Award Number:	DE-EE0002570
Project Title:	Recovery Act: Brea California Combined Cycle Electric Generating Plant Fueled by Waste Landfill Gas
Project Period:	1/14/2010 – 12/31/2012
Recipient Organization:	Brea Power II, LLC
Project Director:	Stephen Galowitz
Partners:	DCO Energy

A. Executive Summary

The primary objective of the Project was to maximize the productive use of the substantial quantities of waste landfill gas generated and collected at the Olinda Landfill near Brea, California. An extensive analysis was conducted and it was determined that utilization of the waste gas for power generation in a combustion turbine combined cycle facility was the highest and best use.

The resulting Project reflected a cost effective balance of the following specific sub-objectives:

- Meeting the environmental and regulatory requirements, particularly the compliance obligations imposed on the landfill to collect, process and destroy landfill gas
- Utilizing proven and reliable technology and equipment
- Maximizing electrical efficiency
- Maximizing electric generating capacity, consistent with the anticipated quantities of landfill gas generated and collected at the Olinda Landfill
- Maximizing equipment uptime
- Minimizing water consumption
- Minimizing post-combustion emissions

- The Project produced and will produce a myriad of beneficial impacts.
  - The Project created 360 FTE construction and manufacturing jobs and 15 FTE permanent jobs associated with the operation and maintenance of the plant and equipment.
  - By combining state-of-the-art gas clean up systems with post combustion emissions control systems, the Project established new national standards for best available control technology (BACT).
  - The Project will annually produce 280,320 MWh's of clean energy
  - By destroying the methane in the landfill gas, the Project will generate CO2 equivalent reductions of 164,938 tons annually.

The completed facility produces 27.4 MWnet and operates 24 hours a day, seven days a week.

Brea Power II Landfill-Gas-to-Energy Facility

B. Project Timeline

March 14, 2010	Kickoff Meeting
December 10, 2010	Construction Mobilization
November 22, 2011	Permit Approvals Complete
February 29, 2012	Final Design Complete
June 22, 2012	Construction Complete
October 15, 2012	Commissioning Complete
December 3, 2012	Facility Performance Testing Complete
December 31, 2012	Project completed

C. Facility Description

The facility is comprised of the Gas Collection and Clean-up site (GCC site) and the adjacent Combustion Turbine Generator site (CTG site).

Major systems located on the GCC site are the LFG Collection Blowers, LFG Chilling system, Gas Compression systems, and the Siloxane Removal and Polishing system. Major systems on the CTG site include CTG's, Heat Recovery Steam Generators (HRSG) with integral Selective Catalytic Reduction units (SCR), the Steam Turbine Generator (STG), Inlet Air Chilling systems, Condenser and Cooling Water systems, Boiler Feed-Water and Steam Condensate systems, and related Electrical equipment, Distribution Pole Line, and the Switchyard.

The Brea Combined Cycle LFG Plant consists of four (4) LFG fired, Solar Taurus 60 CTG's nominally rated at 5.65 MW and mated to dedicated, single pressure HRSG's. The four (4) trains produce approximately 91,860 PPH of 425 psig superheated steam at a temperature of 750°F to drive a

single STG nominally rated at 10 MW. The four (4) trains, in combination with the ST generate nominally 32.5 (gross) MW of electrical power in combined-cycle operation at the average annual ambient conditions.

The HRSG include SCR units to reduce NOx emissions and a CO catalyst section, including an upstream catalyst guard bed to further reduce siloxane levels. The SCR is an aqueous ammonia-based system.

The CTG's are located outdoors and are enclosed in weather proof and sound mitigating enclosures, as required. In general, all other Plant systems and equipment are located outdoors and provisions shall be made for weather protection and sound mitigation, as required.

The Plant includes the following major systems:

- LFG Collection Blowers
- LFG Collection Aftercooler
- LFG Chilling System
- 1^{st} Stage Compression System
- 1^{st} Stage Aftercooler
- Siloxane Removal and Polishing System
- 2^{nd} Stage Compression System
- Swing Compression System
- Regen Flare
- Combustion Turbine Generators
- Heat Recovery Steam Generators
- Selective Catalytic Reduction and Aqueous Ammonia Systems
- CTG Inlet Air Chilling System
- Steam Turbine Generator
- STG Exhaust Condenser
- Steam Dump Condenser
- Deaerator
- Boiler Feed-Water and Steam Condensate Systems
- Cooling Towers
- Condenser Cooling Water System
- Chiller/Lube Oil Cooling Water Systems
- Steam Cycle Make-up Water and Reverse Osmosis System
- Steam and Cooling Water Chemical Treatment Systems
- GCC and CTG Site Compressed Air Systems
- GCC and CTG Site Oil Water Separation Systems
- Building HVAC Systems
- Storm Drainage System
- Fire Protection Systems
- Sanitary Sewer System
- Potable and Utility Water Systems
- Transformers and Electrical Distribution Systems
- Grounding and Lightning Protection Systems

- Building Lighting and Utility Power Systems
- Uninterruptible Power Supply (UPS) System
- Instrumentation and Plant Control Systems
- Continuous Emissions Monitoring Systems (CEMS)
- Information Transport System

D. Facility Performance

Emissions and Performance Tests

Emissions and Performance tests were conducted to confirm that the following project performance guarantees were met:

Performance Metric	Units	Guaranteed
Design Fuel Conditions		
LFG Heating Value on a dry basis at STP conditions of 32F and 1 atmosphere.	BTU/SCF, LHV	478.9
Gas Flow Requirements to the Gas Turbines	SCFM	8,804
Gas quality		Maximum H2S Concentration: 100 ppm with CO241% and CH4-52.6% -Sum of Siloxanes(2), (3): ≤ 140 mg/m3 , NMOC ≤ 2500 ppmv as Tolulene
DCO Guarantees		
Project Emissions Guarantee @ Full Load	Limits as defined in the Permit to Construct	Limits as defined in the Permit to Construct
Project Noise Level Guarantee		Noise levels will meet all local, state and federal requirements. Provided that existing boundary noise levels do not currently exceed these requirements
Power Generation Performance		
Gross Project Output	**kW**	**32,216**
Fuel Input (LHV)	MMBtu/hr	252.96
Gross Project Heat Rate		**7,852**
Net Project Capacity	**kW**	**27,810**

Availability Test

Availability testing focused on accurately determining the Equivalent Availability corrected to Contractual Reference Conditions. Satisfactory completion of the tests demonstrated compliance with the Project Availability Contractual guarantees.

The results of these Emissions and Performance Tests are summarized in the following Attachments:

Attachment 1 – Combustion Turbine #1 Emissions

Attachment 2 - Combustion Turbine #2 Emissions
Attachment 3 – Combustion Turbine #3 Emissions
Attachment 4 – Combustion turbine #4 Emissions
Attachment 5 – Regeneration Flare Emissions
Attachment 6 – Capacity and Heat Rate Test Results
Attachment 7 – Reliability Test Results

E. Conclusion

All Project Objectives were achieved by the 1) Modifying and upgrading of the landfill gas collection system. 2) Construction of a State-of-the Art gas clean up and compression facility. 3) Construction of a high pressure pipeline to convey cleaned landfill gas from the clean-up and compression facility to the power plant. 4) Construction of a combined cycle electric generating facility consisting of combustion turbine generator sets, heat recovery steam generators and a steam turbine. 5) Increase of the voltage of the electricity produced at a newly constructed transformer/substation and delivery of the electricity to the local transmission system. 6) The creation of construction, manufacturing and permanent full time employees.

ATTACHMENT 1

Unit 1 Emissions

SUMMARY OF RESULTS
BREA PARENT 2007, LLC

Facility: Brea Parent - DCO Energy
City: Brea, CA
Source: Unit 1 Outlet
Test Date: 8/22/12

Parameter	Run # units	Compliance Unit 1 Outlet	Limit(s)
Test Date:	m/d/y	8/22/12	
Start Time:	hhmm	20:35	
End Time:	hhmm	21:37	
Firing Rate	MMBtu/hr	64.93	***72***
Stack Gas Flowrate	dscfh	2286372	
Stack Gas Flowrate (*EPA 19*)	dscfm	38106	
O2 Emissions			
Concentration, measured	%	15.34	
CO2 Emissions			
Concentration, measured	%	5.03	
NOx Emissions			
Concentration, measured	ppmv	19.21	
Concentration @15%O2	ppmv	20.40	***25***
Emission Rate	lb/hr	5.32	
Emission Rate	lb/MMBtu	0.082	
CO Emissions			
Concentration, Less Than	ppmv	<20.00	
Concentration @15%O2	ppmv	<21.24	***130***
Emission Rate	lb/hr	<3.37	
Emission Rate	lb/MMBtu	<0.019	
Particulate Emissions			
Total PM by weight	mg	8.90	
Total PM	lb/hr	0.50	
Total Particulate Matter	gr/dscf	0.001	
Emission Rate	gr @ 12% CO2	0.002	***0.10***
VOC Emissions			
Concentration, measured	ppmv	14.94	
Concentration, *as hexane*	ppmv	2.49	
Concentration @3%O2	ppmv	8.02	***20***
Emission Rate as CH4	lb/hr	1.44	
Emission Rate as CH4	lb/day	34.56	
Emission Rate	lb/MMBtu	0.022	

*VOC oxygen corrected results reported as hexane per permit conditions.

Facility: Brea Parent - DCO Energy
City: Brea, CA
Source: Unit 1 Outlet
Test Date: 8/22/12

Operating Information			
Rated MW	mw	5.6	
Actual MW	mw	5.0	
MW % of Rated	%	89	
Total Fuel Useage	scfm	1982	
Ammonia Injection Rate	lbs/hr	14.35	
Fuel Information			
Higher Heating Value (HHV)	btu/scf	546	
Dry F-Factor	dscf/MMBtu	9361	
NH3 Emissions			
=0.01543 x NH3, net / VmStd	gr/dscf	0.00011	
Concentration, measured	ppmv	0.34	
Concentration @15%O2	ppmv	0.36	***5***
Emission Rate	lb/hr	2.07	
SOx Emissions			
Concentration, measured	ppmv	1.50	
Concentration @15%O2	ppmv	1.59	
Emission Rate	lbs/hr	0.58	
Emission Rate	lbs/day	13.88	***33***
Emission Rate	lb/MMBtu Fuel	0.00046	***0.06***

ATTACHMENT 2

Unit 2 Emissions

SUMMARY OF RESULTS
BREA PARENT 2007, LLC

Facility: Brea Parent - DCO Energy
City: Brea, CA
Source: Unit 2 Outlet
Test Date: 8/24/12

Parameter	units	Compliance Unit 2 Oulet	Limit(s)
Test Date:	m/d/y	8/24/12	
Start Time:	hhmm	14:56	
End Time:	hhmm	16:03	
Firing Rate	MMBtu/hr	64.13	***72***
Stack Gas Flowrate	dscfh	2311256	
Stack Gas Flowrate (*EPA 19*)	dscfm	38521	
O2 Emissions			
Concentration, measured	%	15.47	
CO2 Emissions			
Concentration, measured	%	4.93	
NOx Emissions			
Concentration, measured	ppmv	19.40	
Concentration @15%O2	ppmv	21.09	***25***
Emission Rate	lb/hr	5.43	
Emission Rate	lb/MMBtu	0.085	
CO Emissions			
Concentration, measured	ppmv	0.38	
Concentration @15%O2	ppmv	0.41	***130***
Emission Rate	lb/hr	0.06	
Emission Rate	lb/MMBtu	0.000	
Particulate Emissions			
Total PM by weight	mg	2.20	
Total PM	lb/hr	0.10	
Total Particulate Matter	gr/dscf	0.000	
Emission Rate	gr @ 12% CO2	0.000	***0.10***
VOC Emissions			
Concentration, measured	ppmv	16.37	
Concentration, *as hexane*	ppmv	2.73	
Concentration @3%O2	ppmv	9.00	***20***
Emission Rate as CH4	lb/hr	1.59	
Emission Rate as CH4	lb/day	38.27	
Emission Rate	lb/MMBtu	0.025	

*VOC oxygen corrected results reported as hexane per permit conditions.

Facility: Brea Parent - DCO Energy
City: Brea, CA
Source: Unit 2 Outlet
Test Date: 8/24/12

Operating Information			
Rated MW	mw	5.6	
Actual MW	mw	5.0	
MW % of Rated	%	89	
Total Fuel Useage	scfm	1978	
Ammonia Injection Rate	lbs/hr	16.10	
Fuel Information			
Higher Heating Value (HHV)	btu/scf	540	
Dry F-Factor	dscf/MMBtu	9358	
NH3 Emissions			
Concentration, measured	ppmv	0.34	
Concentration @15%O2	ppmv	0.37	***5***
Emission Rate	lb/hr	2.09	
SOx Emissions			
Concentration, measured	ppmv	1.00	
Concentration @15%O2	ppmv	1.09	
Emission Rate	lbs/hr	0.39	
Emission Rate	lbs/day	9.35	***33***
Emission Rate	lb/MMBtu Fuel	0.00031	***0.06***

ATTACHMENT 3

Unit 3 Emissions

SUMMARY OF TEST RESULTS
DCO Energy
Turbine 3
August 8, 2012

PARAMETER	INLET LFG	INLET APCS	EXHAUST		PERMIT LIMIT
			As Found	Defaulted [1]	
O_2, %	0 97	14 62	14 71		
CO_2, %	39 89	5 59	5 55		
N_2, %	6 76	79 79	79.75		
H_20, %	2 4		10 9		
Flow Rate, wscfm	1633	26570	38,230		
Flow Rate, dscfm	1633	26570	34,055		
Temperature, °F (as measured at sampling ports)	106	651	254		
Btu/scf (calculated)	521				
MMBtu/Hr	51 03				72
MW	4 99				
NH_3 Inj. Rate lb/hr	26 91				
NOx:					
ppm		31 85	20 88		
ppm @ 15% O_2		29.91	19.90		25
lb/hr (as NO_2)		7.90	5 18		
lb/day (as NO_2)		189 6	124.3		170
lb/MMBtu (as NO_2)		0 155	0 102		
lb/MMCF (as NO_2)		80.64	52 88		
lb/MW-HR			1.04		5 5
APCS Control Eff. %			34.42		
CO:					
ppm		0 00	2.4	10	2000
ppm @ 15% O_2		0 00	2.3	9 5	130
lb/hr		0 00	0 36	1 51	
lb/day		0 00	8 75	36 23	
lb/MMBtu		0.000	0 007	0 030	
lb/MMCF		0 00	3.72	15.41	
lb/MW-HR		0 000	0 07	0 30	
APCS Control Eff. %			0 00	0 00	
Hydrocarbons:					
CH_4, ppm	511,500		9 70		
TGNMO, ppm (as CH_4)	185		2 90		
TGNMO, lb/hr (as CH_4)	0 8		0 25		
TGNMO, lb/day (as CH_4)			6 00		
TGNMO, lb/MM Btu (as CH_4)	-		0 005		
TGNMO, lb/day (as CH_4)	18 4		6 00		12
TGNMO, ppm (as hexane)			0 48		
TGNMO, ppm @ 3% O_2 (as hexane)			1 40		20 [2]
TGNMO, lb/hr (as hexane)			0 22		
Destruction Eff. % (DRE)			95 61		98 [2]
lb/MMCF			2 29		
Particulate (as PM_{10}):					
gr/dscf			0 0008		0 01
lb/hr			0 237		
lb/MM Btu			0 005		
lb/day			5.68		36
lb/MMCF			2.42		
Ammonia:					
ppm			0 05		
ppm @ 15% O_2			0.05		5
lb/hr			0 005		
Total Sulfur Compounds,					
Total Reduced Sulfur Inlet, ppm	0.5				150 (Rule 431.1)
SOx Exhaust, lb/hr (as SO_2) [3]			< 0 01		
SOx Exhaust, lb/hr (as SO_2) [3]					
SOx Exhaust, lb/day (as SO_2) [3]			< 0 20		33
lb/MMCF			< 0 08		
lb/MW-HR			< 0 002		0 9
lb/MMBtu			0 0002		0 06

Notes:
The results in this table are the averages of all measurements.
(1) Values presented reflect 20% of the selected analyzer range
(2) SCAQMD Rule 1150.1 and NSPS require the turbine to meet the concentration standard or DRE
(3) The exhaust SOx lb/hr and lb/day results are calculated from inlet reduced sulfur concentrations.

SUMMARY OF TEST RESULTS
DCO Energy
Turbine 3
August 10, 2012

PARAMETER	INLET LFG	INLET APCS	EXHAUST		PERMIT LIMIT
			As Found	Defaulted [1]	
O_2, %	1.24	14.92	14.83		
CO_2, %	38.63	5.28	5.39		
N_2, %	7.44	79.79	79.78		
H_20, %	2.4		8.2		
Flow Rate, wscfm	1723	28682	37,138		
Flow Rate, dscfm	1723	28682	34,089		
Temperature, °F (as measured at sampling ports)	106	660	305		
Btu/scf	524				
MMBtu/Hr	54.16				72
MW	5.368				
NH_3 Inj. Rate lb/hr		21.360			
NOx:					
ppm		27.41	20.03		
ppm @ 15% O_2		27.07	19.48		25
lb/hr (as NO_2)		5.73	4.97		
lb/day (as NO_2)		137.4	119.3		170
lb/MMBtu (as NO_2)		0.106	0.092		
lb/MMCF (as NO_2)		55.40	48.11		
lb/MW-HR			0.93		5.5
APCS Control Eff. %			28.03		
CO:					
ppm		2.95	4.1	10	2000
ppm @ 15% O_2		2.95	4.0	9.7	130
lb/hr		0.38	0.62	1.51	
lb/day		9.13	14.90	36.26	
lb/MMBtu		0.01	0.011	0.028	
lb/MMCF		3.68	6.01	14.62	
lb/MW-HR		0.07	0.12	0.28	
APCS Control Eff. %			0.00	0.00	

Notes:

The results in this table are the averages of all measurements.

(1) Values presented reflect 20% of the selected analyzer range.

(2) SCAQMD Rule 1150.1 and NSPS require that the turbine meet the concentration standard or DRE.

ATTACHMENT 4

Unit 4 Emissions

SUMMARY OF RESULTS
BREA PARENT 2007, LLC

Facility: Brea Parent - DCO Energy
City: Brea, CA
Source: Unit 4 Outlet
Test Date: 8/23/12

Parameter	Run # units	Compliance Unit 4 Outlet	Limit(s)
Test Date:	m/d/y	8/23/12	
Start Time:	hhmm	19:55	
End Time:	hhmm	20:58	
Firing Rate	MMBtu/hr	64.31	***72***
Stack Gas Flowrate	dscfh	2324785	
Stack Gas Flowrate (*EPA 19*)	dscfm	38746	
O2 Emissions			
Concentration, measured	%	15.47	
CO2 Emissions			
Concentration, measured	%	4.92	
NOx Emissions			
Concentration, measured	ppmv	18.56	
Concentration @15%O2	ppmv	20.15	***25***
Emission Rate	lb/hr	5.23	
Emission Rate	lb/MMBtu	0.081	
CO Emissions			
Concentration, measured	ppmv	<2.00	
Concentration @15%O2	ppmv	<2.17	***130***
Emission Rate	lb/hr	<0.34	
Emission Rate	lb/MMBtu	<0.0018	
Particulate Emissions			
Total PM by weight	mg	2.90	
Total PM	lb/hr	0.20	
Total Particulate Matter	gr/dscf	0.000	
Emission Rate	gr @ 12% CO2	0.000	***0.10***
VOC Emissions			
Concentration, measured	ppmv	10.99	
Concentration, *as hexane*	ppmv	1.83	
Concentration @3%O2	ppmv	6.04	***20***
Emission Rate as CH4	lb/hr	1.08	
Emission Rate as CH4	lb/day	25.85	
Emission Rate	lb/MMBtu	0.017	

VOC oxygen corrected results reported as hexane per permit requirements

Facility: Brea Parent - DCO Energy
City: Brea, CA
Source: Unit 4 Outlet
Test Date: 8/23/12

Operating Information			
Rated MW	mw	5.6	
Actual MW	mw	5.0	
MW % of Rated	%	89	
Total Fuel Useage	scfm	2015	
Ammonia Injection Rate	lbs/hr	16.17	
Fuel Information			
Higher Heating Value (HHV)	btu/scf	532	
Dry F-Factor	dscf/MMBtu	9395	
NH3 Emissions			
=0.01543 x NH3, net / VmStd	gr/dscf	0.00011	
Concentration, measured	ppmv	0.35	
Concentration @15%O2	ppmv	0.38	***5***
Emission Rate	lb/hr	2.18	
SOx Emissions			
Concentration, measured	ppmv	1.70	
Concentration @15%O2	ppmv	1.85	
Emission Rate	lbs/hr	0.67	
Emission Rate	lbs/day	16.00	***33***
Emission Rate	lb/MMBtu Fuel	0.00054	***0.06***

ATTACHMENT 5

Regeneration Flare Emissions

SUMMARY OF TEST RESULTS
DCO/Brea Power Partners
Regen Flare
September 25, 2012

PARAMETER	INLET		EXHAUST		PERMIT LIMIT
			As Found	Defaulted [1]	
O_2, %	9.64		13.38		
CO_2, %	23.02		6.67		
N_2, %	37.24		79.96		
H_2O, %	3.6		9.8		
Flow Rate, wscfm	447		3,936		27000 inlet
Flow Rate, dscfm	418		3,551		
Temperature, °F (as measured at sampling ports)	96		1,432		
Temperature, °F (as measured at by set thermocouple)			1,497		>1400
Btu/scf	310				
MMBtu/Hr	8.32				13.65
NOx:					
ppm			5.76		
ppm @ 3% O_2			13.71		
lb/hr (as NO_2)			0.15		
lb/day (as NO_2)			3.6		8
lb/MMBtu (as NO_2)			0.018		0.025 (Rule 1303)
lb/MMCF (as NO_2)			5.94		
CO:					
ppm			11.6	20	
ppm @ 3% O_2			27.6	47.6	2000
lb/hr			0.18	0.31	
lb/day			4.39	7.55	
lb/MMBtu			0.022	0.038	0.06
lb/MMCF			7.29	12.55	
Hydrocarbons:					
CH_4, ppm	292,500	<	10.00		
CH_4, lb/hr	310	<	0.09		
Destruction Eff. % (CH_4)		>	99.97		99
TGNMO, ppm (as CH_4)	18,352		2.90		
TGNMO, lb/hr (as CH_4)	19.4		0.026		
TGNMO, lb/MM Btu (as CH_4)	-		0.003		
TGNMO, lb/day (as CH_4)	466.5		0.63		1
TGNMO, ppm (as hexane)			0.48		
TGNMO, ppm @ 3% O_2 (as hexane)			1.15		20
TGNMO, lb/hr (as hexane)			0.02		
Destruction Eff. % (DRE)			99.87		98
lb/MMCF			0.93		
Particulate (as PM_{10}):					
gr/dscf			0.0026		0.01
lb/hr			0.114		
lb/MM Btu			0.014		
lb/day			2.74		6
lb/MMCF			4.55		
Formaldehyde, ppb			781.2		
Formaldehyde, lb/hr			0.0132		
Acetaldehyde, ppb			186.1		
Acetaldehyde, lb/hr			0.0046		
Total Sulfur Compounds,					
Total Reduced Sulfur Inlet, ppm	38				
SOx Exhaust, lb/hr (as SO_2)[3]			0.16		0.21
SOx Exhaust, lb/day (as H_2S)[3]			1.92		6
lb/MMCF			6.37		

Notes:

The results in this table are the averages of all measurements.

(1) Values presented reflect 20% of the selected analyzer range.

(2) SCAQMD Rule 1150.1 and NSPS require that a flare meet the concentration standard or DRE.

(3) The exhaust SOx lb/hr and lb/day results are calculated from inlet reduced sulfur concentrations.

ATTACHMENT 6

Capacity and Heat Rate Test Results

Olinda Landfill Gas to Energy Project

Capacity and Heat Rate Test Results

RESULT SUMMARY							
Description	**Units**	**Base / Design Conditions**	**Test Run 1 12/16/11 15:00 - 19:00**	**Test Run 2 12/16/11 20:00 - 23:59**	**Test Run 3 12/17/11 01:00 - 05:00**	**Average**	**Notes**
CORRECTED NET PROJECT CAPACITY RESULTS							
Plant Net Electrical Output with Load Bank Power Dissipated	kW	27,810.00	27,189.93	27,190.65	27,029.93	27,136.84	
Corrected Net Project Capacity, Pcorr	kW	27,810.00	28,028.45	28,064.24	28,039.30	28,044.00	
Margin from Guarantee	kW	-	218.45	254.24	229.30	234.00	
Margin from Guarantee	%	0.00%	0.79%	0.91%	0.82%	0.84%	
Pass/Fail	-	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**	
Net Corrected Electrical Output Uncertainty	%		0.50%	0.50%	0.50%	0.54%	
Net Corrected Electrical Output Uncertainty	kW	0	141.0	141.0	140.3	151.52	
GROSS CORRECTED PROJECT HEAT RATE RESULTS							
Measured Heat Input (LHV)	mmBtu/h	0.0	277.4	276.8	275.1	276.4	
Measured Plant Gross Electrical Output	MW	33,591.8	33,590.9	33,591.8	33,430.9	33,537.9	
Corrected Gross Project Heat Rate (LHV)	Btu/kWh	7,852.0	7,828.6	7,818.3	7,828.6	7,825.2	
Margin from Guarantee	Btu/kWh	0.0	-23.4	-33.7	-23.4	-26.8	
Margin from Guarantee	%	0.00%	-0.30%	-0.431%	-0.30%	-0.34%	
Pass/Fail	-	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**	
Gross Corrected Heat Rate Uncertainty	%	0.00%	1.28%	1.28%	1.29%	1.10%	
Gross Corrected Heat Rate Uncertainty	Btu/kWh	0.0	100.1	100.3	101.2	86.3	

ATTACHMENT 7

Availability Test Results

Olinda Landfill Gas to Energy Project

Availability Test Results

Equivalent Availability Test Calculations			
Total Facility Event Duration During the Availability Test, FED	**Hours**	**8.00**	
Facility Net Electrical Energy, kWh_{test}	**kWh**	**13,472,740**	
Guaranteed Facility Net Electrical Output, P_{Guar}	**kW**	**27,810**	
Availability Test Duration	**hours**	**504**	
Availability Test Correction Amount, ATCA(P)	**kWh**	**-28,477**	
Equivalent Availability, EA	**%**	**95.93%**	