



# Methane to Markets

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Methane to Markets Program  
Canadian Perspective

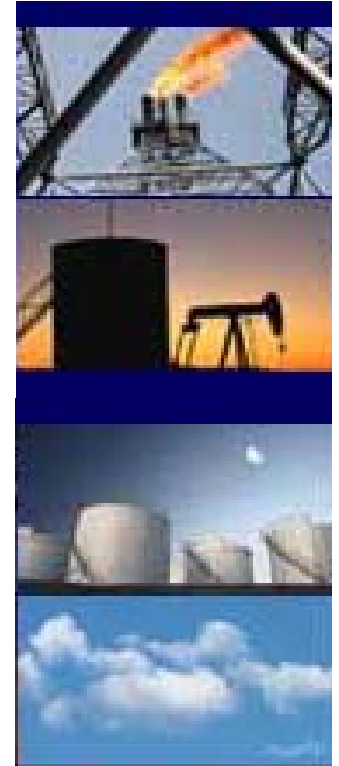
Energy Management Workshop for Upstream and  
Midstream Operations

January 17, 2007

# Overview

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- Methane to Markets Partnership
- Oil and Gas Technical Committee Opportunities for Canada
- Natural Gas STAR International



# Methane to Markets Partnership

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- International M2M Partnership launched November 2004
  - Seeking to champion cost effective methane emission reduction opportunities globally
- Canada joined July 2005
  - Canada has significant potential to contribute
- Current 19 member states include Kyoto and AP6 signatories

# Methane to Markets Partnership

- Advances recovery and use of methane as a valuable clean energy source
- Encourages development of cost-effective methane recovery and use opportunities in
  - coal mines
  - landfills
  - oil and gas systems and
  - agriculture (manure waste management)
- Private companies, multilateral development banks and other relevant organizations participate by joining the Project Network – over 350 organizations now participating
- 19 partner countries

<b>Argentina</b>	<b>Japan</b>
<b>Australia</b>	<b>Korea</b>
<b>Brazil</b>	<b>Mexico</b>
<b>Canada</b>	<b>Nigeria</b>
<b>Colombia</b>	<b>Poland</b>
<b>China</b>	<b>Russia</b>
<b>Ecuador</b>	<b>Ukraine</b>
<b>Germany</b>	<b>United Kingdom</b>
<b>India</b>	<b>United States</b>
<b>Italy</b>	





## Oil and Gas Technical Committee

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- Co-chaired by Mexico and Russia
  - Javier Bocanegra of PEMEX
  - Kaplan Basniev – Gubkin Russian State Univ.
  
- Canada has participated since first meeting in Tomsk, Russia September 2005
  - Canadian Project Network Partners fully engaged throughout
  - Canada recently appointed vice-chair



## Oil and Gas Technical Committee

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- “The main purpose of Oil and Gas Subcommittee activities is to **locate** and **promote** methane emissions **reduction** and **utilization** projects in the oil and gas sector”
  - Reasonable to assume that utilization should be in the most energy efficient way possible
  - Hence, energy efficiency and fuel gas optimization, along with fugitive’s reduction are in keeping with this stated objective



## Oil and Gas Technical Committee

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*Mission statement excerpts to which Canada can contribute internationally:*

- Develop project evaluation and development templates
  - CETAC-West eco-efficiency integrated audit and benchmarking protocol
    - Systematic
    - Strategic
    - Highly reproducible and verifiable



## Oil and Gas Technical Committee

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- Identify short, medium and long term projects and activities
  - CETAC-West eco-efficiency integrated audit and benchmarking protocol
  - Highly transferable to UOG unit operations domestically or internationally
  - Will ensure credible verification of opportunities and logical scheduling of implementation, and post audit monitoring for confidence
    - **Critical for developing budgets, technical and permit considerations, CDM/JI etc.**





## Oil and Gas Technical Committee

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- Identify methane emissions recovery and use opportunities
  - Available or developing technologies
    - **PTAC TERE and ARPC**
  - Available or developing best practices
    - **CETAC-West audit team unit operations optimization**
    - **CAPP, AEUB, EC – Fugitives BMP**
    - **AEUB Directive 60 – Flaring and Venting**



## Oil and Gas Technical Committee

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- Identify key barriers to methane emissions reduction project development
  - Economics
  - Technical
  - Cultural
- Abundant knowledge in Canada and the US
  - Much needed in some M2M Partner countries



## Emerging Canadian Opportunity

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- Minister Lunn's announcement January 17, 2007
- ***... "enforceable and achievable regulation"***
  - Enforceability will largely be the work of lawyers writing regulatory documents
  - Will require competent regulators



## Emerging Canadian Opportunity

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- ***...”enforceable and achievable regulation”***
  - Achievability can be established through credible, verifiable and reproducible evaluation protocols such as the eco-efficiency audit and benchmarking
  - Incentivization for demonstration and implementation of verified technology
  - Optimized investment of R&D (gov’t and industry) to develop implementable science-based regulation



## Emerging Canadian Opportunity

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*There is precedent for international uptake of “made in Canada” achievable regulation:*

- The World Bank Global Gas Flaring Reduction Initiative was largely modeled after AEUB Directive 60
  - R&D funded by CAPP, EC, NRCan-PERD was incorporated into this science-based directive

# Natural Gas STAR International Available to Canadian Industry

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- The Natural Gas STAR International Program is U.S. EPA's contribution to Methane to Markets
  - The Natural Gas STAR Program is a flexible, voluntary partnership between EPA and the U.S. oil and natural gas industry designed to cost-effectively reduce methane emissions from natural gas operations.
- Natural Gas STAR helps companies implement methane-saving projects through technology transfer international operations to voluntarily reduce methane emissions
- Over 110 U.S. natural gas companies and 7 international companies

# Natural Gas STAR International

- Seven Charter Partners



- Participation involves:
  - Developing an implementation plan
  - Identifying and implementing cost-effective projects
  - Reporting your success
- Support from Gas STAR International is available to:
  - Identify top cost-effective methane reduction project opportunities
  - Conduct project pre-feasibility analysis
  - On-site training and workshop development

# Natural Gas STAR - Key Components

- Technology transfer
  - Provide technical information and training
  - One-on-one assistance to identify and implement cost-effective methane emission reduction projects
  
- Reporting
  - *Maintain records of voluntary actions*



Technology Transfer



Workshops

Annual Reports





## Contact Information

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