A new partnership, led by the USA, is funding ways to make use of methane

The USA has accepted that human activities are causing global warming. Global temperatures could rise by up to 6°C in the 21st century, which would lead to an 88cm 3ft) sea level rise, threatening 100 million people. Greenhouse gases (GHG) have increased 10 percent since 1990.

The USA has not signed the 1997 Kyoto Protocol for a 5.2 percent reduction in GHG below 1990 levels by 2008-12. It is, however, now focusing on methane.

Carbon dioxide is the main GHG emitted, followed by methane - a hydrocarbon that is the primary component of natural gas. It is a short-lived GHG with an atmospheric lifetime of approximately 12 years compared to over 100 years for carbon dioxide. Also, methane is 23 times more potent as a GHG, kilogram for kilogram, than carbon dioxide. The balance of the input rate and the removal rate determines atmospheric concentrations of GHG. There will be a greater impact by concentrating on methane in the medium-term because it is shortlived and has a high global warming potential (GWP).

President Bush is keen to concentrate on methane, for the above environmental reasons, and also because methane can be combusted, generating energy and income, and saving fossil fuels from being burnt. Many methane emission sources are small, localised and can be used to the advantage of indigenous people.

Methane is emitted from a variety of both anthropogenic (humaninfluenced) and natural sources. Anthropogenic emission sources include coal mining, natural gas and oil systems, landfills and agriculture. Some 60 percent of methane emissions come from anthropogenic sources, with around 40 percent from natural sources. Globally, China,

India, the USA, Brazil, Russia and the Eurasian countries are responsible for almost half of these anthropogenic methane emissions.

President Bush announced the Methane to Markets Partnership (hereafter referred to as the Partnership) in a statement on 28 July 2004. This was announced as a new and innovative programme to increase energy security, improve environmental quality and reduce greenhouse gas emissions throughout the world.

Delegations from 14 countries met in Washington at a ministerial meeting in November 2004 and signed voluntary Terms of Reference to implement the objectives of the Partnership. These establish a framework for voluntary cooperation and do not create any legally binding obligations between or among the partners. Each partner is expected to conduct the activities contemplated by the Terms of Reference in accordance with the laws under which it operates and the international instruments to which it is a party.

The Partnership is an action orientated initiative to reduce global methane emissions. Its objective is to annually reduce methane emissions by up to 50Mt carbon or to recover 500 billion cubic feet of natural gas by 2015. These measurable results, if achieved, could lead to the stabilisation or even declining levels of global atmospheric concentrations of methane. The Partnership calculates that this reduction will be equivalent to removing 33 million cars from the road, or planting 55 million acres of trees, or eliminating emissions from 50 500MW coal-fired power stations. The combustion of the methane would heat 72 million households.

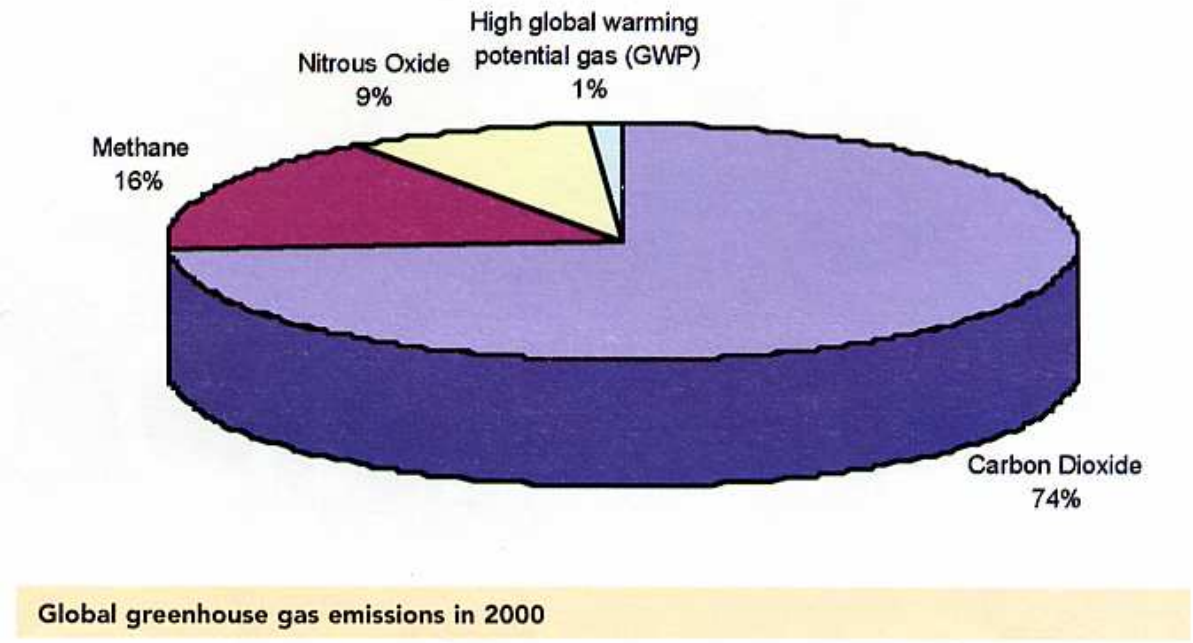
The Partnership serves as a framework to promote cost-effective, near-term methane recovery internationally through partnerships among developed countries, developing countries and countries with economies in transition.

The purpose of the Partnership is to create a voluntary, non binding framework for international cooperation to advance the recovery and use of methane as a valuable clean energy source to increase energy security, enhance economic growth, improve air quality, improve industrial safety and reduce greenhouse gas emissions throughout the world. The Partnership will focus on the development of strategies and markets for the recovery and use of methane through technology development, demonstration, deployment and diffusion, implementation of effective policy frameworks, identification of ways and means to support investment and removal of barriers to collaborative project development and implementation.

The partners will seek to identify and promote areas of bilateral, multilateral, and private sector collaboration on methane recovery and use, initially in the areas of coal mining, oil and natural gas systems, and landfills. Other areas, such as developing improved emissions estimates and identifying the largest relevant emission sources to facilitate project development will be promoted. Cost effective opportunities to recover methane emissions for energy production and identify potential financing mechanisms to encourage investment will also be sought.

Each partner will appoint two representatives to the Partnership's Steering Group and further countries may be added by consensus of the steering committee. It will be responsible for guidance and assessment of area-specific activities and engaging representatives of the private sector, development banks, researchers and other relevant governmental and non-governmental organisations. Its actions will include developing reliable systems to monitor methane emissions and identify emission sources, identifying and undertaking cost-effective projects that capture and use - as a clean energy source - methane emissions from coal mines, oil and gas systems, landfills and other sources, identifying and removing barriers to project development and strengthening energy markets to support energy recovery and use. The USA has initially allocated $53m over five years to fund the Partnership and initiate projects. ▌

Visit the the www.methanetomarkets.org web site.



Global greenhouse gas emissions in 2000

TERMS OF REFERENCE OF THE PARTNERSHIP

- Identify and address barriers to project development and improve the legal, regulatory, financial, institution a , technological and other conditions necessary to attract investment in methane recovery and utilisation projects
- Identify and implement collaborative projects aimed at addressing specific challenges to methane recovery, such as raising awareness in key industries, removing harriers to project development and implementation, identifying project opportunities and demonstrating e deploying technologies
- Foster cooperation with the private sector, research organisations, development banks arid other relevant governmental and non-governmental organisations
- Integrate and coordinate Partnership activities with related activities and initiatives
- Support the identification and deployment of best management practices n the recovery and use of methane
- Work to improve scientific understanding and certainty in relation to the recovery and use of methane.
- Develop collaborative action plans that outline a series of concrete activities and actions that directly support the core goals and functions of the Partnership
- Develop and implement a process for evaluating progress and reporting results.