



Agenda

- **Introductory Remarks**
- **Shell E&P U.S. Overview**
- **Shell's Global Commitments**
 - Sustainable Development
 - Climate Change
 - Global Minimum Standards
- **Shell E&P U.S. Methane Emissions**
- **Offshore Natural Gas Star Activities**
 - Technology & Hardware
 - Management Systems
 - Organizational Culture
- **Future Activities**

Operate in 3 states & GOM
Approximately 1700 employees
600+ Contract Companies

Rocky Mtn
100 wells
650 bpd
130 MMCF/day

**Yellowhammer
Plant**
200 MMCF/day

S. Texas
300 wells
4500 bpd
280 MMCF/day

Gulf of Mexico
200 wells; 18 facilities
500,000 bpd
2,000 MMCF/day

Shell E&P U.S. Overview

Shell Global Commitments



Climate Change

- **Measurement, reporting & verification** 
- **Energy management**
- **Ending continuous flaring & venting** 
- **Developing new technologies to capture and store CO2**
- **Accounting for carbon costs in new investments** 
- **Being a leader in trading GHG allowances in emerging international markets**

Sustainable Development



- **Social Responsibility (people)**
- **Economic Prosperity (profit)** 
- **Environmental Management (planet)** 

Global Minimum Standards

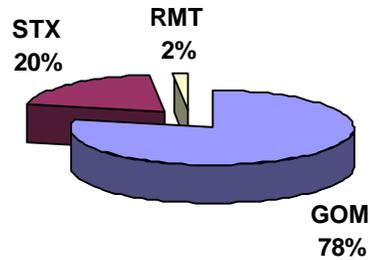


- **ISO 14001**
- **Energy management plans**
- **Ending continuous flaring & venting** 
- **Elimination of halons & CFCs**



Shell E&P U.S. – CH₄ Emissions

2003 Methane Emissions by Operating Area



2003 Total CH₄ Production = 781 BCF

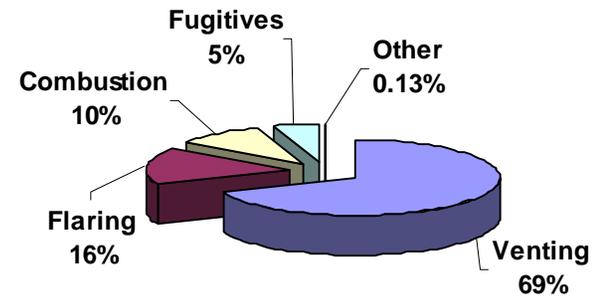
2003 Total CH₄ Emissions = 0.34 BCF

Emissions/Production = 0.04%

Gulf of Mexico Venting accounts for approx. 56% of total SEPCo methane emissions

Approximate value of Methane emitted = \$1.02MM

2003 Methane Emissions by Activity

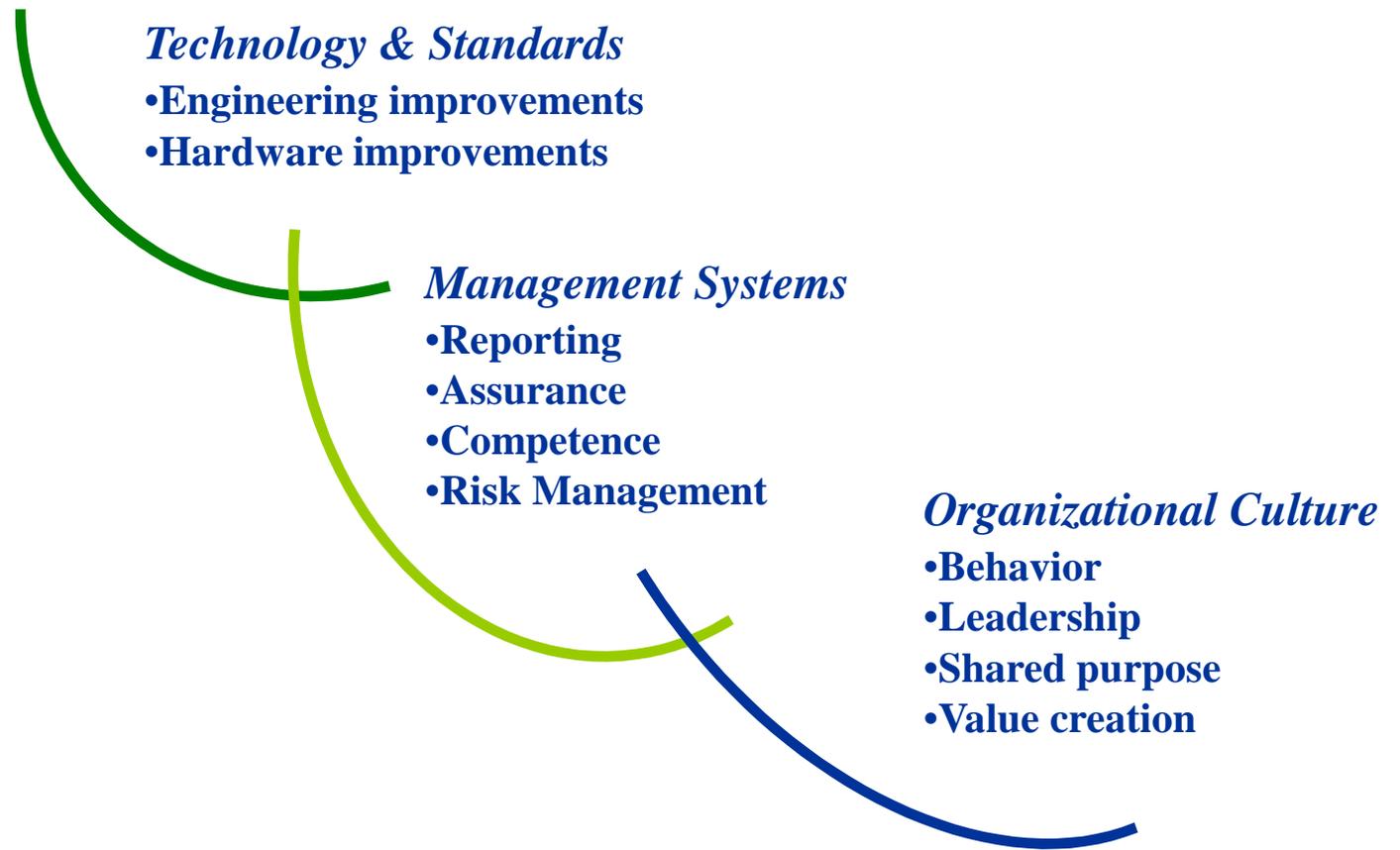




Offshore Natural Gas Star Activities

HSE Evolution

Emissions



Time



Offshore Natural Gas Star Activities

HSE Evolution

Emissions



- Vapor Recovery Units
- Dehy Recirculation Rates
- Flash Tank Separators



- Flaring & Venting Targets
- Leak Reduction Program
- Emissions Reporting & Verification



- Ursa Shut-in Planning
- Auger Flare “Re-light”
- Integrated Decision Making

Technology & Standards

- Engineering improvements
- Hardware improvements

Management Systems

- Reporting
- Assurance
- Competence
- Risk Management

Organizational Culture

- Behavior
- Leadership
- Shared purpose
- Value creation

Time



Ursa Shutdown Planning

- **Ursa production impacted by gas plant maintenance shutdown**
- **Goal “no oil curtailed and no flaring of gas”**
- **Shared purpose among platform, pipeline company, & plant**



Positive outcome:

- **No flaring**
- **1.2 BCF of methane not emitted**
- **\$3.7MM in benefit**



Auger Flare “Re-light”

- **Auger flare igniter malfunction; pilot extinguished**
- **In compliance with regulatory requirements**
- **Flare in essence became a vent**
- **Could wait until June/July shutdown or initiate temporary solution**

AUGER



Positive outcome:

- **Initiated temporary “re-light” of flare in April**
- **36 MMCF of methane not emitted**



Integrated Decision Making – 3D Success Tool

PLANET

Protect the environment

- Emissions to air: Project may increase emissions of greenhouse gases (-)
- Effluents & Spills: Project increases overboard water discharges; need to evaluate ways to minimize in next phase of project (-)

Manage resources

- Conservation/Efficiency: Increases recovery of a non-renewable resource (+ +)

PEOPLE

Respect and safeguard people

- Safety: Performed HAZID; Bowtie on souring (+); Need further work on materials & souring prediction (-)

Work with stakeholders & Value to customers

- Stakeholder engagement:
 - Regular technical mtgs w/ partners; subsurface workshop w/ partners (+)
 - Have not yet approached MMS, but not yet req'd
 - Need to engage partners on souring issues (-)

Benefits to the community

- Social impact: Extends field life and employment opportunities (+)

PROFIT

Robust profitability

- Some show stoppers and value erosion issues need to be addressed in next phase of project (-)

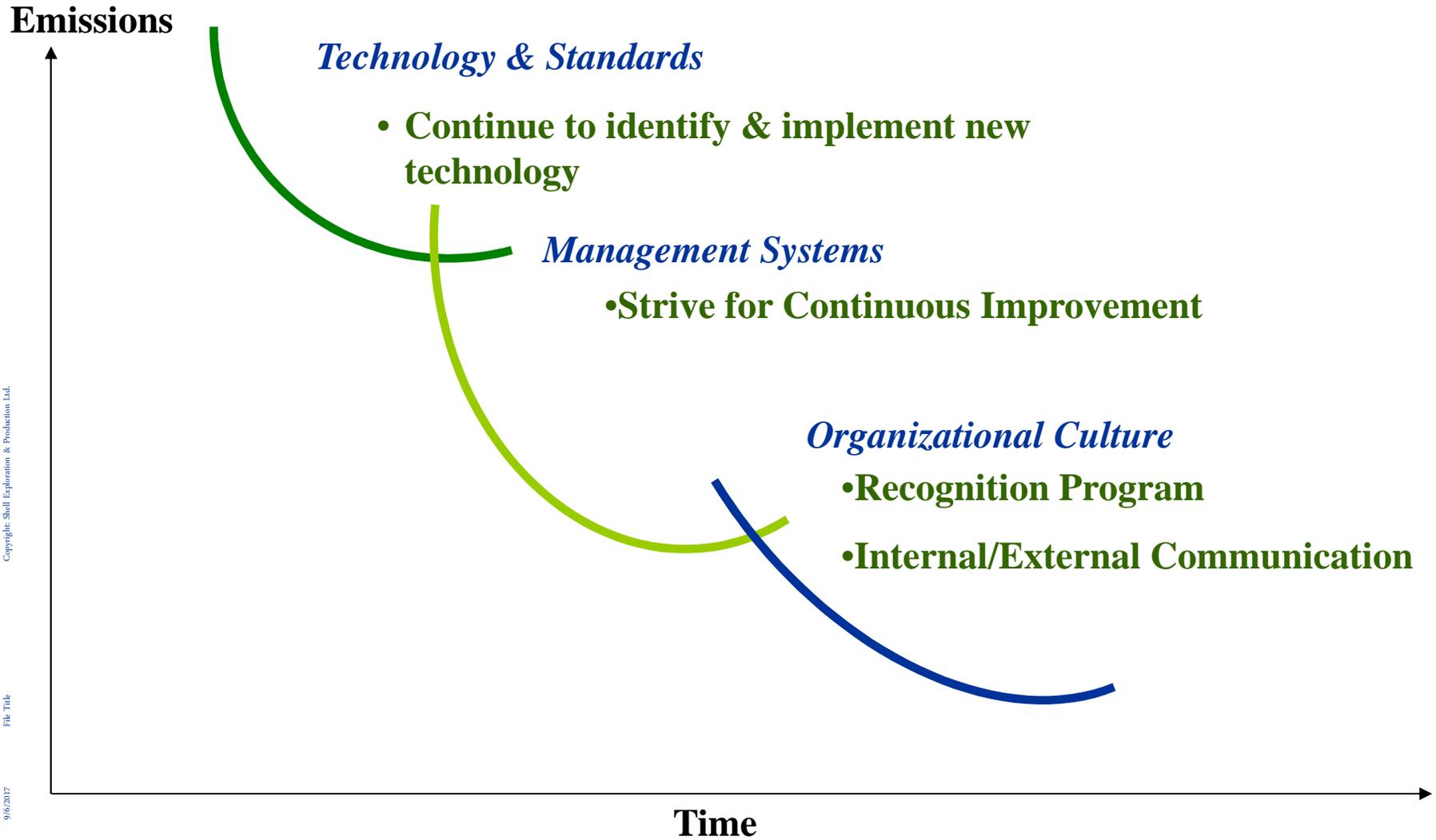
- **Developed SD evaluation tool for all projects**
- **Systematic assessment of People, Planet & Profits**
- **Includes anticipated emissions & reduction possibilities**
- **Embeds SD expectations**
- **Leads to more balanced decisions**

- **No alignment or SD not being considered**
- **Some alignment or serious concerns**
- **Considerable alignment; elements missing**
- **Full alignment with Project Objectives**

Future Activities



Continued Evolution





Questions?

