The Importance of Policy in Fostering Landfill Gas Development:  
*Results from a New IEA Study*

*Methane to Markets Meeting, Monterrey Mexico*  
*January 2009*
Content

- Background
- Barriers to LFG use
- Policy tools and solutions in use globally
- Lessons learned
International Energy Agency

Goals:

- energy security
- environmental protection
- economic growth

Activities:

- co-ordinates efforts to ensure energy security
- conducts policy analysis for G8 and member countries
- compiles energy statistics
- reviews energy policies & programs
- convenes, mobilizes science & technology experts

In support of the G8 Plan of Action
A New Energy Revolution: Cutting Energy-Related GHG Emissions

Source: IEA, Energy Technology Perspectives (2008).

We need a portfolio of solutions, including methane capture, to meet our GHG goals

In support of the G8 Plan of Action
Methane Emissions from Solid Waste (2005-20)

MSW-related methane emissions are expected to grow most in developing nations

IEA’s Methane Recovery Work

- Analysis on costs and benefits
  - Chapter in ETP 2008 publication

- Targeted reports on specific issues/ countries
  - Coal mine methane at medium-to-small mines in China (report February 2009; workshop April 2009)
  - Coal mine methane regulatory issues in Russia (report and workshop April 2009)
  - Turning a Liability into an Asset: Landfill Methane Utilisation Potential in India (report August 2008)
  - Global LFGE policy review (this report)
  - Global policy report (May 2009)
IEA Study on LFGE Policy

- **Purpose:** to study variety of policy tools being used to address LFGE barriers around the world
- **Sources:** interviews, IEA RE and EE policies and measures database
- **Part of larger IEA effort to raise awareness about energy sector methane sources and solutions**
Regional Differences in LFGE

- No surprises here: developed countries methane emissions are larger than developing countries
  - Sanitary landfilling practices
  - Larger sites
- Most industrialized countries have LFG regulations
  - China has new regulations
- Proper waste management is the first step to LFG recovery and use
  - Laws enacted; lack of enforcement a challenge
Barriers to LFG Use

- Higher initial capital costs
- Electrical system interconnection
- Lack of awareness among waste disposal professionals, government
The Importance of Policy

- Those countries with greatest growth in biogas have had the most aggressive policies
  - Germany, Portugal, Czech Republic and Luxembourg: feed-in tariffs
  - UK and Italy: quota system with tradable green certificates
  - USA: tax credits, also state policies on interconnection and RE portfolio standards
Policy Tool: Financial Incentives

- A variety of incentives can contribute to offset higher capital costs
- GHG sales revenues
  - Several Clean Development Mechanism projects in China, India
  - However, need to balance LF regulation with CDM goals
  - Much more could be done here
Policy Tool: Feed-in Tariffs

- Over 10 countries use FITs to spur biogas development (including LFGE)
  - Offers dedicated, predictable funding guarantee
  - Facilitates interconnection with electricity grid
  - FITs often lowered over time as technology matures
Policy Tool: Tax Relief

- At least 5 countries use tax credits, deductions, exclusions or favourable rates to spur LFG use
- The US Production Tax Credit a key example
- Adds predictability
- Makes initial capital cost outlay easier to bear
Policy Tool: Interconnection Standards

- For smaller system, “net metering” requirements that utility purchase output
- For larger system, standardized procedures and requirements for connection
  - Massachusetts in the USA is an excellent model
    - Consistent criteria
    - Simplified process
    - Lowered fees
Policy Tool: Outreach and Technology Development Efforts

- Includes awareness efforts, identifying and addressing smaller barriers, and demonstration
- Outreach examples include the USEPA LMOP
- Finland’s Tekes an example of demonstration project funding
- France, Hungary have interesting RE (and LFGE) project demonstration funds
Lessons Learned

● The countries that have made progress in LFGE use have common approaches
  ➢ Identify LFGE as an asset to be used
  ➢ Provide consistent regulatory signals
  ➢ Make LFGE competitive with conventional energy sources
  ➢ Encourage innovation and development

● Developing countries have unique issues
  ➢ Improved MSW management a first step to LFGE use
For More Information

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Report available for free download at
www.iea.org/textbase/subjectqueries/methane.asp

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