

TABLE 1  
SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE

**Dry Creek Landfill Gas to Energy Facility**



**Owner:**

Oregon Environmental Industries

**Location:**

Eagle Point, Oregon

**SCS Scope:**

Design/construct plus five-year operation/maintenance contract.  
Turnkey SCADA system.

**Description:**

Two Caterpillar 3520 reciprocating engines with a combined output of 3.2 MW

**Status:**

Commercial operation achieved in August 2007

**Seminole Road Landfill Gas to Energy Facility**



**Owner:**

DeKalb County Public Works

**Location:**

Ellenwood, Georgia

**SCS Scope:**

Design/construct plus five-year operation/maintenance contract.  
Turnkey SCADA system.

**Description:**

Two Caterpillar 3520 reciprocating engines with a combined output of 3.2 MW

**Status:**

Commercial operation achieved in October 2006

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

**Frey Farm Landfill Gas to Energy Facility**



**Owner:**

PPL Energy

**Location:**

Kreswell, Pennsylvania

**SCS Scope:**

Design/construct. Turnkey SCADA system.

**Description:**

Two Caterpillar 3520 reciprocating engines with a combined output of 3.2 MW. Exports steam to an off-site customer.

**Status:**

Commercial operation achieved in December 2005.

**Pennsauken Landfill Gas to Energy Facility**



**Owner:**

PPL Energy

**Location:**

Pennsauken, New Jersey

**SCS Scope:**

Design/construct. Turnkey SCADA system.

**Description:**

Three Caterpillar 3516 reciprocating engines with a combined output of 2.7 MW

**Status:**

Commercial operation achieved in November 2004.

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

**Coffin Butte Landfill Gas to Energy Facility**



**Owner:**

Pacific Northwest Generating Cooperative

**Location:**

Corvallis, Oregon

**SCS Scope:**

Design. Construction oversight. Turnkey SCADA system.

**Description:**

Two Caterpillar 3520 reciprocating engines with a combined output of 3.2 MW

**Status:**

Commercial operation achieved in October 2007.

**ALZA Landfill Gas to Energy Facility**



**Owner:**

ALZA Corporation

**Location:**

Mountain View, California

**SCS Scope:**

Design three landfill gas fired cogeneration plants. Design/construct a 2.0-mile landfill gas pipeline connecting the three plants to the Mountain View Landfill. Turnkey SCADA system.

**Description:**

Three Jenbacher 320 engines with a combined output of 3.0 MW. Hot water recovery for use on-site.

**Status:**

Commercial operation achieved in March 2006.

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE, Continued

**Finley Buttes Landfill Gas to Energy Facility**

**Owner:**  
 Finley Bioenergy, LLC.

**Location:**  
 Boardman, Oregon

**SCS Scope:**  
 Process and mechanical design. Turnkey SCADA system.

**Description:**  
 Two Caterpillar 3520 reciprocating engines with a combined output of 3.2 MW. Export of hot water to an off-site customer.

**Status:**  
 Project under construction. Target for commercial operation of December 2007.

**Monmouth County Reclamation Center Landfill Gas to Energy Facility**



**Owner:**  
 Monmouth County

**Location:**  
 Tinton Falls, New Jersey

**SCS Scope:**  
 Design/construct plus two-year operation/maintenance contract. Turnkey SCADA system.

**Description:**  
 One Jenbacher 320 reciprocating engine with an output of 1.0 MW

**Status:**  
 Commercial operation achieved in November 2007.

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

Oaks Landfill Gas to Energy Facility	
	<p><b>Owner:</b> Montgomery County</p> <p><b>Location:</b> Laytonsville, Maryland</p> <p><b>SCS Scope:</b> Design/construct plus five-year operation/maintenance contract. Turnkey SCADA system.</p> <p><b>Description:</b> One Caterpillar 3520 reciprocating engine and one Jenbacher 316 reciprocating engine with a combined output of 2.4 MW</p> <p><b>Status:</b> Project in design. Target for commercial operation of December 2008.</p>
Gude Landfill Gas to Energy Facility	
	<p><b>Owner:</b> Montgomery County</p> <p><b>Location:</b> Rockville, Maryland</p> <p><b>SCS Scope:</b> Design/construct plus five-year operation/maintenance contract. Turnkey SCADA system.</p> <p><b>Description:</b> Jenbacher 316 reciprocating engine with an output of 0.8 MW</p> <p><b>Status:</b> Project in design. Target for commercial operation of December 2008.</p>

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued


University of New Hampshire Landfill Gas to Energy Facility	
	<p><b>Owner:</b> University of New Hampshire</p> <p><b>Location:</b> Rochester, New Hampshire</p> <p><b>SCS Scope:</b> Design/construct plus five-year operation/maintenance contract. Turnkey SCADA system and siloxane treatment system.</p> <p><b>Description:</b> Two Caterpillar 3520 reciprocating engines with a combined output of 3.2 MW</p> <p><b>Status:</b> Project in design. Target for commercial operation of October 2008.</p>
Marion County Landfill Gas to Energy Facility	
	<p><b>Owner:</b> G2 Energy</p> <p><b>Location:</b> Ocala, Florida</p> <p><b>SCS Scope:</b> Preliminary design</p> <p><b>Description:</b> Two Caterpillar 3520 reciprocating engines with a combined output of 3.2 MW</p> <p><b>Status:</b> Project in design. Target for commercial operation of September 2008.</p>

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

TABLE 1-1  
LFGE AND SMALL POWER PLANT PROJECT EXPERIENCE

27 <sup>th</sup> Avenue Landfill Gas to Energy Facility	
	<p><b>Owner:</b> Cambrian Energy</p> <p><b>Location:</b> Phoenix, Arizona</p> <p><b>SCS Scope:</b> Design/construct</p> <p><b>Description:</b> Two Caterpillar 3516 reciprocating engines with a combined output of 1.8 MW</p> <p><b>Status:</b> Project in design. Target commercial operation date is June 2008.</p>
Juarez Landfill Gas to Energy Facility	
	<p><b>Owner:</b> Hawthorne Power</p> <p><b>Location:</b> Juarez, Mexico</p> <p><b>SCS Scope:</b> Design</p> <p><b>Description:</b> Four Caterpillar 3520 reciprocating engines with a combined output of 5.4 MW</p> <p><b>Status:</b> Project in design. Target commercial operation date is July 2008.</p>

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

**Industry Hills Cogeneration Facility**



**Owner:**

City of Industry

**Location:**

City of Industry, California

**SCS Scope:**

Operation/maintenance contract, plus turnkey plant upgrades including: SCADA system, landfill gas co-firing system, and siloxane treatment system.

**Description:**

Two Jenbacher 320 engines, with natural gas and landfill gas co-firing. Hot water recovery for on-site use.

**Status:**

SCS assumed operation/maintenance responsibility in October 2002.

**Penrose Landfill Gas to Energy Facility**



**Owner:**

Viridis Energy

**Location:**

Sun Valley, California

**SCS Scope:**

Operation/maintenance contract, plus design/construction of a \$3.2 million plant upgrade. Supply turnkey SCADA system.

**Description:**

Four Cooper Superior reciprocating engines with a combined output of 7.0 MW

**Status:**

SCS assumed operation/maintenance responsibility in February 2005

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

**Toyon Landfill Gas to Energy Facility**



**Owner:**

Viridis Energy

**Location:**

West Hollywood, California

**SCS Scope:**

Operation/maintenance contract

**Description:**

Two Cooper Superior reciprocating engines with a combined output of 3.2 MW

**Status:**

SCS assumed operation/maintenance responsibility in January 2006.

**Redlands WWTP Cogeneration Facility**



**Owner:**

City of Redlands

**Location:**

Redlands, California

**SCS Scope:**

Operation/maintenance contract. Turnkey plant upgrades, including a SCADA system and siloxane treatment system.

**Description:**

One Deutz TBG 620 (V12) engine, co-fired on landfill gas and digester gas, with a capacity of 1.0 MW. Hot water is used for digester heating at a municipal wastewater treatment plant.

**Status:**

SCS assumed operation/maintenance responsibility in August 2006

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued


Badlands Landfill Gas to Energy Facility	
	<p><b>Owner:</b> County of Riverside</p> <p><b>Location:</b> Riverside, California</p> <p><b>SCS Scope:</b> Operation/maintenance contract. Supply turnkey siloxane treatment system.</p> <p><b>Description:</b> One Deutz TBG 620 (V16) engine with an output of 1.3 MW</p> <p><b>Status:</b> SCS assumed operation/maintenance responsibility in July 2007</p>
Fort Worth Regional Landfill Gas to Energy Facility	
	<p><b>Owner:</b> G2 Energy</p> <p><b>Location:</b> Ft. Worth, Texas</p> <p><b>SCS Scope:</b> Operation/maintenance contract</p> <p><b>Description:</b> One Caterpillar 3520 reciprocating engines with an output of 1.6 MW</p> <p><b>Status:</b> SCS assumed operation/maintenance responsibility in March 2007</p>

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

**Hidden Hollow Landfill Gas to Energy Facility**



**Owner:**

G2 Energy

**Location:**

Boise, Idaho

**SCS Scope:**

Operation/maintenance contract

**Description:**

Two Caterpillar 3520 reciprocating engines with a combined output of 3.2 MW

**Status:**

SCS assumed operation/maintenance responsibility in February 2007

**El Estero WWTP Fuel Cell Cogeneration Facility**



**Owner:**

Alliance Power

**Location:**

Santa Barbara, California

**SCS Scope:**

Design/construct. Turnkey SCADA system and siloxane treatment system.  
Operation/maintenance.

**Description:**

Two digester gas fueled fuel cells with a combined output of 500 kW.  
Hot water recovery for on-site digester heating.

**Status:**

Project achieved commercial operation in November 2004.

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

**Palmdale WWTP Fuel Cell Cogeneration Facility**



**Owner:**

Sanitation Districts of Los Angeles County

**Location:**

Palmdale, California

**SCS Scope:**

Design/construct. Turnkey SCADA and siloxane treatment system.

**Description:**

One digester gas fuel cell with an output of 250 kW. Hot water recovery for on-site digester heating.

**Status:**

Project achieved commercial operation in September 2004.

**Sierra Nevada Brewing Company Fuel Cell Project**



**Owner:**

Sierra Nevada Brewing Company

**Location:**

Chico, California

**SCS Scope:**

Design

**Description:**

Four natural gas fuel cells with a total output of 1.0 MW. Steam recovery for on-site use.

**Status:**

Project achieved commercial operation in May 2005.

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

**Jamacha Landfill Gas to Energy Facility**



**Owner:**

County of San Diego

**Location:**

Spring Valley, California

**SCS Scope:**

Design/construct. Turnkey SCADA system and siloxane treatment system.  
Operation/maintenance.

**Description:**

Four Ingersoll-Rand microturbines with a combined output of 280 kW

**Status:**

Project achieved commercial operation in February 2002.

**Calabasas Landfill Gas to Energy Facility**



**Owner:**

Sanitation Districts of Los Angeles County

**Location:**

Calabasas, California

**SCS Scope:**

Design/construct. Turnkey SCADA system and siloxane treatment system.  
Operation/maintenance contract.

**Description:**

Ten Capstone microturbines with a combined output of 300 kW

**Status:**

Project achieved commercial operation in August 2002.

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE, Continued

**Burbank Landfill Gas to Energy Facility**



**Owner:**

City of Burbank

**Location:**

Burbank, California

**SCS Scope:**

Design/construct. Turnkey SCADA system and siloxane treatment system. Operation/maintenance contract.

**Description:**

Ten Capstone 30 kW microturbines and one 250 kW Ingersoll-Rand microturbine with a total output of 550 kW

**Status:**

Project achieved commercial operation in April 2005.

**Oll Landfill Gas to Energy Facility**



**Owner:**

New Cure, Inc.

**Location:**

Monterey Park, California

**SCS Scope:**

Design/construct. Turnkey SCADA system and siloxane treatment system.

**Description:**

Six Ingersoll-Rand microturbines with a combined output of 420 kW

**Status:**

Project achieved commercial operation in September 2002.

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

**Allentown WWTP Microturbine Cogeneration Facility**



**Owner:**

PPL Energy

**Location:**

Allentown, Pennsylvania

**SCS Scope:**

Design/construct. Turnkey SCADA system and siloxane treatment system.  
Operation/maintenance contract.

**Description:**

Twelve 30 kW Capstone microturbines. Hot water recovery for on-site digester heating.

**Status:**

Project achieved commercial operation in November 2003.

**American Canyon Landfill Gas to Energy Facility**



**Owner:**

Napa-Vallejo Waste Management Authority

**Location:**

American Canyon, California

**SCS Scope:**

Design. Turnkey SCADA system.

**Description:**

Three Ingersoll-Rand microturbines with a combined output of 210 kW

**Status:**

Project under construction. Target commercial operation date is December 2007.

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

**Toland Road Landfill Gas to Energy Project**



**Owner:**

Ventura Regional Sanitation District

**Location:**

Santa Paula, California

**SCS Scope:**

Design/construct. Turnkey SCADA system.

**Description:**

One 70 kW Ingersoll-Rand microturbine

**Status:**

Project achieved commercial operation in August 2004.

**Los Angeles Landfill Gas to Energy Project**



**Owner:**

City of Albuquerque

**Location:**

Albuquerque, New Mexico

**SCS Scope:**

Design/construct

**Description:**

One Ingersoll-Rand 70 kW microturbine with fuel skid

**Status:**

Project achieved commercial operation in August 2006.

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE, Continued

Otay Landfill Gas to Energy Facility



**Owner:**

County of San Diego

**Location:**

Spring Valley, California

**SCS Scope:**

Design/construct. Turnkey SCADA system.

**Description:**

Three Ingersoll-Rand microturbines with a combined output of 210 kW

**Status:**

Project achieved commercial operation in October 2007.

Sihe Mine Coal Mine Methane Power Plant



**Owner:**

Shanxi Jincheng Anthracite Coal Mining Group

**Location:**

Jincheng City, Shanxi Province, Peoples' Republic of China

**SCS Scope:**

Technical and engineering assistance in process design, procurement specifications, equipment procurement, construction oversight, startup/performance testing, and operator training.

**Description:**

Sixty Caterpillar 3520 reciprocating engines, in combined cycle mode, with a total output of 120 MW

**Status:**

Project under construction. Target for commercial operation of December 2007.

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

**Sudokwon Landfill Gas to Energy Facility**



**Owner:**

Korea Power Engineering Company/EcoEnergy

**Location:**

Incheon, South Korea

**SCS Scope:**

Feasibility study, conceptual design, and subcontractor to KEPCO in support of detailed design

**Description:**

50 MW steam cycle power plant

**Status:**

Project achieved commercial operation in March 2006

**Sang Am Landfill Gas to Energy Facility**



**Owner:**

Korea District Heating Engineering Company

**Location:**

Seoul, South Korea

**SCS Scope:**

Conceptual design and subcontractor to KDHEC in support of detailed design

**Description:**

25 MW<sub>t</sub> hot water generation facility

**Status:**

Project achieved commercial operation in 2003

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

### Sonoma County Vehicle Fuel Facility



**Owner:**

County of Sonoma

**Location:**

Petaluma, California

**SCS Scope:**

Design/construct plus one-year operation/maintenance contract

**Description:**

Conversion of 100 scfm of raw landfill gas to purified 960 Btu/ft<sup>3</sup> product gas for use in County's transit fleet

**Status:**

Project under construction. Target commercial operation date is December 2007.

### McCommas Bluff Gas Plant



**Owner:**

McCommas Partners

**Location:**

Dallas, Texas

**SCS Scope:**

Design/construct of \$4.5 million plant upgrade and 4.8 MW of on-site power generation. Operation/maintenance contract.

**Description:**

Pipeline quality gas is produced from landfill gas using pressure swing adsorption. The inlet capacity is 9.0 mmscfd.

**Status:**

SCS assumed operation/maintenance responsibility in June 2005.

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

### Mountaingate Gas Plant



**Owner:**

SCS Renewable Energy -- Mountaingate, LLC

**Location:**

Los Angeles, California

**SCS Scope:**

Operation/maintenance contract

**Description:**

Cleanup and compression of 2.0 mmscfd of landfill gas, which is then delivered by a 5.2-mile pipeline to UCLA's on-campus cogeneration plant. Siloxane treatment system.

**Status:**

SCS assumed operation/maintenance responsibility in May 2003.

### University of New Hampshire Gas Cleanup Facility



**Owner:**

University of New Hampshire

**Location:**

Rochester, New Hampshire

**SCS Scope:**

Design/construction plus five-year operation/maintenance contract

**Description:**

Conversion of 7,000 scfm of raw landfill gas to purified 810 Btu/ft<sup>3</sup> product gas for use in the University's combined cycle power plant and to satisfy other campus energy requirements.

**Status:**

Project in design. Target commercial operation date is December 2008.

TABLE 1. SCS LANDFILL GAS-TO-ENERGY AND SMALL POWER PLANT PROJECT EXPERIENCE,  
Continued

Metrogas Gas Cleanup Facility	
	<p><b>Owner:</b> Metrogas, SA and Gestion y Servicios, SA</p> <p><b>Location:</b> Santiago, Chile</p> <p><b>SCS Scope:</b> Design.</p> <p><b>Description:</b> Design of a 4.3 mmscfd WWTP digester gas compression and treatment facility to deliver purified digester gas through a 10-mile pipeline to a town gas manufacturing plant.</p> <p><b>Status:</b> Project in design. Target commercial operation date is June 2008.</p>