United States of America GMI Oil & Gas Update 12 May 2014

Scott C. Bartos US Environmental Protection Agency GMI O&G Subcommittee Meeting San Antonio, Texas USA





US Partner Achievements

- Natural Gas STAR and Natural Gas STAR International have nearly 130 partner companies—21 of which are international partners
- U.S. oil and gas partner companies reduced methane emissions by approximately 66 Bcf in 2012
- International partner companies reduced methane emissions by 7.6 Bcf in 2012



Natural Gas STAR Partnership

- Welcoming New Partners:
 - Odessagaz (Ukraine)
 - Cairn India Ltd.
 - Kuwait Oil Company
 - Surtigas S.A. (Colombia)



Collaboration Highlights

Indonesia

- Star Energy joined in 2011
 - Measurement studies conducted at Kakap field offshore platforms (February, 2012) and FSO (September, 2012)
 - Major opportunities include platform flare gas recovery (being actively pursued by Star) and tank gas recovery on the FSO

- VICO Indonesia joined in May 2013

- Measurement studies conducted at four production facilities at Badak and Nilam assets in September, 2013
- Major opportunities include flare gas recovery, use of instrument air for pneumatic devices, and reciprocating compressor rod packing replacement





Collaboration Highlights (2)

- India
 - ONGC
 - Hosted 1st All India NGSI Workshop New Delhi 2013
 - GAIL
 - Developing implementation plan with GAIL
 - Supporting pilot study of wet seal compressor gas capture system
- Thailand
 - PTT
 - Completed 1st emission measurement study of PTT's onshore production and natural gas vehicle fueling system - September 2013
 - Follow up study / field training planned for 2014



Collaboration Highlights (3)

- Colombia
 - Ecopetrol
 - Developing directed inspection and maintenance training program
 - Estimating emissions from casinghead gas
 - Supporting the design of a VRU capture system
- Kuwait
 - Conducting a desktop study for estimating emissions for Kuwait Oil Company
- Ukraine
 - Conducting a desktop study for estimating emissions for Odessagaz



Outreach and Training

EPA's NG STAR Program hosted Technology Transfer Workshops

- Two recent domestic workshops
 - Production Technologies Colorado and Utah, February 2014
 - Detailed information on the workshops are posted at: <u>http://www.epa.gov/gasstar/workshops/techtransfer/index.html</u>
- International
 - GMI Oil and Gas Study Tour in Texas May 2014
 - Program and Technical Symposium in Saudi Arabia, Kuwait, and Qatar – 2013
 - GMI Outreach Kazakhstan Workshop with Carbon Limits 2014
 - EPA and LEMIGAS will jointly conduct the 3rd Asia-Pacific GMI Oil & Gas Workshop – September 2014
 - Regional Workshop in the Middle East September 2014
 - 2nd Annual All India Workshop TBD 2014





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www.globalmethane.org

http://www.epa.gov/gasstar/international/index.html

http://www.epa.gov/gasstar/tools/recommended.html

