Opportunities for Generating Carbon Credits from Oil & Gas Sector Projects

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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 an 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 CO2e
- S.2191 - defines as a covered facility as “designed to separate natural gas liquids from natural gas”
- Dingell-Boucher - facilities < 10k tonnes CO2e
- WCI – facilities < 25k tonnes CO2e
- AB32 - facilities < 25k tonnes CO2e (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