



RUBY CANYON ENGINEERING

# **Opportunities for Generating Carbon Credits from Oil & Gas Sector Projects**

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Presented by:

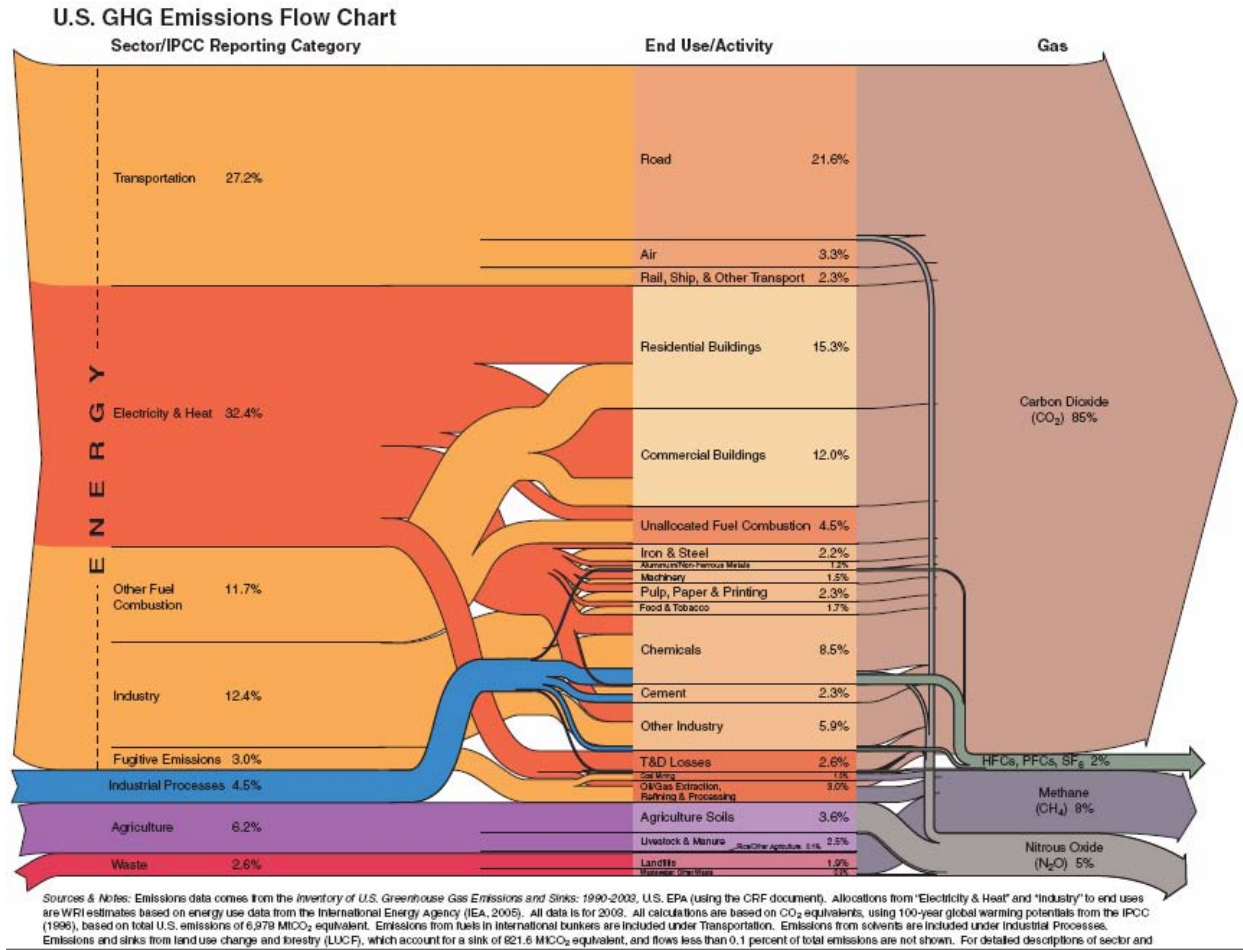
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# Questions About the U.S. Carbon Market within the O&G Sector

- How long will voluntary market last?
- Should you participate or wait for regulation?
- What is the point of regulation?
- GHG emissions reporting protocols
- Treatment of fugitive emissions
- What is the cost of carbon?
- Can price be passed through to end uses?

# O&G Inventory = 3% of U.S. Total



# What Should Companies Be Doing in Pre-Compliance Period?

- Identify GHG Emission Sources throughout Company via GHG Inventory
- Initiate a Emissions Management Program
- Identify Emission Reduction Projects
- New Methodology Development
- Register GHG Projects
- Use of Carbon Offset Incentives

# GHG Inventory Uncertainty

## – O&G unlike other energy-intensive industries:

- Thousands of emission sources for a single company
- Nearly all emissions are calculated and not measured
- Emissions profile could be 50% methane
- High uncertainty with use of fugitive methane emission factors
- GHG inventory not offset project quality (i.e. lack of methodologies)

## – Issues needing resolution:

- API and IPIECA emission factors may not be representative
- Remote locations of many facilities lead to lack of data collection
- Cost of fuel metering can be expensive
- Frequent changes and complex ownership

# Identify Emission Reduction Projects

- **Significant Number of Projects Developed in U.S. O&G Industry and Reported to EPA's GasStar**
  - Green well completions
  - Smart automation plunger lifts
  - Vapor recovery units for tanks
  - Low-bleed pneumatics
  - Solar-powered chemical pumps
  - Zero emissions dehydrator
- **None of the Above Project Types have Standardized Methodologies or Protocols**
  - Baseline or Performance-Based?

# Approved Methodologies

## UNFCCC-Approved

### Upstream:

- AM0009 - “Recovery and utilization of gas from oil wells that would otherwise be flared”
  - 19 projects (mostly India), 4 registered

### Midstream:

- AM0023 - “Leak reduction from natural gas pipeline compressor or gate stations”
  - 23 projects (nearly all Russia), 0 registered
- AM0037 - “Flare reduction and gas utilization at oil and gas processing facilities”
  - 5 projects (India & UAE), 2 registered

### Downstream:

- AM0055 - “Recovery and utilization of waste gas in refinery facilities”
  - 1 project (Argentina), 0 registered

# O&G Facilities Under a Cap & Trade Program

Some upstream gas facilities may be exempt from cap & trade programs

- Wellheads typically not included in Title V
- S.2191 – facilities < 10k tonnes CO<sub>2</sub>e
- S.2191 - defines as a covered facility as “*designed to separate natural gas liquids from natural gas*”
- Dingell-Boucher - facilities < 10k tonnes CO<sub>2</sub>e
- WCI – facilities < 25k tonnes CO<sub>2</sub>e
- AB32 - facilities < 25k tonnes CO<sub>2</sub>e (Phase 2)

*A significant amount of O&G emissions are not located at covered facilities as defined by current legislation!*



# O&G Sector Projects as Offsets

- Treatment of Fugitive Methane Emissions Unknown
  - GHG reporting rules of O&G Sector not defined
    - EPA GHG Reporting Rules – early 2009?
    - WRAP O&G Reporting Rules – late 2009
    - CCAR ?
- Early action credits not well defined by S.2191 or Dingell Boucher
  - EPA GasStar and DOE 1605b reporting may or may not qualify
- Baseline methodologies and performance standards are needed
  - Quantify and qualify emission reduction projects currently being deployed and planned for 2009 by O&G companies
- Platform for new methodology approval
  - Voluntary Carbon Standard 2007?
    - Project start-up dates must be post 2002
    - Only credits generated after March 2006 qualify
    - Issues surrounding financial additionality
    - Approval could take 9-12 months
    - Methodology must accompany an actual project
  - EPA Climate Leaders?, CCX?, CCAR?

# 2009 – Year to Set Precedent!

- Development of GHG Reporting Protocols
- Definition of Covered Facilities and Point of Regulations
- Qualifying of Offset Projects through Methodology Development