

Solid Waste Authority of Central Ohio

SWACO

Presentation for:

Waste to Energy Workshop

Arden Shister Conference Center
Wooster, OH

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AGENDA

- The Project
- The Concept
- Fleet Technology
- Green Energy Center Technology
- The Rational and Opportunities



THE PROJECT

Landfill Gas to CNG

SWACO “Green Energy Center” – Phase I



Groundbreaking June 21, 2005

THE CONCEPT

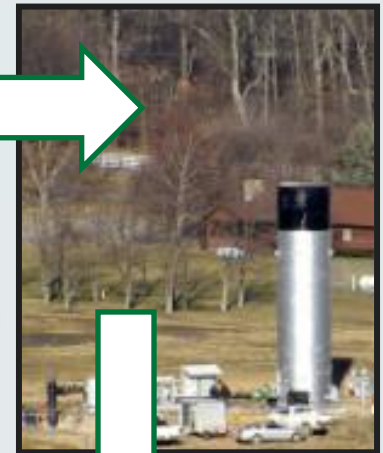
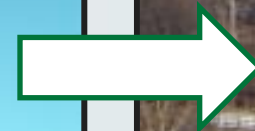
- Purify landfill gas to pipeline quality for CNG
- Find applicable technologies for the most Economical and Efficient Use
 - Transfer Fleet vs. P/U etc. vs. Heavy Steel
- Use purified gas to power SWACO Fleet
- Balance of gas to be used for local fleets

THE TRANSFORMATION

From this to this



From this to this



HOW?

- Public/Private Partnership (SWACO & FirmGreen Fuels of Ohio)
- Proprietary Technology (ACRION CO₂ Wash™)
- \$2M Federal Earmark
- Support of SWACO's Board of Trustees

FLEET TECHNOLOGY

Dual Fuel



Bi Fuel



OEM Dedicated



"GREEN ENERGY CENTER" (GEC) TECHNOLOGY

- ACRION CO₂ Wash™
- Ingersoll-Rand Micro Turbine
- Pinnacle Compressor & Dispensing System

ACRION CO₂ Wash™



Ingersoll-Rand Micro Turbine



Pinnacle Compressor & Dispensing System



WHAT THE "GEC" DOES!

- Uses 10% of landfill gas produced
- Cleans the gas to 99.9% pure methane
- Removes and cleans CO₂ to 99% food grade.
- Produces both a medium btu and high btu stream of methane

WHY THE "GEC"?

- Find a higher best use for landfill gas!
- Lessen energy dependence on foreign oil!
- Create environmental benefits!
 - Landfill gas management
 - Vehicle emission reduction
- Build an economically viable business plan!

"GEC" OPPORTUNITIES

- Phase I of GEC – 250,000 gas gallon equivalents (gge) per year
- Phase II of GEC – 3,000,000 gge per year
- Long term fixed price fuel contracts
- Regional “Alternative Fuel Hubs”
- Lessen dependence on foreign oil

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QUESTIONS
&
I think So!



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