

## METHANE TO MARKETS

### UK Goals – Short, Medium and Long Term

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## NEL Study

Early 2006 - DTI  
commissioned study by  
National Engineering  
Laboratory (UK)

Terms of Reference:

- Identify current sectoral levels of CH<sub>4</sub> emission from UK O&G sector
- Consider scope for and cost of reduction strategies
- Suggest short-, medium- and long-term goals in light of the above

## Data Sources



- Environmental Emissions Monitoring System (EEMS), administered by UK Offshore Operators Association
- UK National Atmospheric Emissions Inventory, administered by AEA Technology (former Government Agency)
  - Data used to report to UN Convention on Climate Change
  - Format specified by Intergovernmental Panel on Climate Change (IPCC)
  - Stated uncertainty of  $\pm 20\%$

M2M O&G Subcommittee, Villahermosa (Mexico), 27/04/06



## Conclusions (1)



- UK responsible for approx. 0.7% of all anthropogenic emissions of CH<sub>4</sub> with approx. 1% of world's population.
- UK O&G sector produces approx 15% of total UK CH<sub>4</sub> emissions.
- In 2003, CH<sub>4</sub> emissions from offshore O&G activities contributed only 1% of total UK CH<sub>4</sub> emissions. Overall, upstream O&G emissions of CH<sub>4</sub> accounted for 2.7% of total UK CH<sub>4</sub> emissions.

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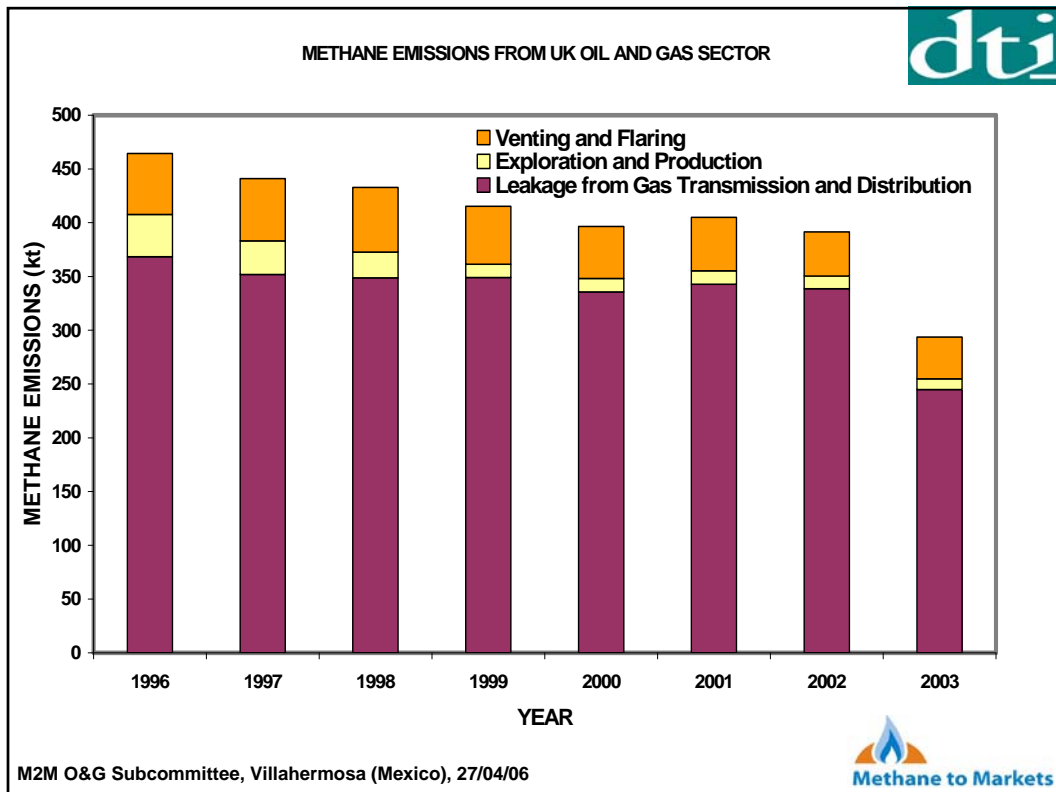


## Conclusions (2)



- Reductions in CH<sub>4</sub> emissions from UK O&G sector between 1995 and 2004 are largely attributable to reductions in emissions from National Transmission System (NTS).

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## Conclusions (3)



- Pipeline leakage from NTS remains by far single most significant source of CH<sub>4</sub> emissions in UK O&G sector – 13% of total UK CH<sub>4</sub> emissions.
- Venting and flaring are the largest sources of CH<sub>4</sub> emissions from UK upstream O&G activities – a large %age of total emissions comes from a small number of ageing offshore installations.
- Quality of available data is poor and is generally based on use of emission factors. NTS uncertainties may be in the region of  $\pm 40\%$ . Poor data quality is not a problem unique to the UK!

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## UK Targets – Short Term (1)



- Produce sectoral breakdown of UK CH<sub>4</sub> emissions and review methodologies (DONE!)
- Initiate stakeholder awareness programme; need for this was highlighted during NEL study. UK Offshore Operators' Association evidently unaware of M2M!
- Consider ways in which the quality of data could be improved (Possible approach based on uncertainty-based models and use of metered inputs and outputs).

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## UK Targets – Short Term (2)



- Survey extent to which vapour recovery systems used offshore and at loading terminals (STARTED!)

## UK Targets – Medium Term



- Encourage use of vapour recovery systems used offshore and at loading terminals, highlighting possible economic and environmental benefits.
- Investigate capability and reliability of existing measurement technologies for verifying reductions in CH<sub>4</sub> emissions. The ability to quantify these to a given uncertainty level is likely to be a prerequisite for inclusion of CH<sub>4</sub> in any future trading schemes at EU level or wider. (Possible UK funding from DTI Flow Programme.)

## UK Targets – Long Term



- Continue to support M2M partnership.
- Continue to implement NTS National Grid Programme that has delivered substantial reductions in CH<sub>4</sub> emissions.