USG&E US GAS & ENERGY

CLEANER ENERGY. BRIGHTER TOMORROWS.

USG&E PREMIER REFRIGERATED TRANSPORTATION PILOT PROGRAM™

REAL EQUIPMENT. REAL ROUTES. REAL RESULTS.™



A Proven Approach to a Real Opportunity

Refrigerated transportation keeps food, pharmaceuticals and other essential products moving, but cooling can require significant fuel, operating cost and emissions.

Savings you can count on. Give Us One Vehicle. Let the Numbers Make the Case.™

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Refrigerated transportation keeps food, pharmaceuticals and other essential products moving, but cooling can require significant fuel, operating cost and emissions. US Gas & Energy is developing a different approach: use the MacSunPod™ thermal-energy platform to capture solar thermal energy on refrigerated transportation equipment and convert it into useful cooling and power.

Test the technology in real-world operation. Measure the results. Then decide.

A Broad Transportation Solution

Refrigerated tractor-trailers • Refrigerated straight and box trucks • Local and regional refrigerated delivery vehicles
• Other appropriate temperature-controlled transportation applications

What the Pilot Measures

Fuel Consumption
Diesel/APU fuel use attributable to refrigeration.

Refrigeration Performance
Temperature control under real operating conditions.

Thermal Energy Production
Useful thermal energy produced by MacSunPod.

Electrical Generation & Storage
ORC electricity and stored energy where configured.

Operating Cost
Measured performance translated into dollars saved.

Emissions Reduction
Fuel reduction and associated emissions data.

We don't want a fleet operator to believe our projections. We want their own operating data to prove - or disprove - the economics.

FROM ONE VEHICLE TO AN ENTIRE FLEET

A Simple, Proven Process to Real-World Results

1	**Establish the Baseline** Select appropriate vehicle(s) and establish historical fuel use, refrigeration runtime, routes, duty cycle, temperature requirements and operating costs.
2	**Install & Instrument** Install the MacSunPod system and monitoring equipment. The objective is not simply to show that it operates - the objective is to measure what it saves.
3	**Put It to Work** Return the vehicle to normal commercial operation: same routes, same freight, same customer requirements, real-world conditions. Monitor production, refrigeration performance and fuel displacement.
4	**Document the Results** Prepare a performance report showing applicable fuel displacement, refrigeration-engine/APU runtime, thermal energy, electrical generation, refrigeration performance, operating-cost savings, emissions reduction and maintenance observations.
5	**Calculate Fleet-Wide Potential** Apply verified operating results across appropriate portions of the fleet to evaluate the economics of broader deployment.

1 vehicle proves the concept. 10 vehicles demonstrate repeatability.

100, 1,000 or 10,000 vehicles demonstrate the opportunity.

More Than a Vehicle-Mounted System

The strategy can extend beyond the vehicle. MacSunPod thermal infrastructure can also be deployed at distribution centers, terminals, loading areas, staging facilities and fleet parking locations, creating fixed thermal-energy collection that complements vehicle-mounted systems.



USG&E isn't asking a transportation company to change an entire fleet based on a presentation.
We're asking for the opportunity to earn the next vehicle.

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