco	988
ConocoPhillips	625
Devon Energy	589
Shell Exploration and Production	516
Anadarko Petroleum	503
El Paso	470
Burlington Resources	409
Dominion Exploration & Production	346
EnCana	376
Marathon Oil	267
Unocal	263
Chesapeake Energy	246
XTO Energy	244

Gas STAR Partners
 Other Companies

Production Sector Gas STAR Partners



Company	U.S. Production (Bcf)
Apache	244
EOG Resources	238
Kerr-McGee	230
Occidental Petroleum	194
Williams	186
Newfield Exploration	184
Pioneer Natural Resources	208
Noble Energy	135
Westport Resources	117
Amerada Hess	92
Forest Oil	84
Questar	79
Pogo Producing	77

Oil and Gas Journal, September 13, 2004

 Gas STAR Partners

 Other Companies

★ Additional partners

- ★ Totalfinalself
- ★ Energen Resources
- ★ Quicksilver Resources
- ★ Murphy Oil
- ★ Houston Exploration
- ★ Torch Energy
- ★ Venoco
- ★ Hunt Oil

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)



1000 Louisiana Boulevard, Suite 1000
Washington, D.C. 20004-1097
202-462-6000

January 10, 2003

The Honorable Spencer Abraham
Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20545

Dear Mr. Secretary:

The Honorable Spencer Abraham
January 10, 2003
Page Two

Administrators aggressively work to eliminate any potential regulatory barriers to progress in these areas.

API's Climate Action Challenge program contains broad goals such as 100% of oil and gas sector membership developing GHG management plans. It also contains more targeted goals for those key cost-effective government programs, such as 100% participation in Natural Gas Star and CHP Challenge. Expanding participation in the Natural Gas Star program would further reduce methane emissions from our natural gas production - a critical low-CO2E fuel necessary for the economy's broader efforts to reduce its carbon's overall GHG intensity.

Our Climate Smart Challenge seeks long-term possibilities, such as developing low GHG emissions energy technologies, CO2 capture and sequestration technologies, and advancing the DOE FreedomCar program, which promises to significantly increase the energy efficiency of new vehicles while reducing new vehicle GHG emissions.

Finally, careful attention underlying all this is the API Climate Challenge: the estimation & Reporting Challenge. Estimating and reporting greenhouse gas emissions is extremely complex for most so that a generally robust, particularly for a highly integrated industry such as ours. Under our GHG Estimation and Reporting Challenge, we are aggressively developing a comprehensive GHG estimation protocol that can be used worldwide to produce standardized and comparable estimates of emissions from oil and gas industry operations - wherever they occur. This protocol is critical for us, since there is currently no reliable way to create our industry energy efficiency goal or other climate change actions to the President's 15 percent GHG intensity reduction goal. Over the next year, we will be developing the tools for measuring our progress toward our industry energy efficiency goal and how it relates to the President's GHG intensity goal. Additionally, as the protocol is adopted and as the data is carefully quality controlled to ensure accuracy and comparability, API will begin aggregating and reporting greenhouse gas emissions from our members' operations.

The attached document provides additional details about the API Climate Challenge Program. API and its members look forward to working with the Department of Energy and the rest of the administration on this complex and evolving issue of climate change and in addressing barriers that inhibit progress towards these goals.

Sincerely,

Red Cavaney
President and CEO



January 10, 2003

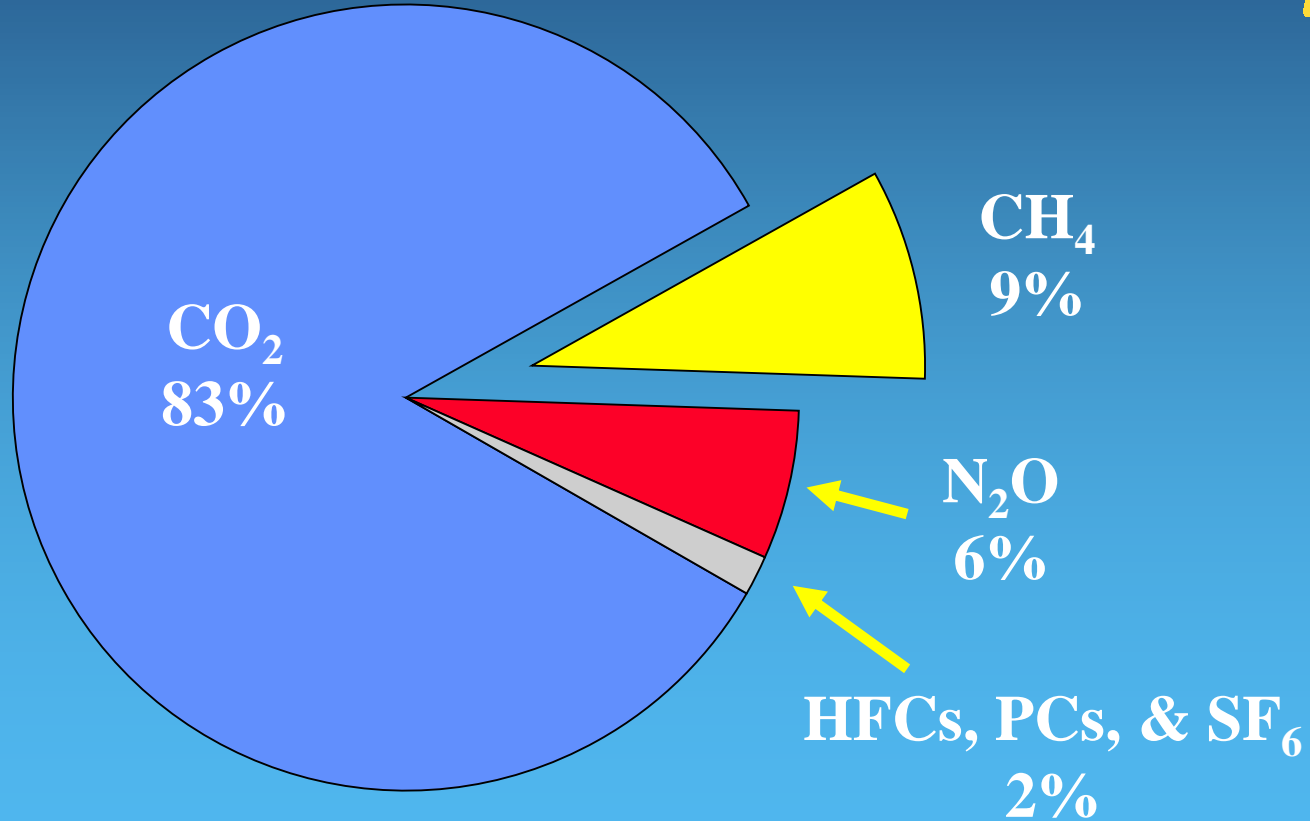
From: Mr. Red Cavaney
To: Hon. Spencer Abraham

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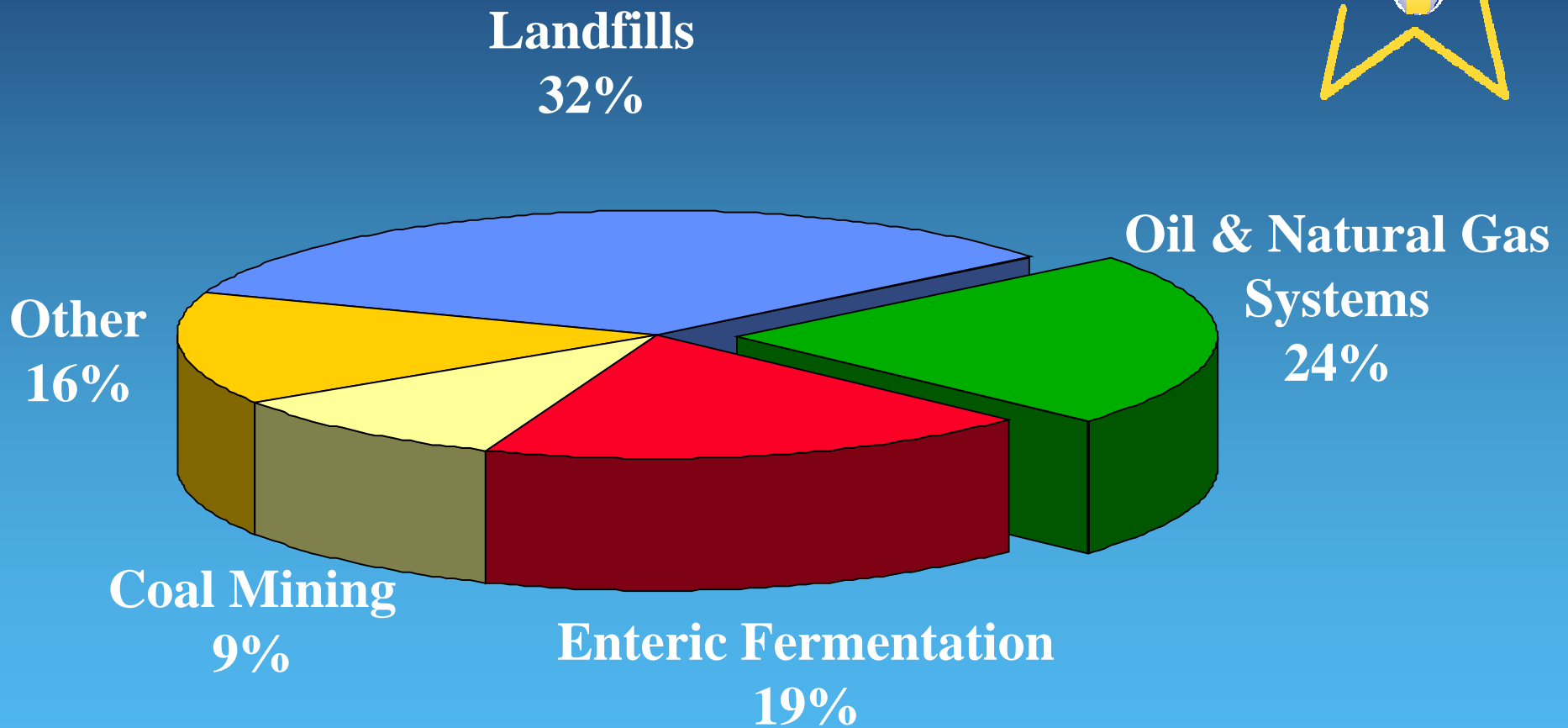
**Methane
Emissions in the
Oil and Gas
Industry**



U.S. Greenhouse Gas Emissions All Sources



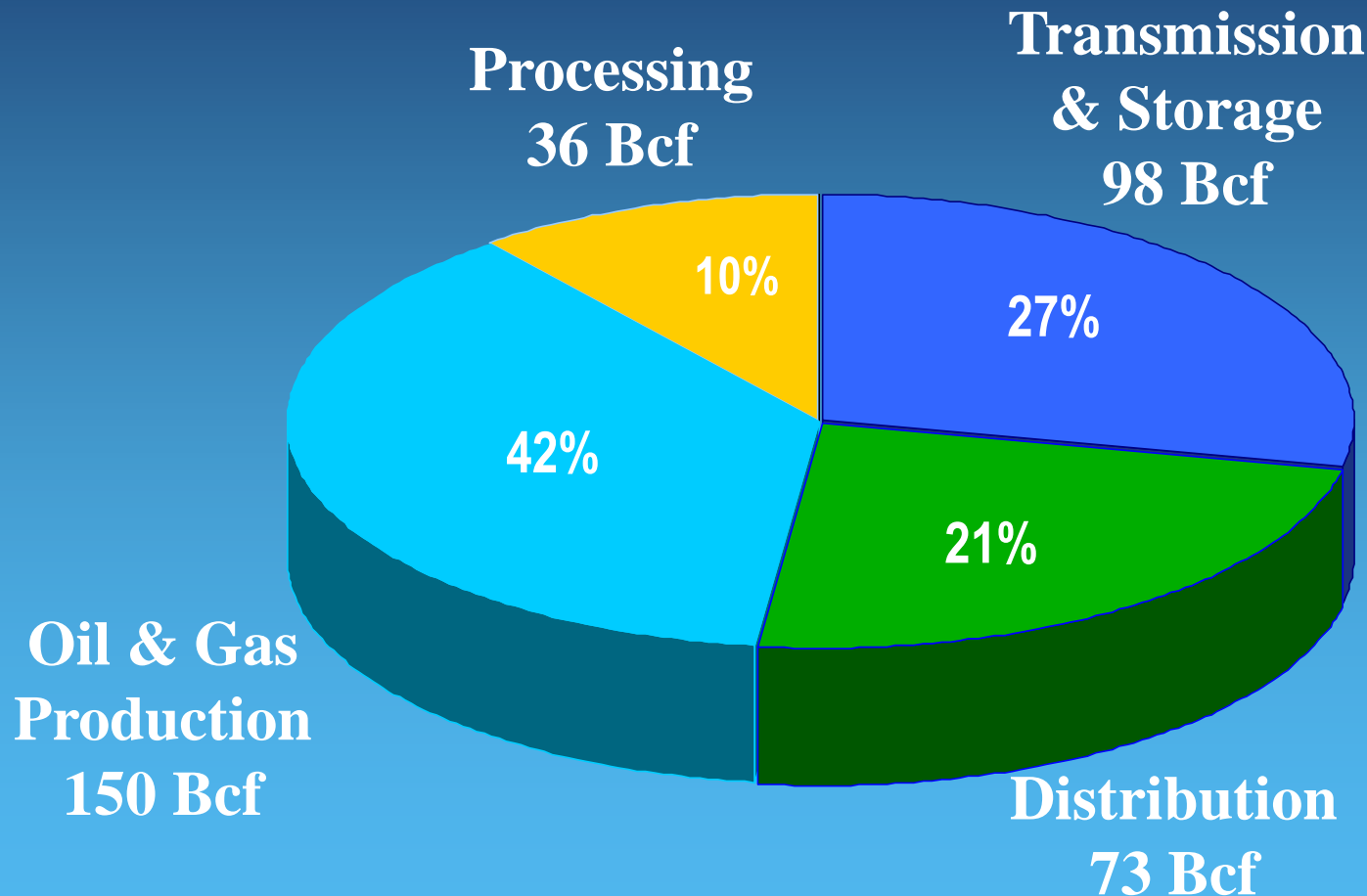
U.S. Greenhouse Gas Emissions Methane



U.S. Oil and Gas Industry Methane Emissions (Annual)



Bcf (billion cubic feet)



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

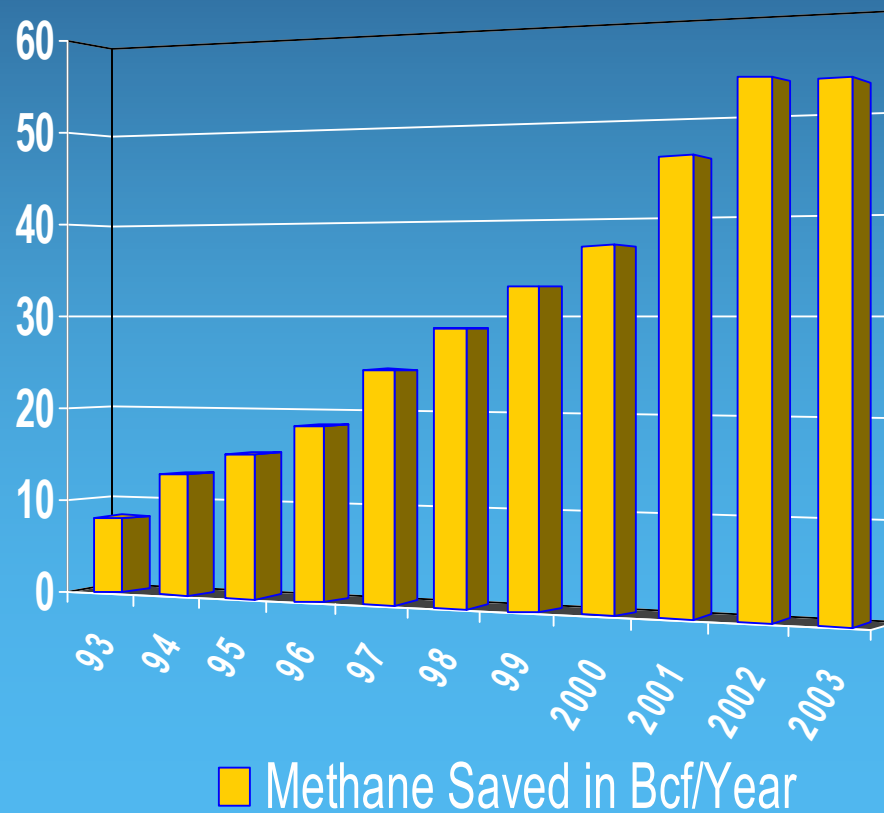
**Methane
Emissions
Reduction
Successes**



Natural Gas STAR Partner Accomplishments

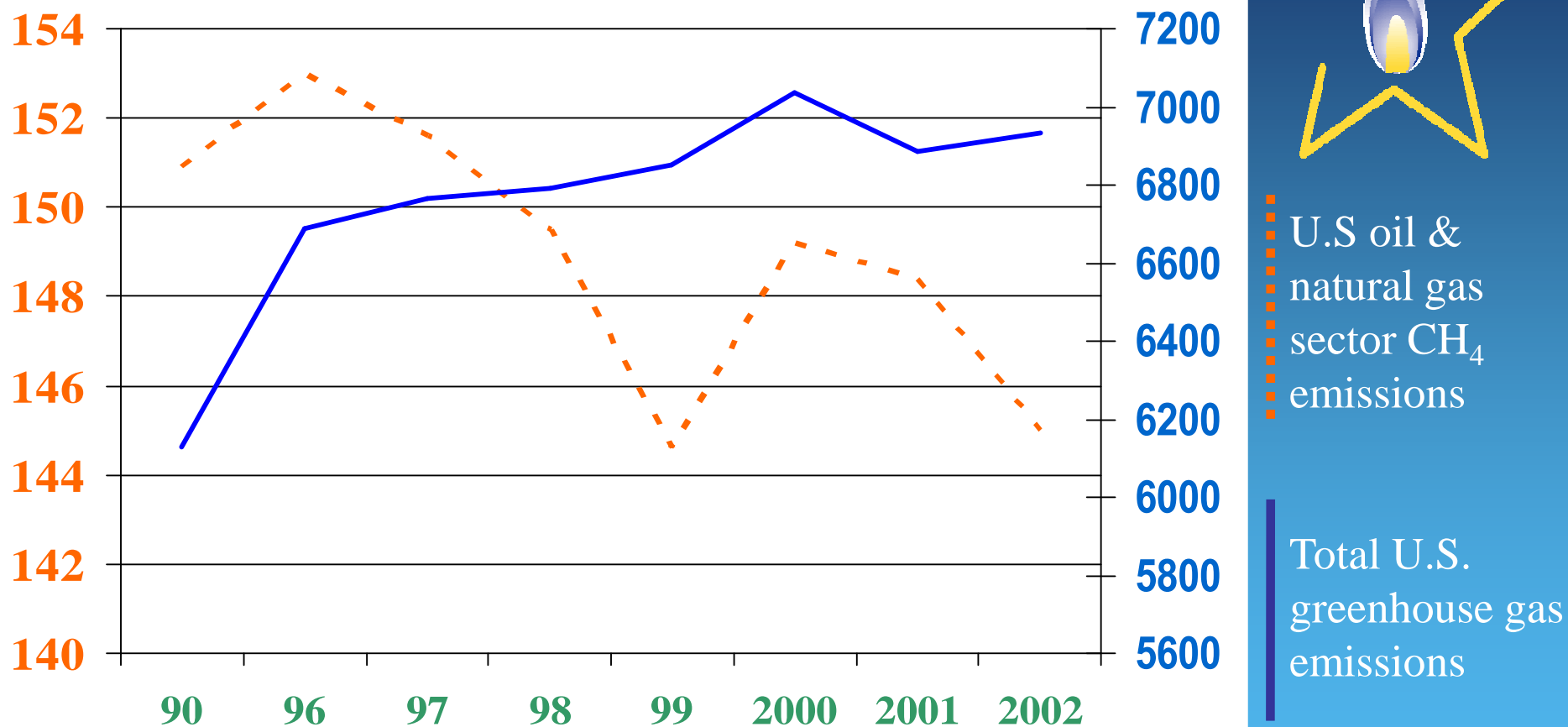


★ 338 Bcf in methane emissions reductions since 1993!



Natural Gas STAR Partner Accomplishments

Years 1990 - 2002

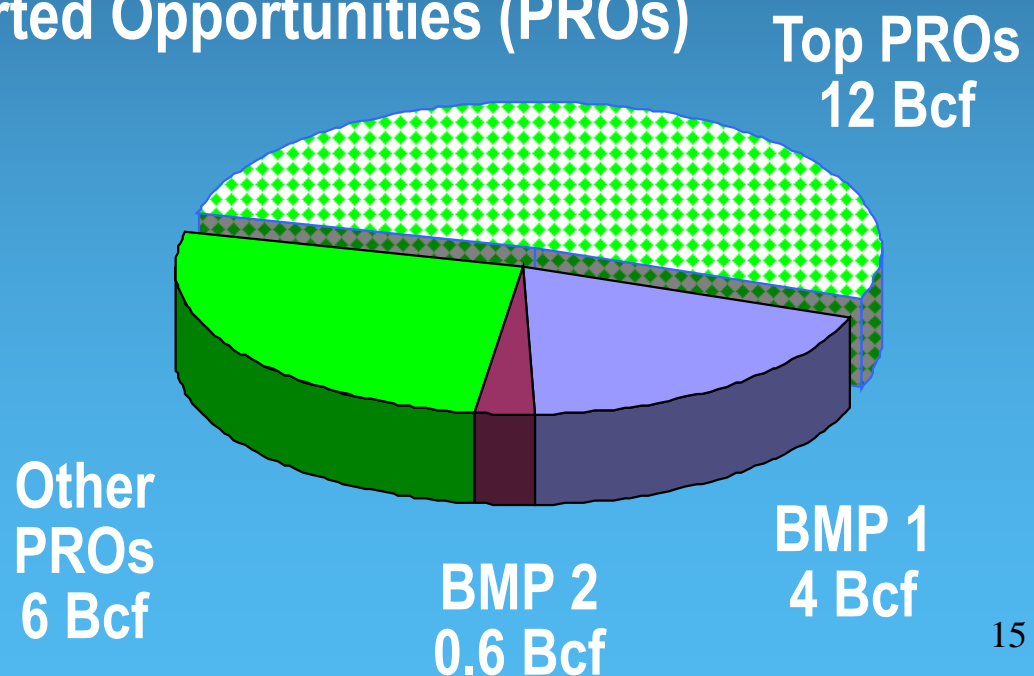


Units in teragrams of CO₂ equivalent (TgCO₂E)

2002 Production Sector Emissions Reductions



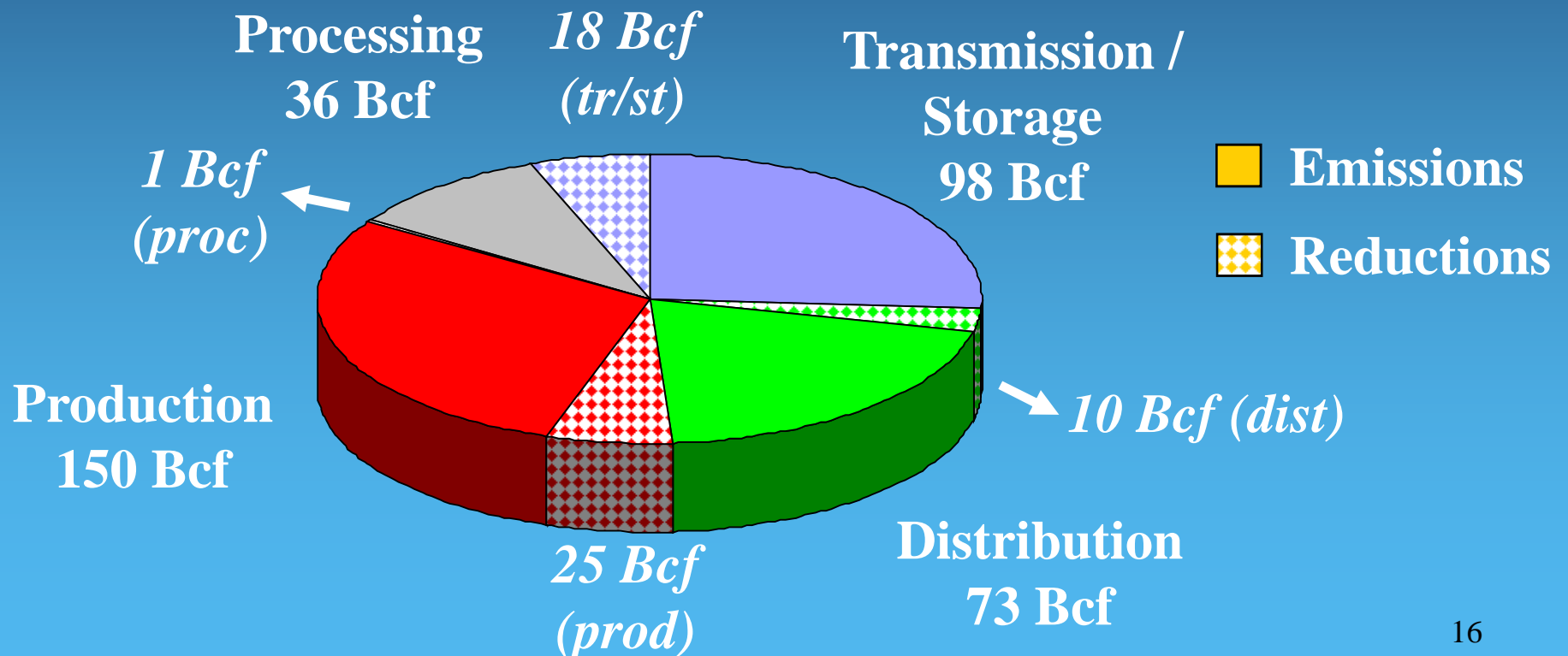
- ★ BMP 1: Replace high bleed pneumatic devices
- ★ BMP 2: Install flash tank separators on glycol dehydrators
- ★ BMP 3: Partner Reported Opportunities (PROs)
 - 80% of production sector reductions came from PROs



Natural Gas Industry Emissions



Methane emissions (solid) and reductions (*italics*) in each sector of the U.S. natural gas industry.



Top Production Sector PROs



- ★ Install Instrument Air System
- ★ Install Plunger Lift in Gas Wells
- ★ Pipe Glycol Dehydrator Emissions to VRU
- ★ Convert Gas-driven Chemical Pumps to Instrument Air
- ★ Eliminate Unnecessary Equipment
- ★ Install Vapor Recovery Units on Storage Tanks

Workshops



Annual Conference
October 25 -26, 2005
Houston, TX

White House “*Methane to Markets*” Initiative



- ★ 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 systems-related activities. The Program welcomes Gas STAR Partner participation.

Contact Information



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