

# Homer Electric Association

Kenai Peninsula Borough Assembly Meeting



Bradley Lake



Battle Creek



Landfill Gas

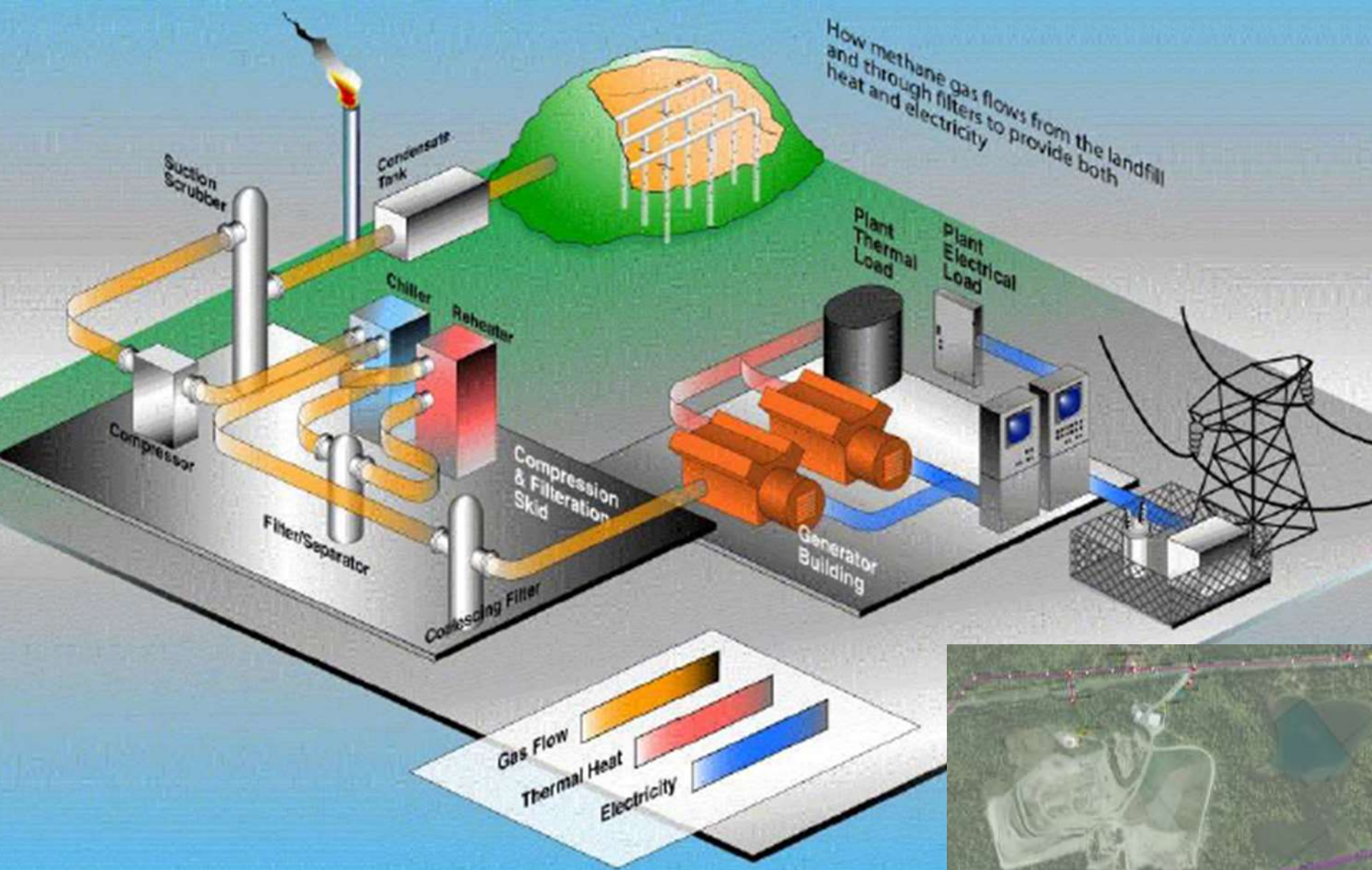


Grant Lake



Community Solar

# Landfill Gas to Energy



# Landfill Gas Utilization Feasibility Study

FINAL REPORT

## Central Peninsula Landfill Landfill Gas Utilization Feasibility Study

Prepared for  
Kenai Peninsula Borough

June 23, 2016

**ch2m:**

CH2M HILL Engineers, Inc.  
949 E 36 Avenue, Suite 500  
Anchorage, AK 99508

Table 5-1. Costs, Savings, and Net Present Value for the Options

	Capital Cost	Average Annual O&M	Annual Revenue/Savings	NPV, 20-year life
Option 1 - Direct Use On Site in a LFG Fired Boiler	(\$1,022,120)	(\$176,930)	\$190,606	(\$851,443)
Option 2a - LFG Piping to CPL Evaporator and Boilers and from CPL to Boiler at Skyview MS	(\$3,057,481)	(\$268,939)	\$252,136	(\$3,266,886)
Option 3 - Engine Gen Set at CPL Without Exhaust Heat	(\$3,486,593)	(\$362,353)	\$1,206,381	\$7,031,857
Option 4 - Engine Gen Set at CPL, Utilize Exhaust Heat	(\$3,503,636)	(\$381,191)	\$1,260,381	\$7,453,011
Option 5 - Remove CO2 and Trace Gases and Inject to ENSTAR Pipeline	(\$823,141)	(\$284,625)	\$376,178	\$317,807
Option 6 - Transport LFG Off Site in Pipeline to Gen Set at Skyview MS	(\$4,724,551)	(\$496,420)	\$1,206,381	-\$4,123,128



# Memorandum of Agreement

## (Subject to Funding)

- Conceptual Design
- Cost Estimate
- Financial Feasibility Analysis
- Project Schedule
- Draft Gas Sales & Waste Heat Exchange and / or Purchase Agreement
- Draft Contract between KPB & AEEC outlining the terms for the design & construction of the proposed facilities
- Draft Operations and Maintenance Agreement



Additional Fuel / Renewable Natural Gas

Smart Energy



Reduced GHG

