

DG/CHP Integrated Data System

Richard Sweetser
EXERGY Partners Corp.
June 10, 2008



NYSERDA DG/CHP Integrated Data System

- Audience Survey
- By-the-numbers
- Site Purpose
- Site Design
- Site Data
- Site Users
- Site Results
- Site Recommendations



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SLIDE 2



Audience Survey

DG/CHP Integrated Data System

- **How many of you know what DG/CHP Integrated Data System is?**
 - *OK What is it?*
- **Do you use this website?**
 - *Why?*
- **Is it useful?**
 - *How?*

by-the-numbers

- **96 sites**
- **35 sites monitored**
- **266 generating systems**
 - *22 fuel cells, 93 microturbines, 136 reciprocating engines, 6 gas turbines, 5 steam turbines, 1 ORC, 1 wind turbine, 2 engine chillers*
- **70 sites using natural gas, 18 digester gas, 4 landfill gas, 3 wood, 1 solid waste, 1 wind**
- **58 Developers**





DG/CHP systems offer the potential to reduce operating costs for end users as well as to improve reliability of the electric distribution and transmission system. NYSERDA's objective is to accelerate the deployment of these technologies in the market to create benefits for the state of New York.

Welcome to the NYSERDA web-based DG/CHP data system. This system includes monitored performance data and operational statistics for NYSERDA's Distributed Generation (DG)/Combined Heat and Power (CHP) demonstration projects.

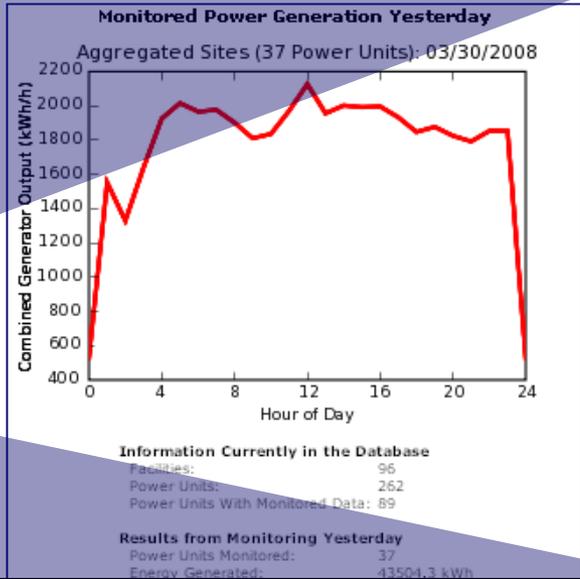
The integrated database includes the following:

- Monitored Hourly Performance Data
- Operational Reliability and Availability Data
- Characteristics of Each Facility and its Equipment

DG/CHP systems offer the potential to reduce operating costs for end users as well as to improve reliability of the electric distribution and transmission system. NYSERDA's objective is to accelerate the deployment of these technologies in the market to create benefits for the state of New York. To accelerate market acceptance, NYSERDA is supporting efforts to demonstrated DG/CHP systems that show the economic, technical, and environmental benefits of these systems in a variety of commercial, institutional, and industrial applications. This database provides access to the measured performance and reliability data collected on NYSERDA's demonstration sites.

The Monitored Hourly Performance Data portion of the database allows users to view, plot, analyze, and compare performance data from one or several different DG/CHP sites in the NYSERDA portfolio. It allows DG/CHP operators at NYSERDA sites to enter and update information about their system. The database is intended to provide detailed, highly accurate performance data that can be used by potential users, developers, and other stakeholders to understand and gain confidence in this emerging technology.

The Operational individual facility performance of the compare with other informed purchases



To accelerate market acceptance, NYSERDA is supporting efforts to demonstrated DG/CHP systems that show the economic, technical, and environmental benefits of these systems in a variety of commercial, institutional, and industrial applications. This database provides access to the measured performance and reliability data collected on NYSERDA's demonstration sites.



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NYSERDA

[Home](#)

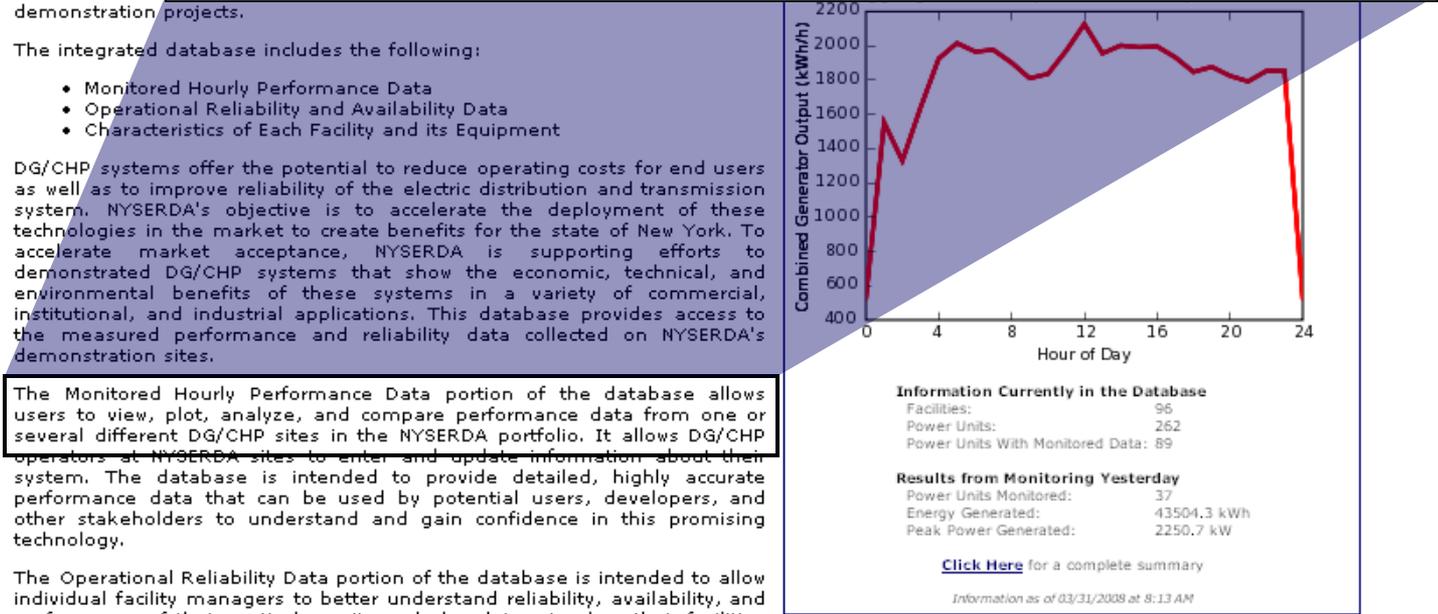
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The Operational Reliability Data portion of the database is intended to allow individual facility managers to better understand reliability, availability, and performance of their particular units and also determine how their facilities compare with other units. Information on reliability and availability performance will enable potential onsite power users to make a more informed purchase decision, and will help policy makers quantify reliability benefits of customer-sited generation.



NYSERDA

New York State Energy Research and Development Authority

DG/CHP Integrated Data System

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The following facilities are currently in the database. [Click on a column heading to re-sort by that column.](#) [Click on a facility name to view details about that facility.](#) [Click Here](#) to see a map showing all of the facilities.

<u>Facility</u>	<u>Category</u>	<u>Developer</u>	<u>Primary Fuel</u>	<u>Units</u>	<u>Installed Capacity</u>	<u>Commission</u>	<u>Monitoring</u>
10 West 66th Street Corp. New York, NY	Multi-Family Residence	DSM Engineering	Natural Gas	1	70 kW	07/01/2004	11/17/2005 - current
230 Park Avenue New York, NY	Office Building	Office Power	Natural Gas	16	960 kW		-
26th Ward Water Pollution Control Plant Brooklyn, NY	Wastewater Treatment	New York Power Authority	Digester Gas	2	400 kW	07/31/2003	-
4C Foods Brooklyn, NY	Food Processing	Energy Concepts	Natural Gas	3	450 kW	06/24/2004	05/22/2005 - current
A.A. Dairy Candor, NY	Dairy Farm	RCM Digesters	Digester Gas	1	130 kW	02/01/2000	04/25/2005 - current
Allenwaite Farms Schaghticoke, NY	Dairy Farm		Digester Gas	1	140 kW		-
Allied Converters, Inc. New Rochelle, NY	Plastics Processing	Advanced Power Systems	Natural Gas	2	60 kW	07/07/2003	-
Allied Frozen Storage Brockport, NY	Food Storage	Energy Concepts	Natural Gas	2	2500 kW		-

NEW YORK STATE

NYSEDA New York State Energy Research and Development Authority

DG/CHP

Home Facilities

10 West 66th Street Corp.

10 West 66th Street
New York, NY 10023 [Map](#)

DG/CHP Developed by DSM Engineering

Unit	Installation	Fuel	Prime Mover
1	07/01/2004	Natural Gas	Microturbine

Facility Details

[Show Complete Details](#)

Facility Documentation

- [Ten West 66th St. Corp. Online Data](#)
- [Ten West 66th St. Corp. Unit Pictures](#)
- [Ten West 66th Street Corp. CHP System](#)
- [Ten West 66th Street Corp. NYSED](#)

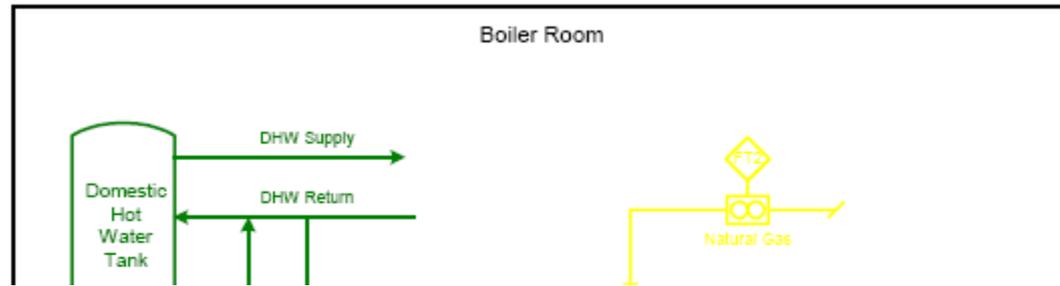
Project Webpages

[Connected Energy Website](#)

Related Webpages

None

CHP Schematic Diagram



General Facility Information

Name: 10 West 66th Street Corp.
Address: 10 West 66th Street
City: New York
State: NY
Zip Code: 10023
County: New York
Category: Multi-Family Residence
Facility Website:
SIC: 65 - Real Estate
NAICS: 53 - Real Estate and Rental and Leasing
ISO Zone: J - New York City
Electric Utility: Consolidated Edison
Gas Utility: Consolidated Edison Co-NY Inc
Time Zone: Eastern Time
Latitude: 40.722 deg N
Longitude: 73.979 deg W
Altitude: 72 feet MSL
Developer Name: DSM Engineering
Developer Website:
NYSEDA Project Number: 6546
NYSEDA Project Manager: Joe Borowiec
DG System Ownership:
DG System Enclosure: Indoor
System Application: Combined Heat and Power
Base Electric Rate: SC 9-1 General Large - Low Tension; New York City - Nov05-Oct06
CHP Electric Rate: SC 14RA Standby - SC 9-1 Base; Low Tension; New York City - Nov05-Oct06
CHP Contract Demand: 350

Number of Power Units: 1
Primary Fuel: Natural Gas
Total Installed Capacity: 70 kW
Operating Hours Per Day: 24
Operating Days Per Week: 7
Operating Months Per Year: 12
Peak Electric Demand:
Total Annual Electricity Usage:
Total Annual Gas Consumption:
Number of Heat Exchangers: 1
Standalone Capability:
Heat Supply Temperature:
DG System Installation Cost:
Third Party Operation: No
Third Party Maintenance: No
Maintenance Cost:
Government Subsidies:
Chiller Efficiency:
Boiler Efficiency:
Electricity Export to Grid: No
Facility Electric Service Voltage:
Gas Commodity Purchased: Yes
Average Gas Cost:
Average Fuel LHV: 920

NYSEDA CHP ECIPP Information

PON Number:
SPC Peak Demand Reduction:

Unit 1

Description: Microturbine
Manufacture Date: 07/01/2004
Installation Date: 07/01/2004
Commission Date: 07/01/2004
Decommission Date:
Installed Capacity: 70 kW
Efficiency: 28 %
Thermal Output: 0.3 MMBtu/h
Technology Group: Microturbine (Recuperated)
Prime Mover: Microturbine
Fuel: Natural Gas
Generator Type: Inverter

Prime Mover Manufacturer: Ingersoll-Rand
Prime Mover Model: I-R PowerWorks 70
Heat Recovery: Hot Water
Primary Heat Recovery Use: Domestic Hot Water
Secondary Heat Recovery Use: Space Heating
Emissions Control Technology: Combustion Controls
Genset Package:
System Installer: DSM Engineering
Component Integration: Customer Assembled
Controller: Third-party Off-the-shelf



DG/CHP Integrated Data System

- Home
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Report Selection -> Site Selection -> Report Details
 Monitored Data Plot

Facilities Included:
 10 West 66th Street Corp. - New York, NY

Select the details for the report.

Starting Date: 11/2005

Ending Date: 05/2008

Data Channel: DG/CHP Generator Output (kWh)

Plot Type: Time Series Plot (data versus time)

Continue

[Additional Options](#)

[Help on this page](#)

[Return to Facility Listing](#)

- Multi-Family Residence
- Real Estate
- New York City
- Consolidated Edison
- Consolidated Edison Co-NY Inc
- Natural Gas

Ten West 66th Street Corp.: 11/18/2005 - 05/13/2008

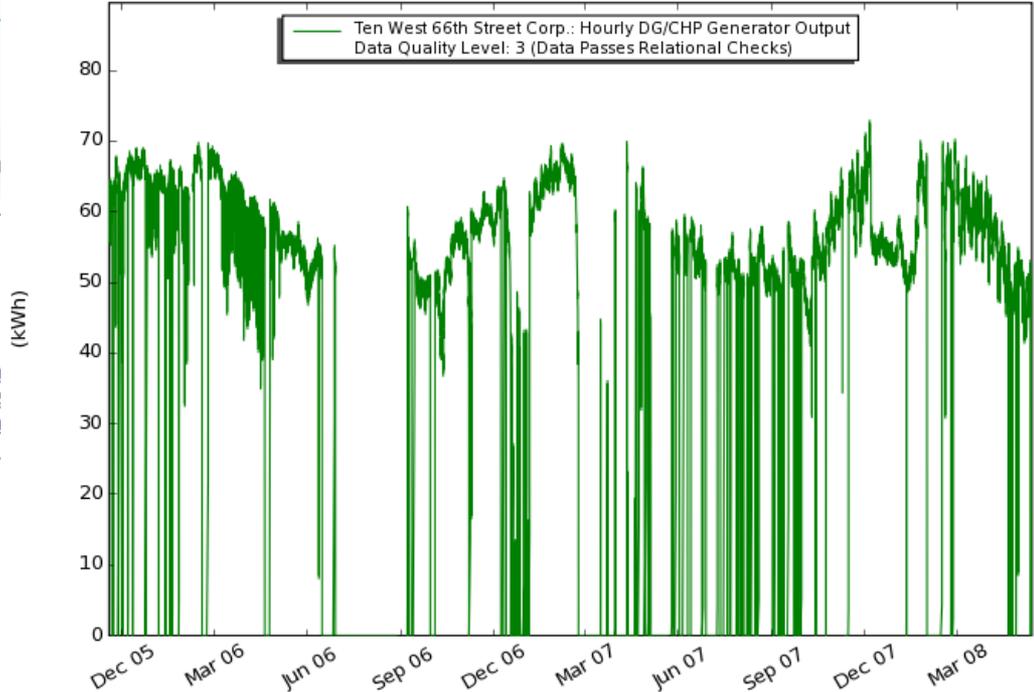
Unit	Installation	Fuel	Prime Mover
1	07/01/2004	Natural Gas	Microturbine

Facility Details
[Show Complete Details](#)

- Facility Documentation**
- [Ten West 66th St. Corp. Online Data](#)
 - [Ten West 66th St. Corp. Unit Picture](#)
 - [Ten West 66th Street Corp. CHP Sch](#)
 - [Ten West 66th Street Corp. NYSERDA](#)

Project Webpages
[Connected Energy Website](#)

Related Webpages
 None



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DESIGN

Facility Selected:
10 West 66th Street

Select the range of dates

(The number of years)

Select the electricity rate

Optional - by month

Unit Input

1

Facility Selected:
10 West 66th Street

Select the utility

A range of dates indicates the fluctuations in electric/gas charges reported by the utility from that time period are used to evaluate the electric/gas rate.

Ten West 66th Street Corp. Monthly Electric Costs and Savings

Month	Base Facility			CHP Facility			Net Savings	
	Consolidated Edison - SC2-1 General-Small (May 2005-April 2006) - NYC			Consolidated Edison - SC2-1 General-Small (May 2005-April 2006) - NYC			Generator Output (kWh)	Cost Savings (\$)
	Purchased Peak Demand (max kW)	Purchased Electricity (kWh)	Electric Costs (\$)	Purchased Peak Demand (max kW)	Purchased Electricity (kWh)	Electric Costs (\$)		
November 2005	429.1	66,311	\$ 10,393.83	362.5	51,297	\$ 8,060.62	15,014	\$ 2,333.21
December 2005	474.8	206,246	\$ 32,387.20	406.9	161,057	\$ 25,310.54	45,189	\$ 7,076.66
January 2006	471.2	177,910	\$ 31,116.59	417.7	133,342	\$ 23,343.95	44,568	\$ 7,772.64
February 2006	534.8	189,116	\$ 33,430.17	466.2	154,552	\$ 27,336.64	34,563	\$ 6,093.53
March 2006	784.4	293,639	\$ 50,888.72	720.1	246,270	\$ 42,693.85	47,369	\$ 8,194.87
April 2006	496.5	190,668	\$ 31,682.78	467.5	156,874	\$ 26,083.19	33,794	\$ 5,599.59
May 2006	522.4	190,374	\$ 31,691.20	471.5	149,052	\$ 24,831.65	41,323	\$ 6,859.55
June 2006	673.3	296,564	\$ 52,578.98	673.3	277,054	\$ 49,125.73	19,510	\$ 3,453.25
July 2006	861.2	397,494	\$ 70,483.30	861.2	397,494	\$ 70,483.30	0	\$ 0.00
August 2006	819.2	366,530	\$ 66,502.34	819.2	366,530	\$ 66,502.34	0	\$ 0.00
September 2006	501.7	242,950	\$ 42,676.24	474.3	219,165	\$ 38,506.77	23,785	\$ 4,169.47
October 2006	531.7	234,874	\$ 38,232.70	473.4	200,590	\$ 32,664.98	34,284	\$ 5,567.72
Annual Totals	861.2	2,852,675	\$ 492,064.04	861.2	2,513,276	\$ 434,943.55	339,399	\$ 57,120.49
Average (\$/kWh)			\$ 0.1725			\$ 0.1731		\$ 0.1683

Ten West 66th Street Corp. Total Economic Analysis

Month	Generator Output (kWh)	Generator Gas Input (Mcf)	Useful Heat Recovery (MMBtu)	Electric Cost Savings (\$)	Heat Recovery Savings (\$)	Maintenance Cost (\$)	Generator Gas Costs (\$)	Total Savings (\$)
November 2005	15,014.2	207.2	57.5	\$ 2,333.21	\$ 0.00	\$ (0.00)	\$ (0.00)	\$ 2,333.21
December 2005	45,189.4	638.2	168.1	\$ 7,076.66	\$ 0.00	\$ (0.00)	\$ (0.00)	\$ 7,076.66
January 2006	44,567.9	626.4	112.0	\$ 7,772.64	\$ 0.00	\$ (0.00)	\$ (0.00)	\$ 7,772.64
February 2006	34,563.4	487.8	122.7	\$ 6,093.53	\$ 0.00	\$ (0.00)	\$ (0.00)	\$ 6,093.53
March 2006	47,369.2	577.3	154.0	\$ 8,194.87	\$ 0.00	\$ (0.00)	\$ (0.00)	\$ 8,194.87
April 2006	33,793.5	661.7	140.9	\$ 5,599.59	\$ 0.00	\$ (0.00)	\$ (0.00)	\$ 5,599.59
May 2006	41,322.6	826.9	178.1	\$ 6,859.55	\$ 0.00	\$ (0.00)	\$ (0.00)	\$ 6,859.55
June 2006	19,509.9	438.7	84.6	\$ 3,453.25	\$ 0.00	\$ (0.00)	\$ (0.00)	\$ 3,453.25
July 2006	0.0	5.4	0.0	\$ 0.00	\$ 0.00	\$ (0.00)	\$ (0.00)	\$ 0.00
August 2006	0.0	4.4	0.0	\$ 0.00	\$ 0.00	\$ (0.00)	\$ (0.00)	\$ 0.00
September 2006	23,784.8	56.0	22.5	\$ 4,169.47	\$ 0.00	\$ (0.00)	\$ (0.00)	\$ 4,169.47
October 2006	34,284.0	485.0	0.0	\$ 5,567.72	\$ 0.00	\$ (0.00)	\$ (0.00)	\$ 5,567.72
Annual Totals	339,399	5,015	1,040	\$ 57,120.49	\$ 0.00	\$ (0.00)	\$ (0.00)	\$ 57,120.49
Rate		HHV: 1,012 Btu/cf			\$ 0.00 \$/MMBtu	\$ 0.0000 \$/kWh	\$ 0.00 \$/MMBtu	

Capacity (kW)

70

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SLIDE 10

Continue

Annual/Reliability Reports
 Usage Report
 Operational Reliability Report

Financial Reports

None

CHP Systems

Monitored Systems

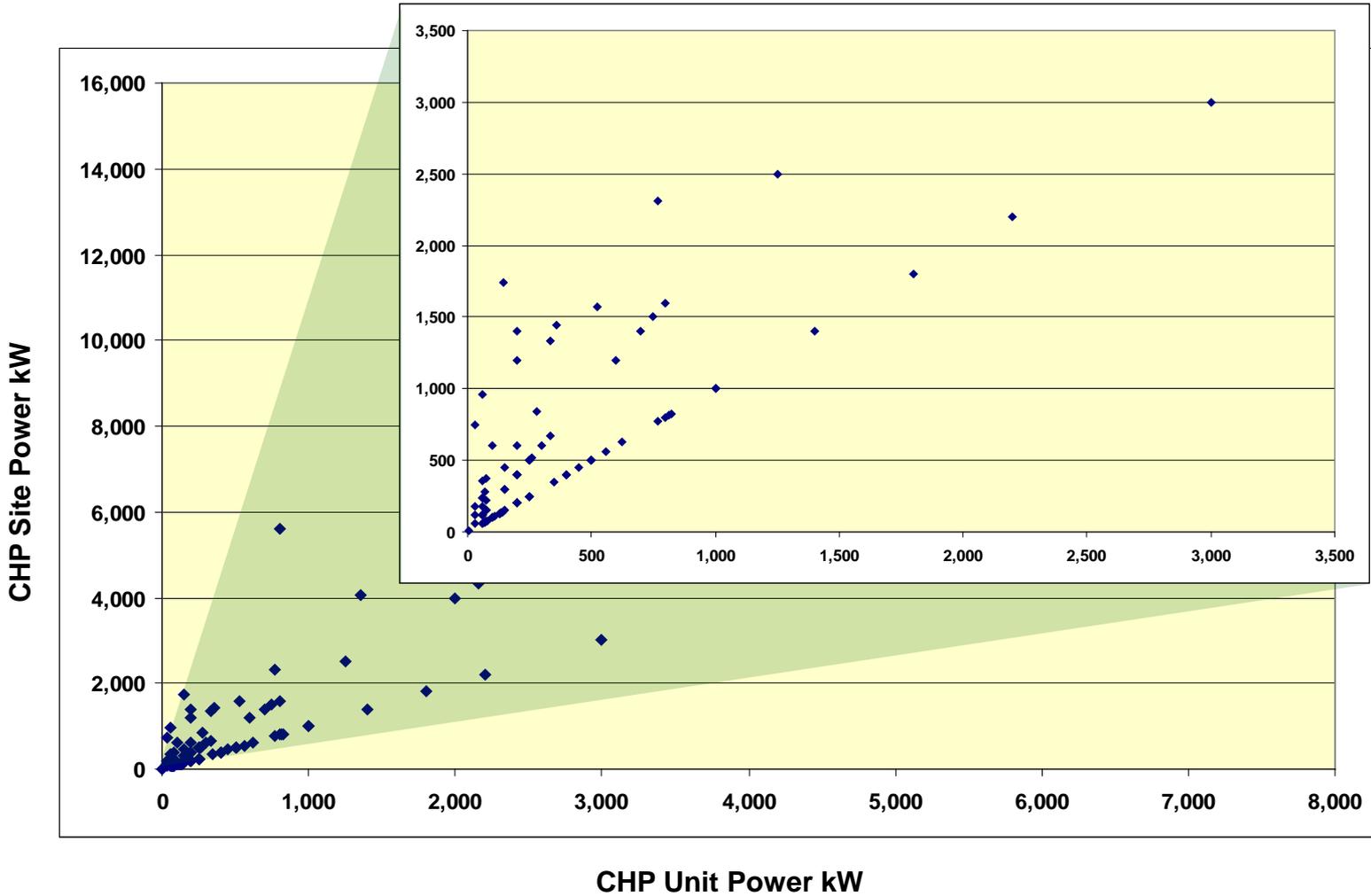
	≤ 10	$10 < \geq 50$	$50 < \geq 100$	$100 < \geq 200$	$200 < \geq 500$	$500 < \geq 1,000$	$1,000 < \geq 2,500$	$2,500 < \geq 5,000$	Total
Fuel Cells	1			1	1				3
MTs		25	9						34
RE-RBs			4						4
RE-LBs			8	11	10	14	4		47
Wind Turbines					1				1
	1	25	21	12	12	14	4		89

Posted Systems

	≤ 10	$10 < \geq 50$	$50 < \geq 100$	$100 < \geq 200$	$200 < \geq 500$	$500 < \geq 1,000$	$1,000 < \geq 2,500$	$2,500 < \geq 5,000$	Total
Fuel Cells				18	1				19
MTs		12	45		2				59
RE-RBs				2					2
RE-LBs			18	25	15	15	6	4	83
Steam Turbines					3	1	1		5
Gas Turbines					1			5	6
Wind Turbine									0
ORCs				1					1
EDC					2				2
	0	12	63	46	24	16	7	9	177

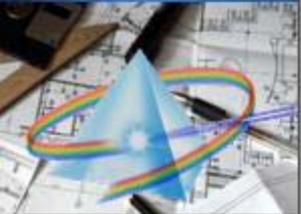


CHP System Size

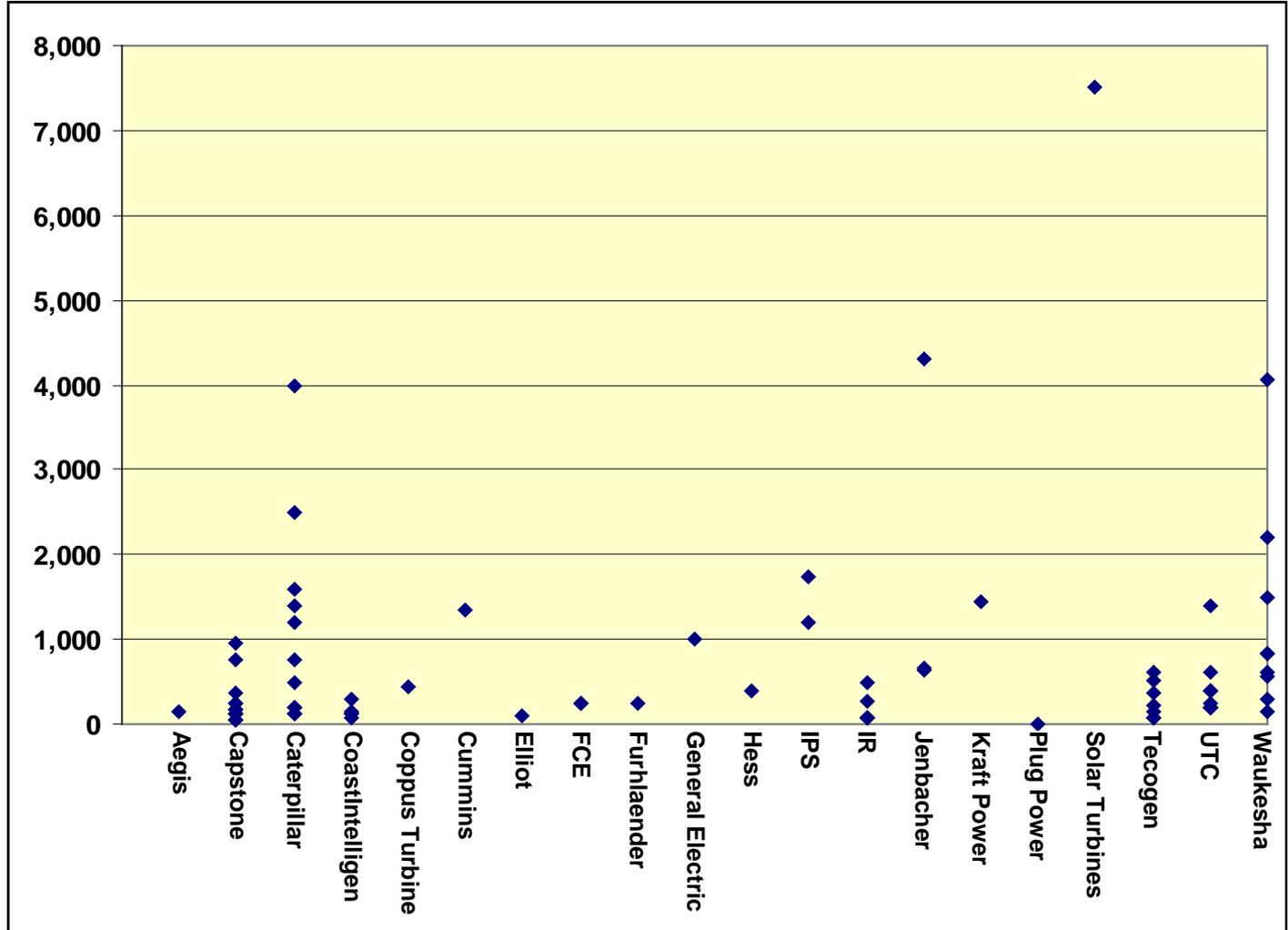


CHP Developers

- Advanced Power Systems
- Aegis Energy Services, Inc.
- AES Cogen Inc.
- All Systems Cogeneration
- Allenwaite Farms
- American DG
- American Metering & Planning
- Atlantic Energy Services
- Aurora Dairy Farms
- Battery Park City Authority
- Building Energy Solutions
- Burrstone Energy
- CDH Energy
- Consolidated Edison Solutions
- Consumers Union
- CRM Energy Technologies
- DSM Engineering
- ECO Technology Solutions
- Emerald Power
- Endurant
- Energy Concepts
- Energy Co-Opportunity Inc.
- Entrust Energy
- Flack and Kurtz
- Gerster Trane Energy Services
- Industrial and Technology Assistance
- Innovative Energy Systems]
- Joseph Technology Corporation
- Keyspan Energy Delivery
- Laidlaw Energy
- Landsberg Engineering
- Loring Consulting Engineers
- Modern Landfill
- National Fuel Gas
- New York Power Authority
- New York Presbyterian Hospital
- New York University
- Noblehurst Dairy
- Northern Development
- Northern Power Systems
- Novus Engineering
- O'Brien and Gere Engineers
- Office Power
- Paradise Plastics
- Pine Bush Energy LLC
- Power Pallet
- PPL Energy Plus, LLC
- Rachel Bridge Corporation
- RCM Digesters
- Redwood Power Company
- Saratoga Biogas
- Siemens Building Technologies
- Summit Energy Services Inc.
- Syska Hennessy Group
- The First Energy Group
- UCS, Inc.
- UTC Power
- Verizon Communications, Inc.



CHP Power

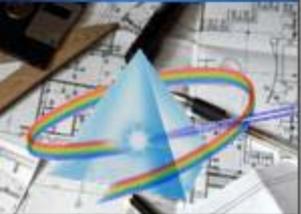


Facility Locations



Who Uses DG/CHP Website

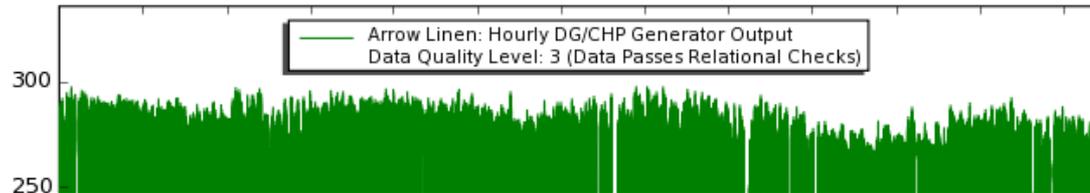
- Users
- Operators
- Project Developers
- CHP Performance Program Participants
- Policymakers
- Investors



Arrow Linen

Dom
Wat

Arrow Linen: 03/01/2005 - 04/06/2008



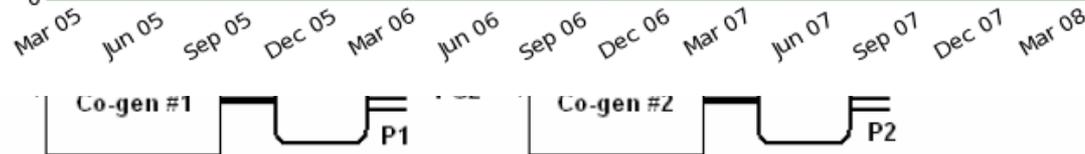
Boiler
Tank

(kWh)

Lessons Learned

- Water flow through the heat exchangers was not balanced no balancing valves were designed in the piping.
- The generators shut down on voltage and frequency faults. The generators were out of commission until the root cause of the problem was determined. The cause of the problem was due to a faulty feeder cable to Generator #2. The feeder cable insulation failed due to a vibration thus causing a shifting of voltage and frequency.
- The dump heat exchanger was short cycling and available heat generated by the generators was not being utilized.
- When the return water temperature to generators fell below the threshold point, the DDC controller would bypass the heat exchangers to prevent condensation from occurring inside the engines. This caused the heat exchanger valves to short cycle. To resolve this problem, a limit provision was added in the DDC's thermal recovery program taking into consideration the outside air temperature and the number of generators that are online de-rating the heat exchangers capacity accordingly to maximize heat recovery.

TE2:





AA Dairy



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AA Dairy: 04/03/2007 - 06/27/2007

AA Dairy: Hourly Gross CHP Efficiency (% LHV: 600 Btu/cuft)
Data Quality Level: 3 (Data Passes Relational Check)

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[Conferences & Events](#)

Manure Management Program

PRO-DAIRY

MANURE MANAGEMENT: CASE STUDIES

Digesters

Anaerobic Digester at AA Dairy updated!	Case Study AD-1
Anaerobic Digester at Dairy Development International (now New Hope View Farm) updated!	Case Study AD-2
Fixed Film Digester at Farber Dairy Farm	Case Study AD-3
Anaerobic Digester at Matlink Dairy Farm (now Ridgeline Farm) updated!	Case Study AD-4
Anaerobic Digester at Noblehurst Farms, Inc.	Case Study AD-5
Anaerobic Digester at Spring Valley Dairy	Case Study AD-6
Anaerobic Digester at Freund Dairy	Case Study AD-7
Anaerobic Digester at Twin Birch Farms updated!	Case Study AD-8
Anaerobic Digester at EL-VI Farms: Case Study	Case Study AD-9
Anaerobic Digester at Patterson Farms updated!	Case Study AD-10
Anaerobic Digester at Emerling Farm, Inc. new!	Case Study AD-11
Anaerobic Digester at Sunny Knoll Farms, Inc. new!	Case Study AD-12

Composting

Composting at Kreher's Poultry Farm: Case Study	Case Study C-1
Poultry Waste Composting at ACE Farm: Case Study	Case Study C-2
Poultry Waste Composting at Brey Egg Farm: Case Study	Case Study C-3

Technical Notes

Feasibility Study of Fuel Cells for Biogas Energy Conversion on Large Dairy Farms	Tech Note FC-1
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Documents

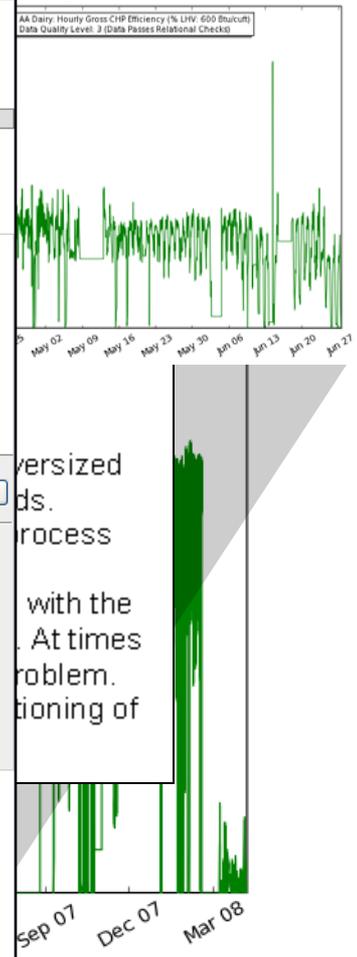
- Fact Sheets
- Case Studies**
 - Digesters
 - Composting
 - Technical Notes
- Academic Papers
- Publications
- Popular Press
- News Reports
- Project Reports

search **Updated!**

Related Sites

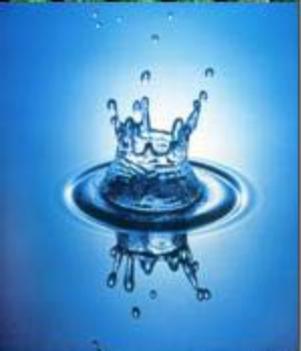
- Cornell University
- PRO-DAIRY
- NYSERDA
- Cornell Waste Management Institute
- Northeast Manure Management
- EPA AgSTAR
- EPA Consent Agreement Information
- ManureNet Canada
- Other Useful Links

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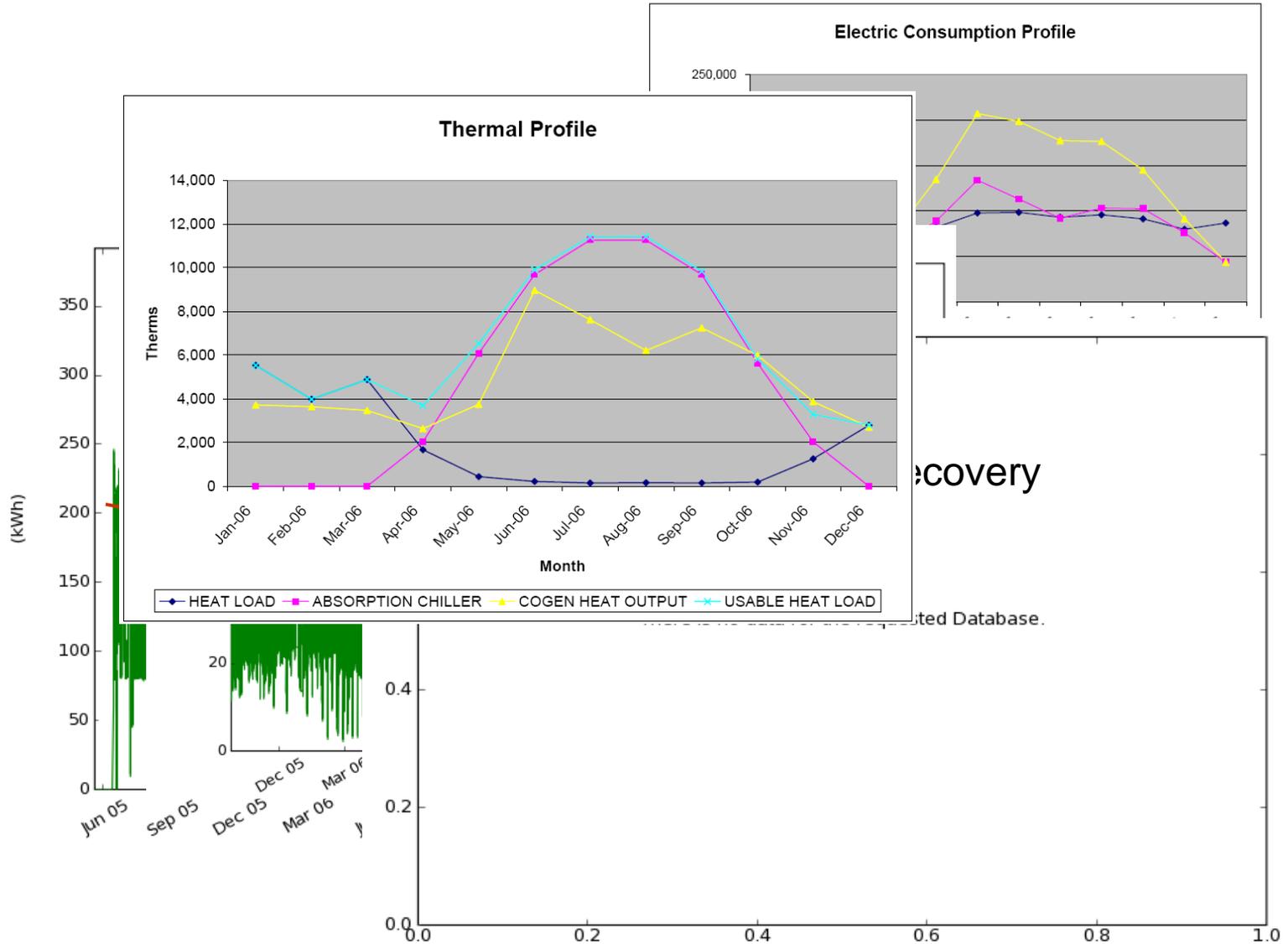


oversized
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process

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At times
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4-C Foods



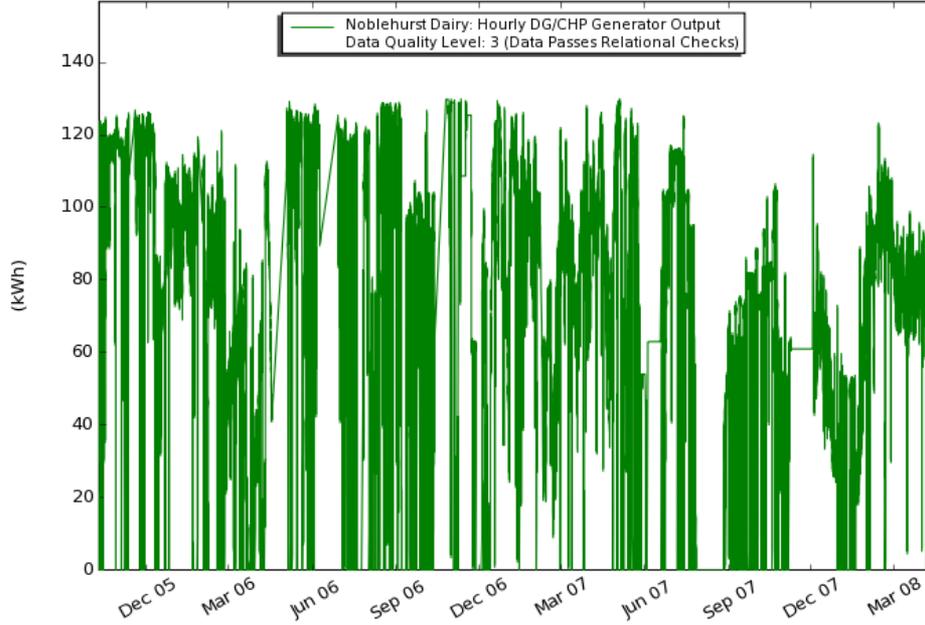
Recovery

Database.



Noblehurst Dairy

Noblehurst Dairy: 10/09/2005 - 04/06/2008



Resources Conferences & Events

to seal. Leaks of biogas
testing before filling with
ed to ensure that the

factory installed to meet
construction

ester and reasonable
e it possible to shut down
hard to divide the
e control device may be

the engine room keeps

eeded on some sites.

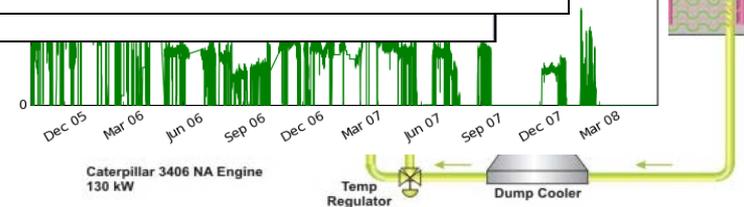
Frozen manure and
en the digester feed was
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be needed to maintain
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n reality.

- Internal combustion
- Maintaining temper
- manure that was t
- reduced the gas p
- maintain the temp
- the digester temp
- weather to recove
- The thermometers



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TIER III - Performance-based Incentives for CHP Systems

- CHP system incentives include both an electricity generation and a peak demand reduction component.
 - *Electricity Generation incentive: $\$0.10 \times kWh_a$*
 - *Peak Demand Reduction incentive: $\$600 \times kW_p \times [PR2 \text{ or } 1, \text{ whichever is less}]$ where:*
- **kWh_a** - Total electricity generated by the CHP system in a 12 month period net of parasitic electricity use. NYSERDA's incentive will not be paid for electricity generated beyond on-site electricity usage. The comparison between the electricity generated by the CHP System and that used on-site will be assessed on an hourly basis.
- **kW_p** - Average power produced by the CHP system during the summer capability period, net of parasitic electricity use. Electricity generated beyond on-site electricity usage will not be included in the calculation of kW_p . The comparison between the electricity generated by the CHP System and that used on-site will be assessed on an hourly basis.
- **kW_{SPC}** - The projected and contracted peak demand reduction, as agreed to between the applicant and NYSERDA in the SPC agreement.
- **PR** - Power ratio. $PR = kW_p / kW_{SPC}$. PR must equal or exceed 0.6 to receive an incentive. **kWh_a and kW_p will be determined by NYSERDA and its contractors based on metered data collected and transferred to the NYSERDA CHP Data Integration Website.**

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Re: DFC at NY Sheraton 3-Mar-06 06:22 pm

Nice try.

Results are obvious, the unit has been operating since May 2005, mostly at its rated output.

So did King County unit and Coast Guard.

There is enough information to suggest the stacks have operated for 1 year or more.

link2fc

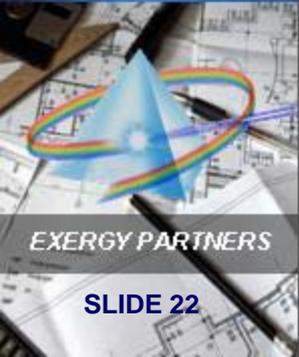
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Messages in Topic Minimum rating: **2 stars + unrated** What's this?

Subject	Author	Rating	Time of Post (ET)
DFC at NY Sheraton In case this hasn't been posted before	fcmavn	Rate it	3-Mar-06 01:36 pm
Re: DFC at NY Sheraton fcmavn, >DG System Installation Cost: 7360 \$/kW...	kidmadeira	Rate it	3-Mar-06 01:58 pm
Re: DFC at NY Sheraton you can chart the dg/ chp data and look at the ...	one_point_7...	Rate it	3-Mar-06 02:01 pm
Re: DFC at NY Sheraton the CHP efficiency is only 50% ...	one_point_7...	Rate it	3-Mar-06 02:02 pm
Re: DFC at NY Sheraton Hey, you crashed our webpage!! Unf ...	cdh_kendra	Rate it	3-Mar-06 03:12 pm
Re: DFC at NY Sheraton	link2fc	Not rated	3-Mar-06 06:22 pm
Re: DFC at NY Sheraton Kid: Everything is relative I guess? Btw - 3r ...	fcmavn	Rate it	3-Mar-06 03:45 pm
Re: DFC at NY Sheraton And when they show efficiency and Kws I think ...	fceexperenc...	Rate it	3-Mar-06 04:48 pm
Re: DFC at NY Sheraton Kid, The cost reported is the installed cost ...	link2fc	Rate it	3-Mar-06 06:18 pm



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Re: DFC at NY Sheraton

< 3-Mar-06 03:12 pm >

Hey, you crashed our webpage!! Unfortunately, some form data needs to be submitted to view the CHP Efficiency plot.

The "CHP Efficiency" in this case is incomplete. The control system is not currently set up to return heat recovery data so for the meantime the CHP Efficiency is strictly the Electrical Efficiency. The energy contractor expects to begin collecting the recovery data within the next month or two.

We also have data for another fuel cell in our database: in this case a 5 kW residential fuel cell demonstration project in Western NY. That link is here:

<http://chp.nyserda.org/facilities/detail...>

ooh_kendra



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Rating :

★ ★ ★ ★ ★ (No ratings)

Rate it:

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Messages in Topic

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Re: DFC at NY Sheraton Kid, The cost reported is the installed cost ...	link2fc	Rate it	3-Mar-06 06:18 pm



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SLIDE 23

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Message

Subject

DFC at NY

Re: DFC
fcmav

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you can chart the ag/ cnp data and look at the ...

Re: DFC at NY Sheraton the CHP efficiency is only 50% ...	one_point_7...	Rate it	3-Mar-06 02:02 pm
Re: DFC at NY Sheraton Hey, you crashed our webpage!! Unf ...	cdh_kendra	Rate it	3-Mar-06 03:12 pm
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10 West 66th Street Corp.



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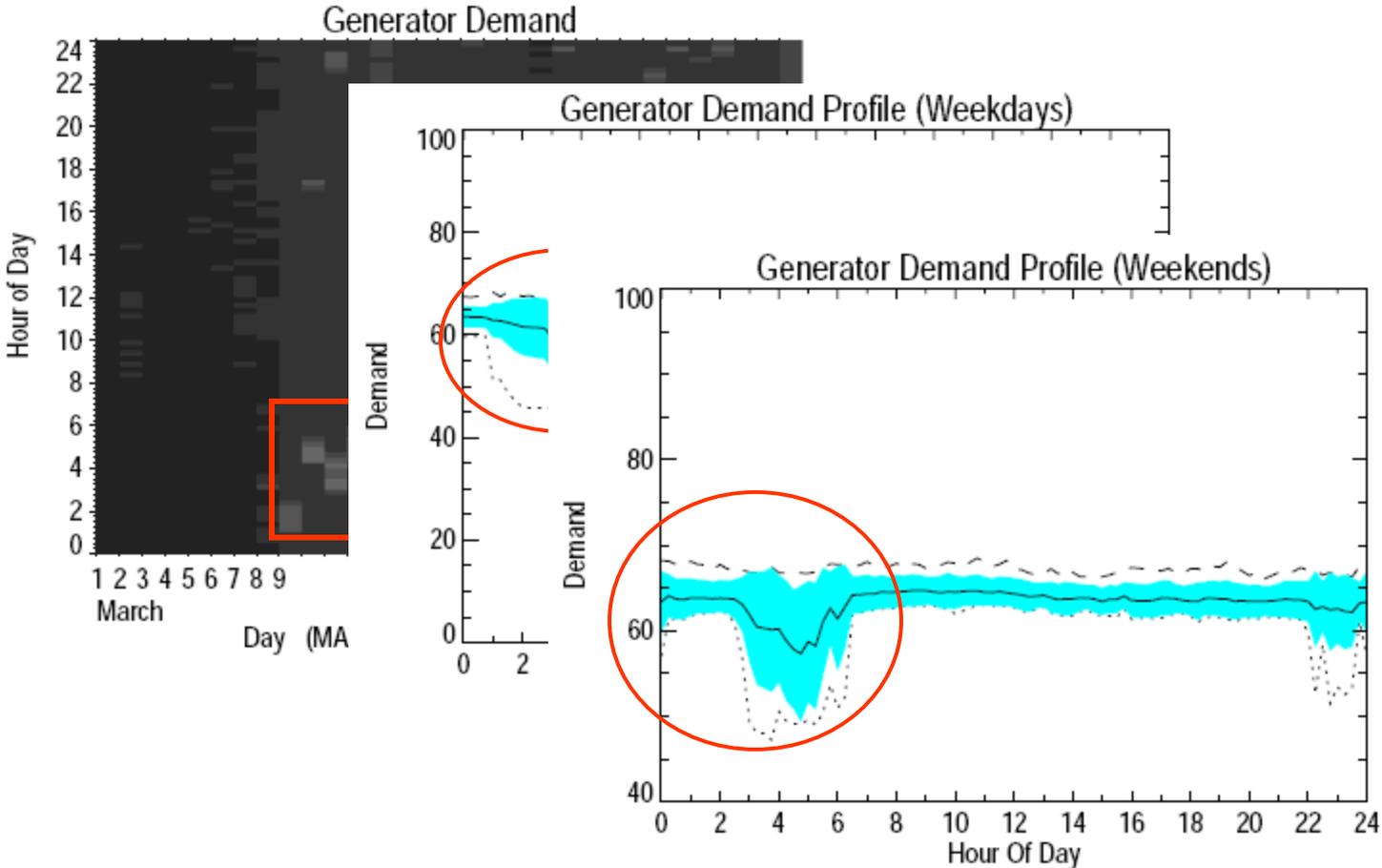


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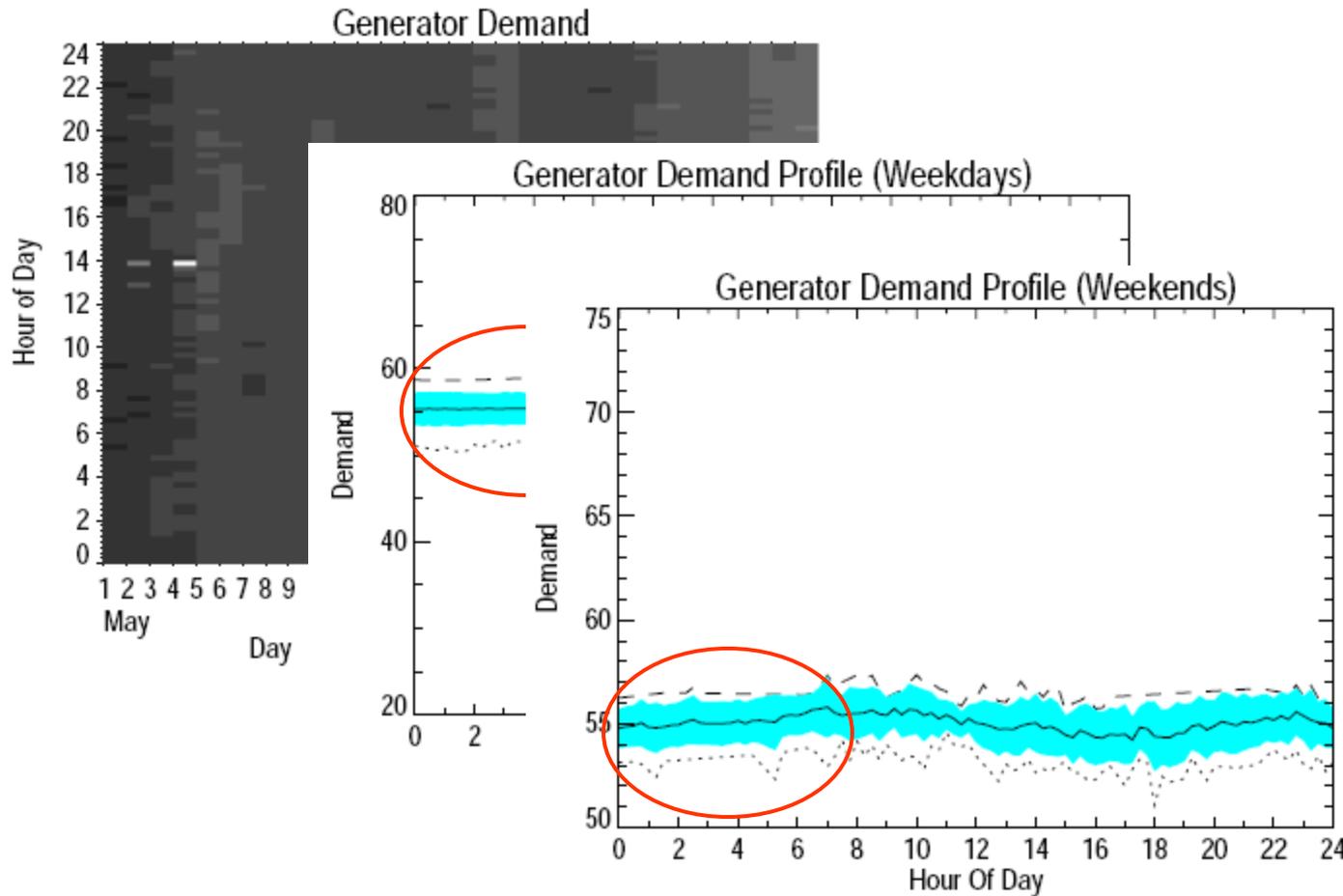
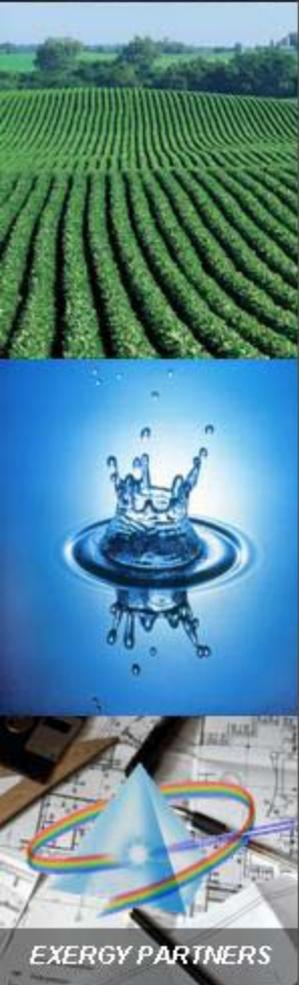
SLIDE 26



Performance Issue Identified



Performance Issue Resolved

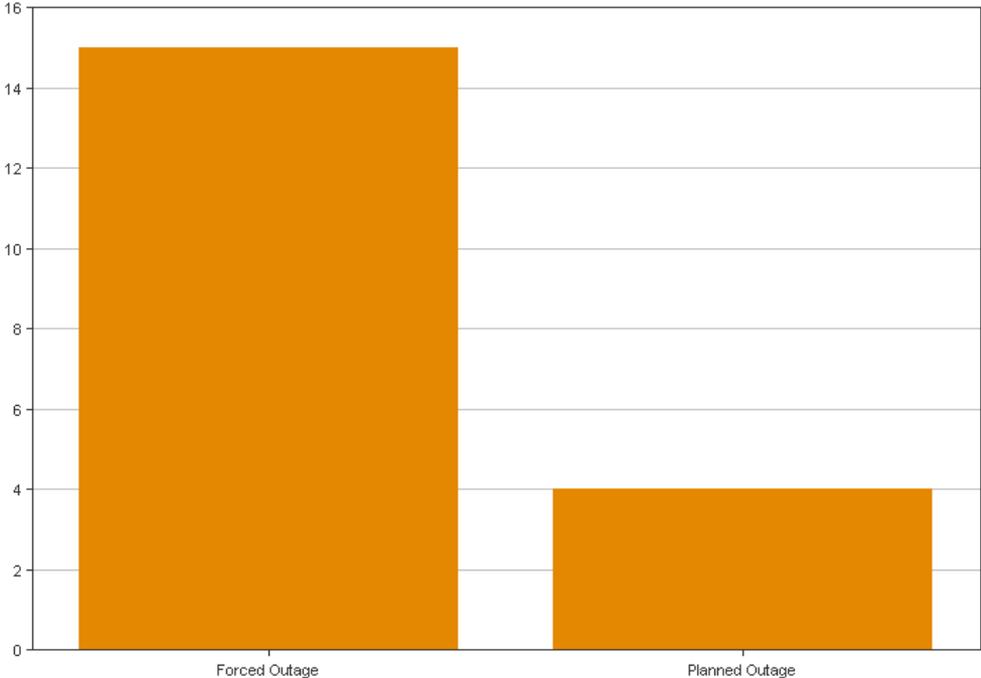


10 West 66th Street Corp.

Outages by Type
11/01/2005 through 10/31/2006

Report Created 5/15/2008

Facilities Included: 10 West 66th Street Corp. - New York, NY





Recommendations

- **My recommendations**
 - *Simplify GUI – Menu Driven and Directed*
 - *Quarterly Updated Project Assessment and Analysis*
 - *Developer & Major Equipment Contacts*
 - *Link Project to Other Reputable Sites Where Beneficial – e.g. Cornell Manure Management Program*
- **Your recommendations?**

Thank You

Richard Sweetser
EXERGY Partners Corp.
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