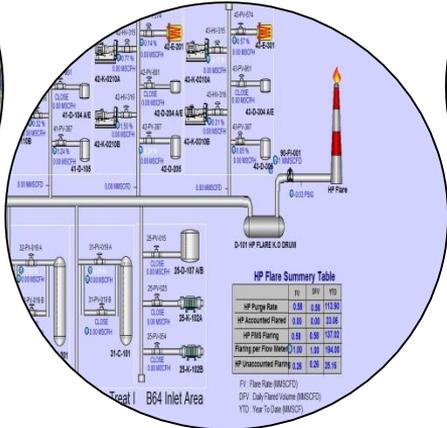


Saudi Aramco Methane Reduction Efforts

Flaring Minimization Program



Adel S. Al-Ghamdi
Saudi Aramco, P&CSD

Saudi Aramco Methane Reduction Efforts

Flaring Minimization Program

Master Gas
System



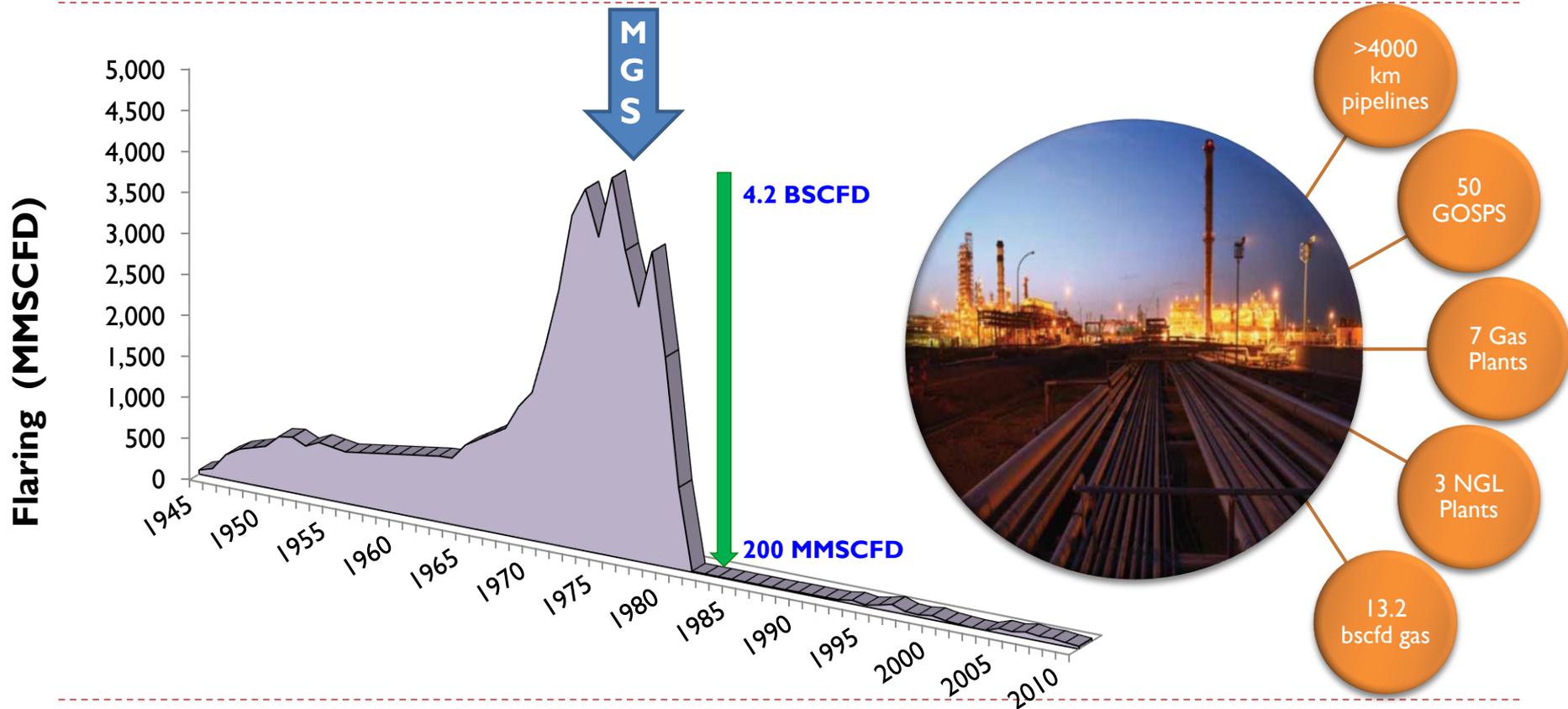
Corporate Flaring
Roadmap



Near Zero
Flaring



Master Gas System (95% Reduction)



Saudi Aramco Methane Reduction Efforts

Flaring Minimization Program

Master Gas
System

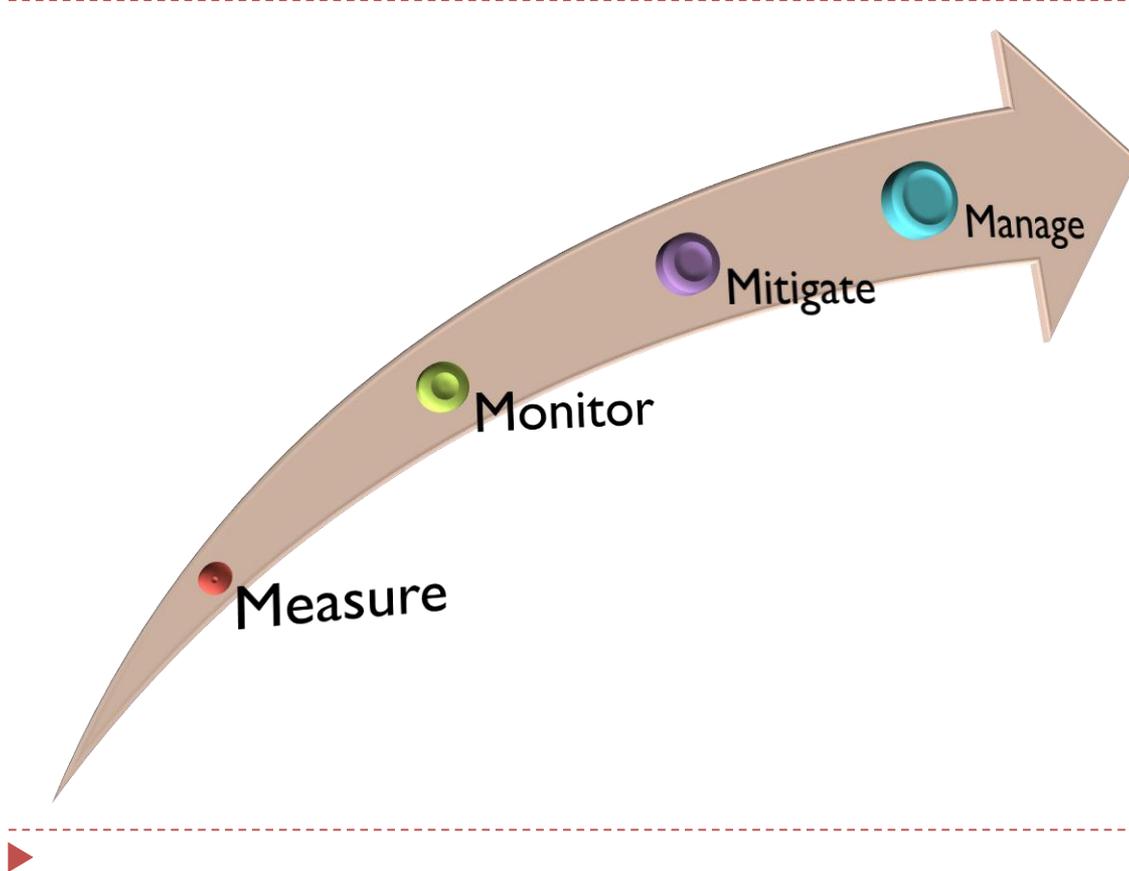
Corporate Flaring
Roadmap

Near Zero
Flaring



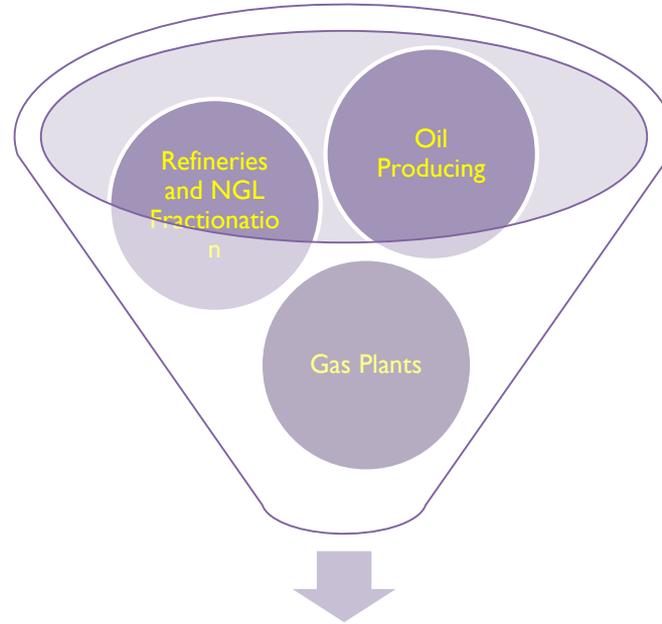
4.0 BSCFD

Corporate Flaring Roadmap



Corporate Flaring Roadmap - Monitor

PI flaring data



Corporate Flaring Monitoring System (CFMS) Database

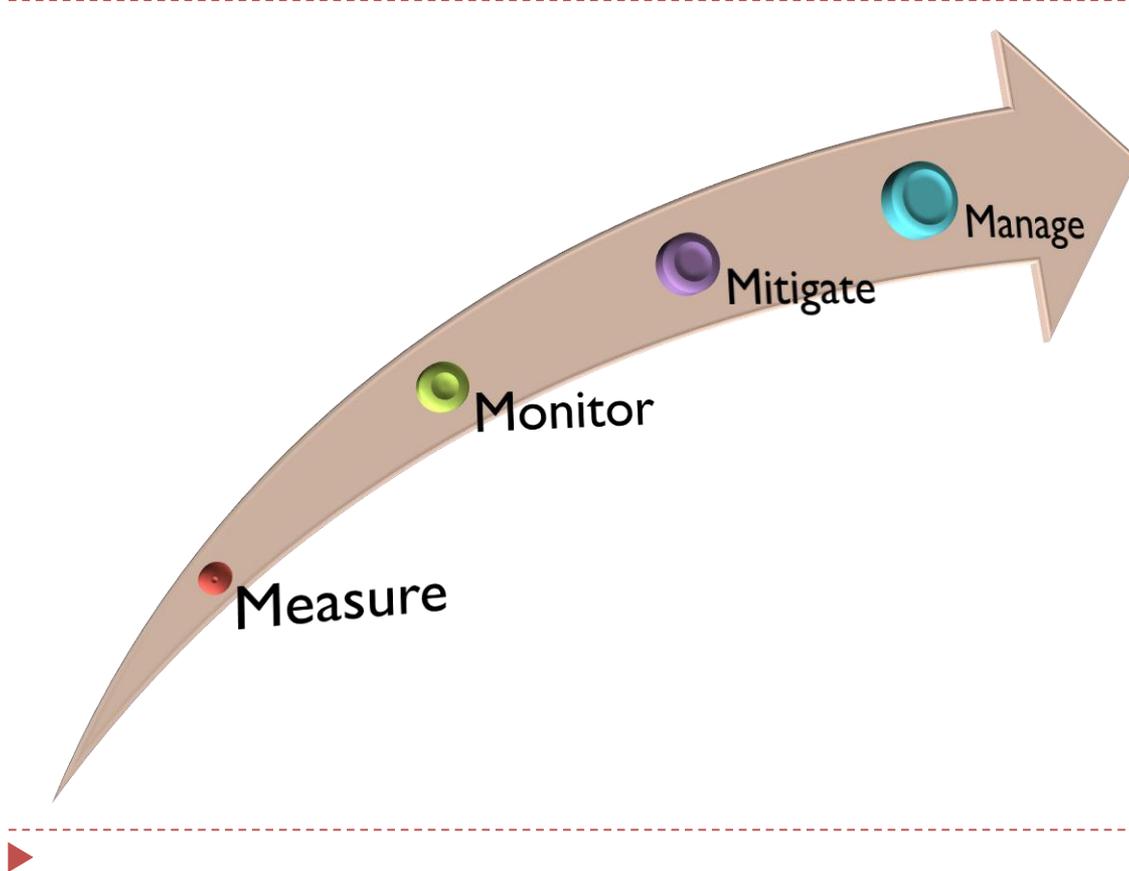
Corporate Flaring Roadmap - Mitigate

- ▶ Site Specific annual Flaring Mitigation Plan
 - ▶ Detailed description of Flare System
 - ▶ Details of flaring amount and reasons
 - ▶ Long and short term mitigation measures
- ▶ Approved by facility manager (SAES-A-102, SAEP-400)

Corporate Flaring Roadmap - Manage

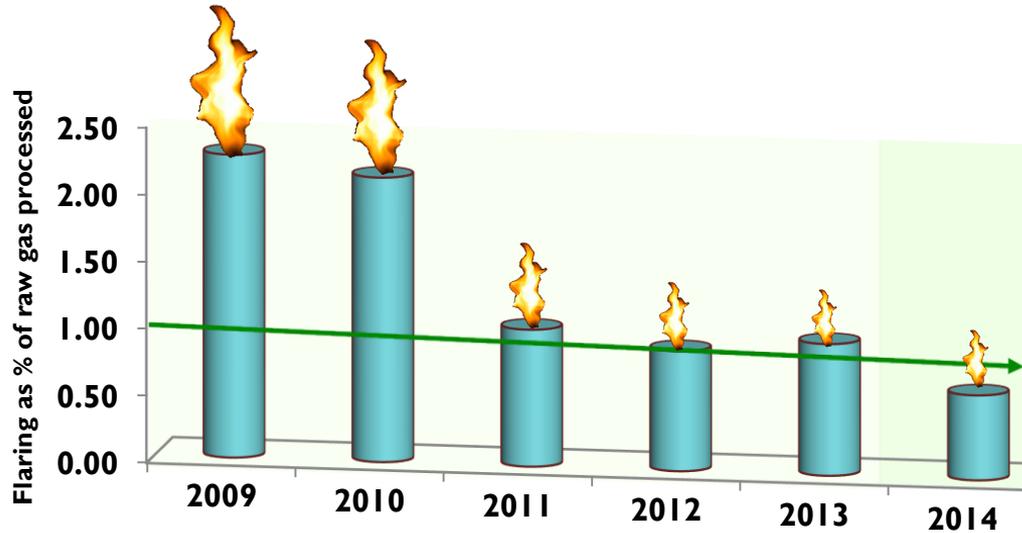
- ▶ For accountability, consistency and continuous improvement, the **Flaring Minimization Program** is governed by procedures and standards:
 - ▶ SAEP-400: Guidelines for Facility Flaring Minimization Plan
 - ▶ SAEP-400A: Guidelines for Real-Time Flare Monitoring System Development
 - ▶ SAES-A-102: Ambient Air Quality and Source Emissions Standards
- ▶ KPI Established to Manage Flaring Loss

Corporate Flaring Roadmap



Corporate Flaring Roadmap

- 50% Flaring Reduction (2012)
- 200 MMSCFD to 100 MMSCFD



Flaring Minimization Program

Master Gas System



4.0
BSCFD

Corporate Flaring Roadmap



100
MMSCFD

Near Zero Flaring



>\$400 MM Towards Near Zero Flaring

Upstream

ZDT
Onshore



ZDT
Offshore



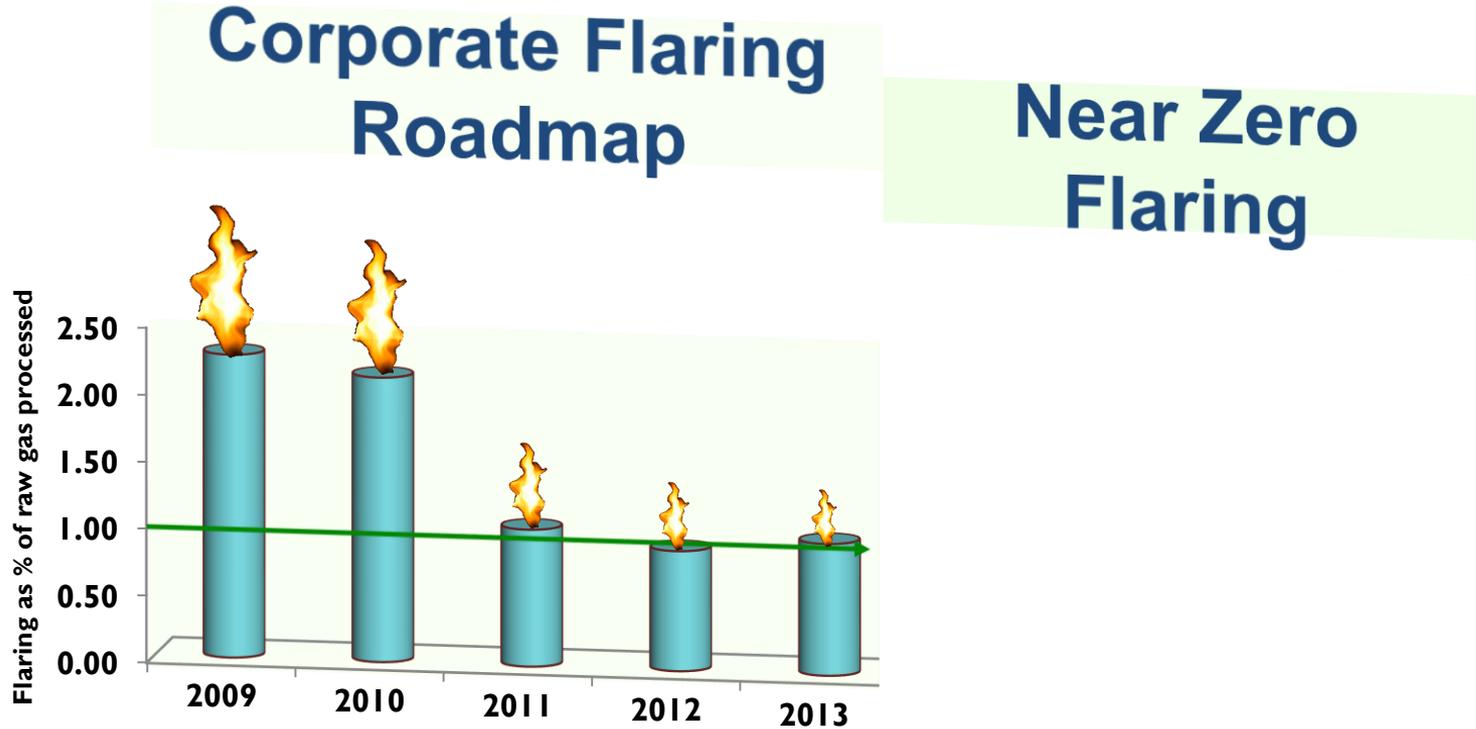
HIPPS



FGRS



Near Zero Flaring



Flaring Minimization Program

Master Gas System

Corporate Flaring Roadmap

Near Zero Flaring

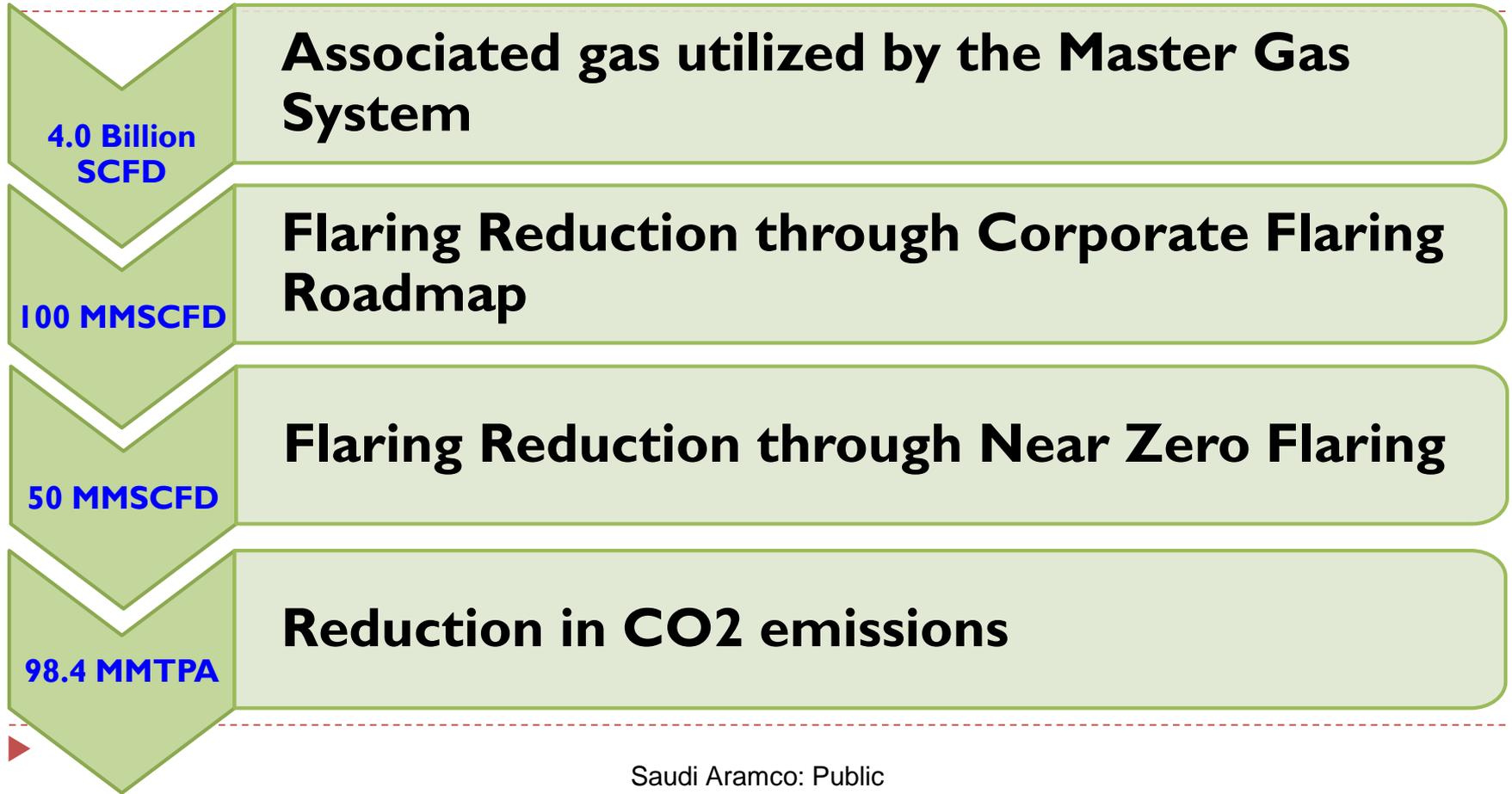


4.0
BSCFD

100
MMSCFD

50
MMSCFD

Achievements



Associated gas utilized by the Master Gas System

4.0 Billion SCFD

Flaring Reduction through Corporate Flaring Roadmap

100 MMSCFD

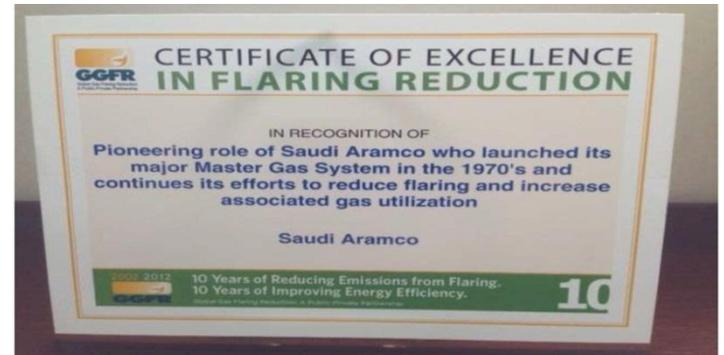
Flaring Reduction through Near Zero Flaring

50 MMSCFD

Reduction in CO2 emissions

98.4 MMTPA

Global Recognition



THANK YOU

The text "THANK YOU" is rendered in a bold, green, 3D sans-serif font. Each letter has a slight shadow and a highlight, giving it a three-dimensional appearance. Below the text is a soft, white-to-transparent gradient reflection. The entire composition is centered horizontally between two thin, dark grey horizontal lines that span the width of the image.
