

Lycoming County LFGTE

A Public-Private-Public Project

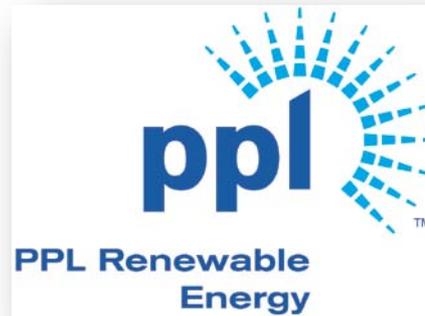
Presented by:

Steve Gabrielle

Director – Renewable Energy

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Project Participants/LMOP Partners



Project Participants



■ History of Land

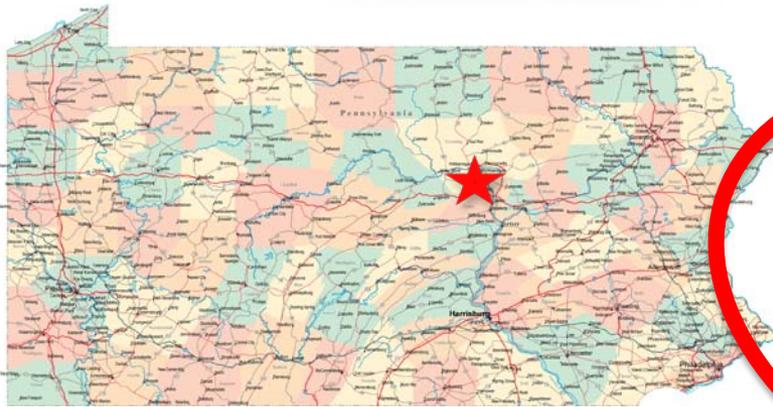
- Town of Alvira, until 1942
- 8500 acres taken for ammunition depot
 - 200 buildings, 150 bunkers, 10,000 employees
- 3000 acres for state game lands
- 4200 acres to FBOP
 - 1957 low security prison
 - 1990s low, medium and high security prisons
 - 4500 inmates

■ County owned landfill

■ 7 PA Landfill Projects



Project Location



An Early Adopter of LFGTE

- First generation
 - 2 Caterpillar engines (1100 kW)
 - Started 1992
 - Ran 20 years
 - Heat recovery



Project Drivers

- Landfill gas had increased to 2200 cfm
- Energy Policy Act of 2005 and Executive Order 13423 mandating federal renewables
 - 117 federal prisons, 217,000 inmates
 - 15% or 17 prisons sustainable by 2015
- Best use of resources
- Location of supply and load



One Land Owner

- FBOP owns 4200 acres
- Multiple agencies
 - Federal and State
 - Two counties
 - Two townships



Well Field Improvements

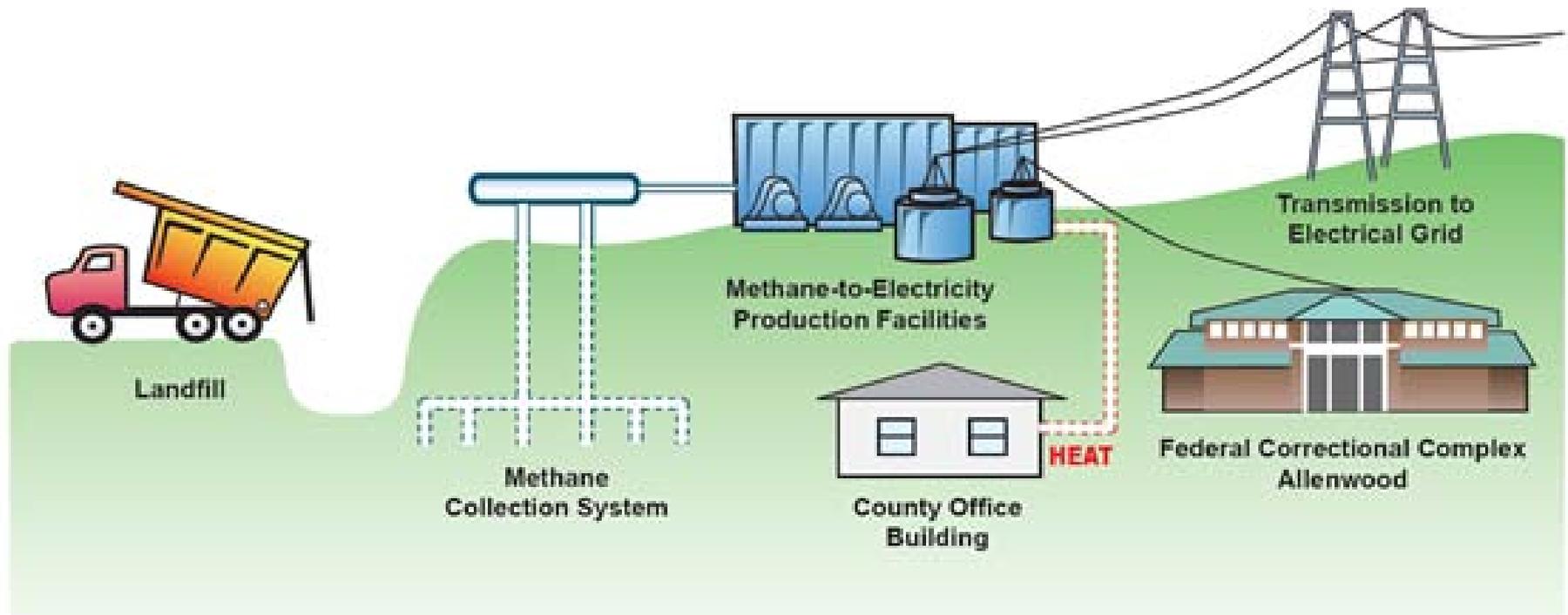


Pole Line Construction



Two Plants

- Allenwood Federal Correctional Complex
- Lycoming County and Grid



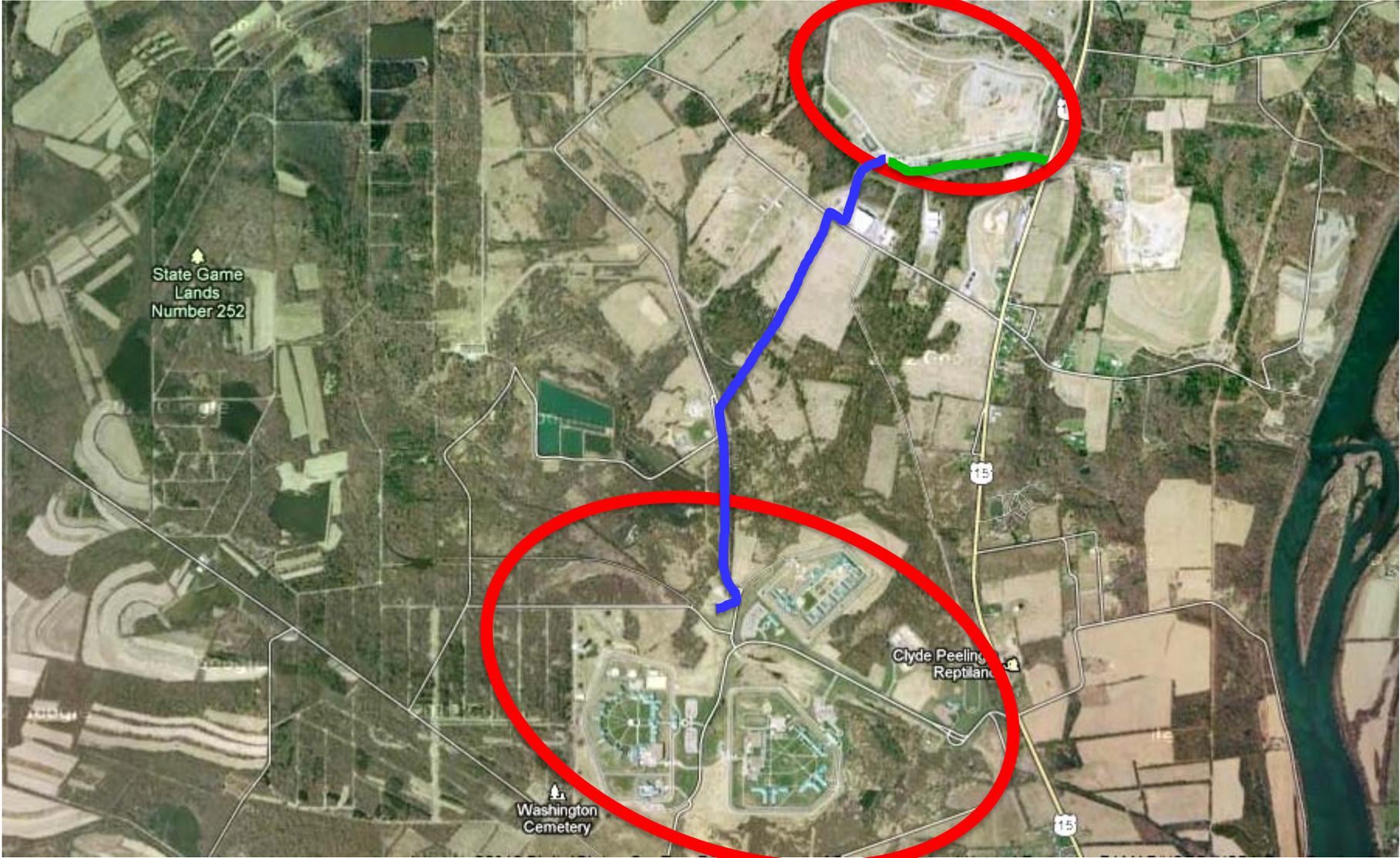
Two Power Plants



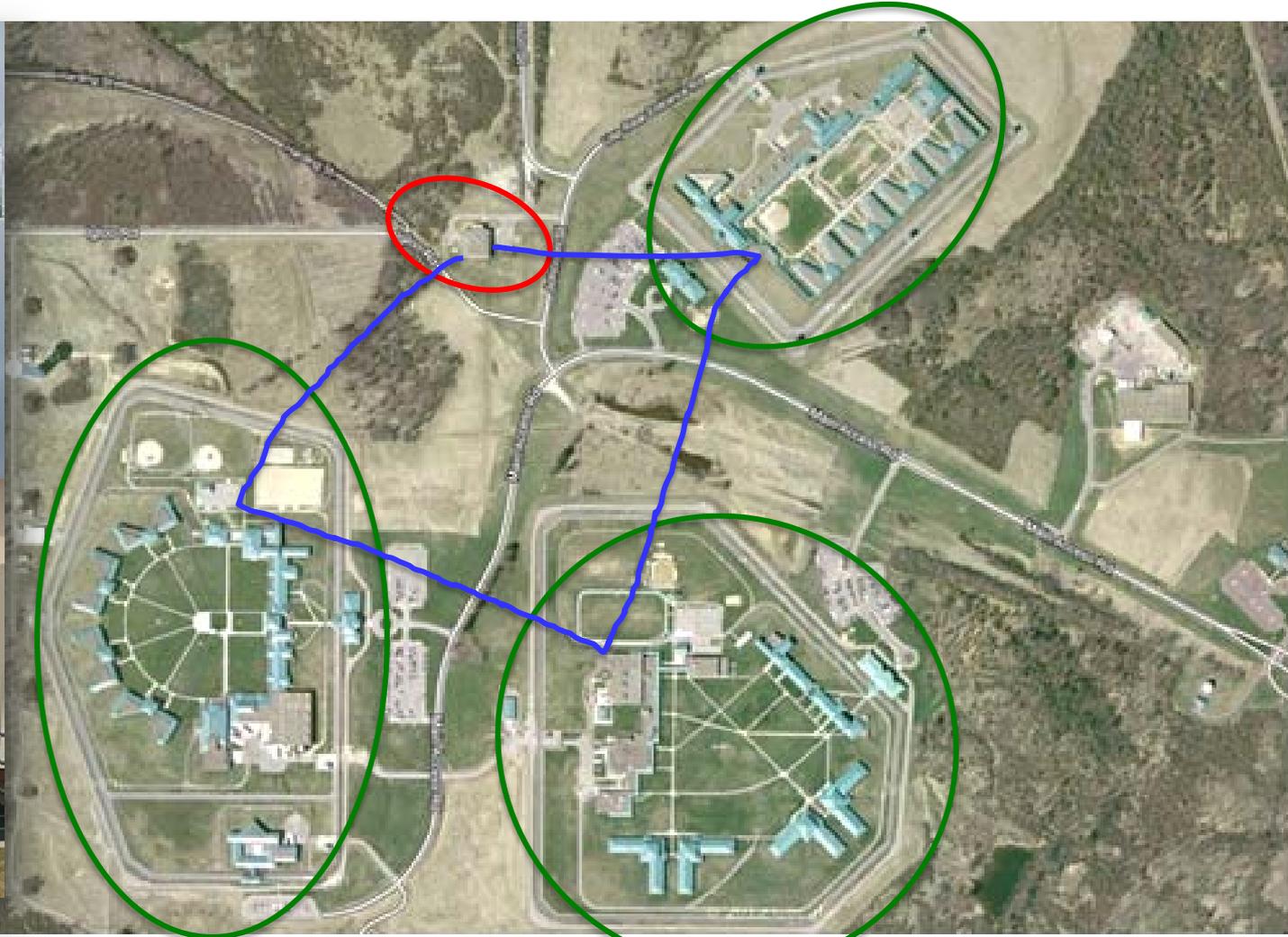
Two Substations



Two Power Lines



Electrical Interconnection to Allenwood



Three Entities

- Landfill Gas
- Power and RECs



Start Up

- Transition
- Success!



Education for the Next Generation



LIVE GENERATION DASHBOARD

LANDFILL GAS

LANDFILL GAS POWER



5,602 kW	Current Output
18,054 MWh	Total Output

GREEN STATISTICS

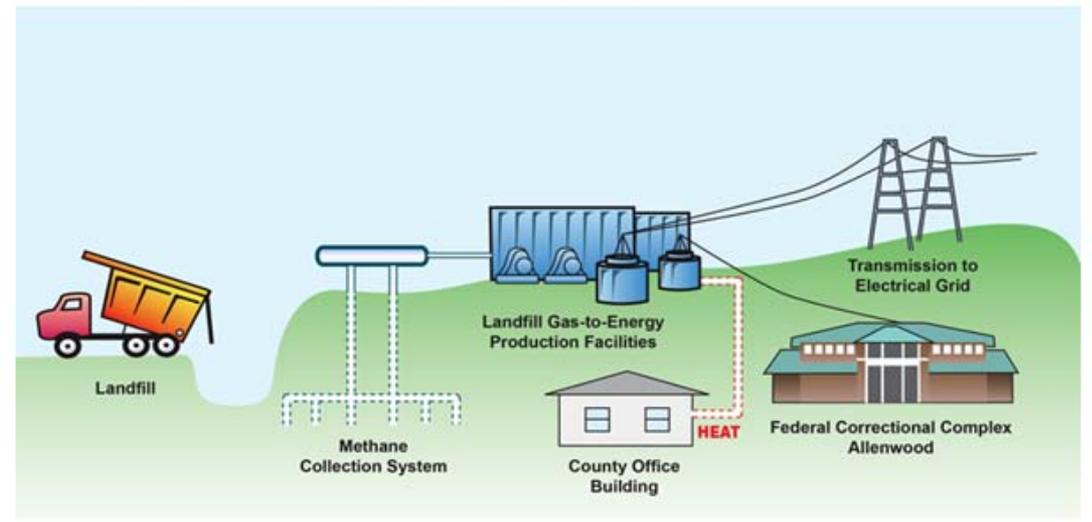
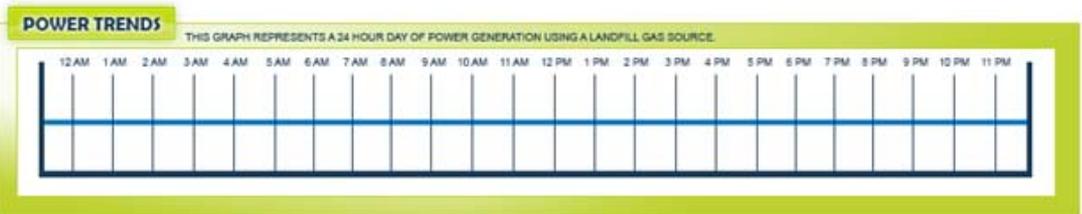
TOTALS ARE CALCULATED ANNUALLY

Carbon Dioxide TOTAL POUNDS SAVED	12,963
Pine Forest ACRES PLANTED	2,762
Cars Removed REMOVED FROM ROAD	2,474
Homes Powered TOTAL HOMES POWERED	181
Gasoline Saved TOTAL GALLONS SAVED	1,458,796

GENERATION TERMS

What is a Kilowatt Hour (kWh)?
1 kWh = Ten 100 Watt Light Bulbs turned on for 1 hour.

What is a Megawatt Hour (MWh)?
1 MWh = 1000 Kilowatt Hours (kWh)



Pennsylvania College of Technology

PENNSYLVANIA STATE UNIVERSITY



A Public-Private-Public Success



Greening Our Energy

