



# Economic and Environmental Benefits

*Presented by:*

**Chris Voell**

*U.S. Environmental Protection Agency*

*Landfill Methane Outreach Program (LMOP)*

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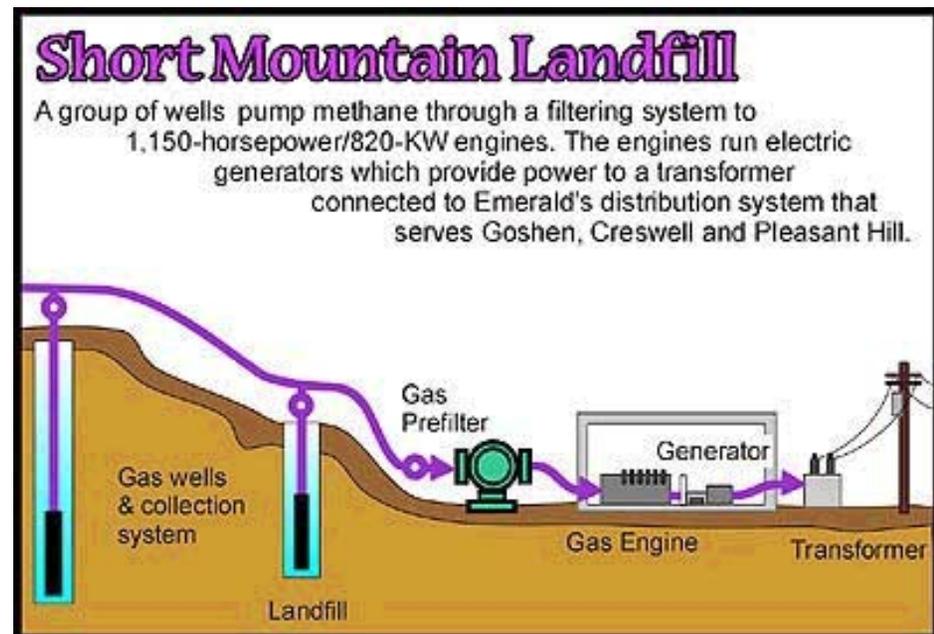


# Today's Presentation



## Discussion Outline

- Economic Benefits
  - Direct
  - Indirect
- Environmental



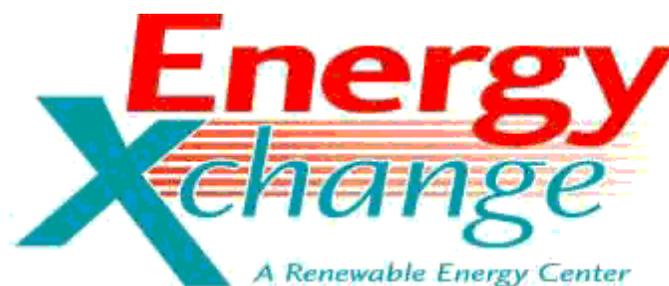


# ECONOMIC BENEFITS



## Who Benefits?

- Community
- Landfill Owner/Operator
- Developer
- End-Users





# Direct Benefits

- Profits generated by gas sales
- Operational Cost Savings
  - Can be a cheaper alternative to natural gas that can lower end-user operating costs
  - Can be used to off-set onsite power costs
- Infrastructure Improvements
  - LFG collection system





# Direct Benefits (Continued)

- Federal Incentives
  - Renewable Energy Production Incentives (REPI)
  - QF Certification (PURPA)
  - Section 29/Section 45 Tax Credits
- State Incentives
  - Energy Investment Program
    - ◆ \$15,000 - \$300,000 loan (up 7 year term, 3% below Prime)
    - ◆ Retrofit Projects and Energy Efficient Process (boilers, kilns, ovens, cogeneration, furnaces, waste recovery, etc.)
  - Other in *MS LFGTE Primer*



## Indirect Benefits

- Taxable Income for Community from new business
- Taxable Income for Community from job creation
- More revenue circulated in the community
- Infrastructure Add-Ons

# ENVIRONMENTAL BENEFITS

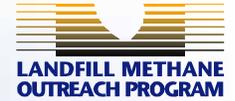




# What is Landfill Gas?

- Landfill gas (LFG) is a by-product of the decomposition of municipal solid waste
- LFG is approximately 50% methane ( $\text{CH}_4$ ) 49% carbon dioxide ( $\text{CO}_2$ ), and ,1% non-methane organic compounds (NMOCs)
- $\text{CH}_4$  has a global warming potential (GWP) that is at least 21 times that of  $\text{CO}_2$ .

# Global and Local Environmental Benefits to LFG Utilization



- Global Environmental Benefits
  - Reduction of GHG emissions into the atmosphere
  - Offsets the need for nonrenewable resources (coal and oil)
  - Converting a liability into an asset
- Local Environmental Benefits
  - Reduces the threat of explosion due to off-site migration
  - Reduces nuisance odors associated with a landfill
  - Improves local air quality
  - Provides source of local, renewable power



# LFG Utilization Benefits

- 1 million tons of waste typically generates 380 cubic feet per minute (cfm) of LFG
- 380 cfm of LFG can generate 0.8 MW of power (7,000,000 kilowatt hours (kWh) per year)
- 7,000,000 kWh is enough energy to power 700 homes for a year
- Using 380 cfm of LFG for a year yields the same benefit as removing the emissions from 6,100 cars for a year, or planting 8,300 acres of forest.

# Contact Information



For specific information concerning the economics of LFG beneficial-use projects feel free to contact:

Juene Franklin, P.E.  
EMCON/OWT Solid Waste Services  
Phone: (713) 996-4581  
Email: [jkfranklin@theitgroup.com](mailto:jkfranklin@theitgroup.com)  
or  
Chris Voell  
LMOP  
Phone: (202) 564-6362  
Email: [voell.christopher@epa.gov](mailto:voell.christopher@epa.gov)

