

MONTHLY PROGRESS REPORT FOR CONTRACT NO. 500-00-036

PROJECT 2.2 – ENHANCED ENERGY RECOVERY THROUGH OPTIMIZATION OF
ANAEROBIC DIGESTION AND MICROTURBINES PROJECT

REPORT PREPARED BY: COMMONWEALTH ENERGY TEAM

May 2003

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What we planned to accomplish this period:

Information collection and analysis activities will continue as related to process selection. Task work activity related to enhanced energy production, gas cleaning and advanced energy recovery will continue in May. Communications with technology developers for the technologies under consideration will also continue. In addition, preparation of the draft process selection report will begin in May.

What we actually accomplished this period:

Task 2.2.1 Process Selection:

- Information collection activities continued in May. Information was assembled on different processes that are being analyzed as part of the Process Selection task. Activities related to refining process concepts for enhanced anaerobic digestion were undertaken. Discussions continued with Ingersoll-Rand (IR) regarding their new biogas fuel conditioning system and its possible application on this project. Arrangements were made for a meeting of Ingersoll-Rand and IEUA staff to explore how the IR gas cleaning technology could be deployed at one of the IEUA sites.
- Work on the process selection report is continuing, although completion of the biogas portion of the report cannot take place until the results of the power flow analysis work are available. Because it is not anticipated that these power flow results will be available in May, efforts on this task were minimized. Further, since much of the work for this task was completed earlier, most efforts this month were expended on the gas cleaning for microturbine aspect of the project.

How we are doing compared to our plan:

Process selection work is proceeding as anticipated. However, as stated previously, the uncertainty regarding the project recommended for funding, may push the deliverable due date for the Process Selection Report back.

Significant problems or changes:

There are no significant fiscal problems to report during this period and work is proceeding within budget. Progress and expenditures will result in project being completed on time and within budget.

What we expect to accomplish during the next period:

Information collection and analysis activities will continue as related to process selection. Activity related to enhanced energy production, gas cleaning and advanced energy recovery will continue. It is anticipated that a planning meeting will be held involving IEUA, Ingersoll-Rand and the Commonwealth Team staff to more fully identify the technical issues and evaluate gas cleaning options for this project. In addition, preparation of the draft process selection report will continue in June.

Status of Milestones and Deliverables:

Table 1 below summarizes the status of Project 2.2 task deliverables as of the end of the current reporting period.

Table 1: Summary of Project Status and Deliverables – Project 2.2

Task No.	Description	Start Date		Due Date		Status (%)
		Planned	Actual	Planned	Actual	
2.2.1	Process Selection	01/21/03	01/24/03	07/26/03		35%
2.2.2	Site Selection and Test Plan	02/12/03		07/28/03		
2.2.3.a	Design Microturbine and Gas Cleaning System	02/12/03		09/25/03		
2.2.3.b	Design Thermal Hydrolysis and Ultrasound System	02/12/03		09/25/03		
2.2.7	Coordinate with RPAC	01/21/03		10/18/05		

Explanation of any Difference(s) in Schedule

Work is proceeding as anticipated, however it is possible that Task 2.2.1’s deliverable date may be revised.

Overall Schedule for Project 2.2:

Task Name	Duration	Start Date	End Date	Cost	2003				2004				2005			
					Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2		
Project 2.2 - Enhanced Energy Recovery through Optimization	716 days	Tue 1/21/03	Tue 10/18/05	\$0.00												
Task 2.2.1 - Process Selection	128 days	Fri 1/24/03	Sat 7/26/03	\$236,563.00												
Task 2.2.2 - Site Selection and Test Plan	119 days	Wed 2/12/03	Mon 7/28/03	\$182,543.00												
Task 2.2.3.a - Design Microturbine and Gas Cleaning System	162 days	Wed 2/12/03	Thu 9/25/03	\$242,995.00												
Task 2.2.3.b - Design Thermal Hydrolysis and Ultrasound System	162 days	Wed 2/12/03	Thu 9/25/03	\$215,842.00												
Critical Project Review Meeting	14 days	Fri 9/26/03	Wed 10/15/03	\$22,557.00												
Task 2.2.4.a(1) - Install Microturbine and Gas Cleaning System	121 days	Wed 2/12/03	Wed 7/30/03	\$292,430.00												
Task 2.2.4.a(2) - Install Microturbine and Gas Cleaning System	121 days	Wed 2/12/03	Wed 7/30/03	\$30,000.00												
Task 2.2.4.a(3) - Install Microturbine and Gas Cleaning System	121 days	Wed 2/12/03	Wed 7/30/03	\$0.00												
Task 2.2.4.b - Install Thermal Hydrolysis and Ultrasound System	120 days	Wed 2/12/03	Tue 7/29/03	\$229,585.00												
Task 2.2.5.a - Collect and Analyze Data for Microturbine and Gas	44 days	Tue 8/19/03	Fri 10/17/03	\$87,073.00												
Task 2.2.5(b) - Collect and Analyze Data for Microturbine and Gas	65 days	Mon 10/20/03	Fri 1/16/04	\$87,073.00												
Task 2.2.5(c) - Collect and Analyze Data for Microturbine and Gas	65 days	Mon 1/19/04	Mon 4/19/04	\$87,073.00												
Task 2.2.5(d) - Collect and Analyze Data for Microturbine and Gas	66 days	Mon 4/19/04	Mon 7/19/04	\$87,073.00												
Task 2.2.6.a - Prepare Outline for Project 2.2	44 days	Mon 7/28/03	Thu 9/25/03	\$25,404.00												
Task 2.2.6.b - Prepare Draft Report for Project 2.2	325 days	Fri 9/26/03	Thu 12/23/04	\$190,528.00												
Task 2.2.6.c - Prepare Final Report for Project 2.2	42 days	Fri 12/24/04	Mon 2/21/05	\$38,105.00												
Task 2.2.7 - Coordinate with RPAC	716 days	Tue 1/21/03	Tue 10/18/05	\$0.00												
Task 2.2.8.a - Evaluate Project 2.2: Draft Report	64 days	Fri 12/24/04	Wed 3/23/05	\$79,117.00												
Task 2.2.8.b - Evaluate Project 2.2: Final Report	14 days	Thu 3/24/05	Tue 4/12/05	\$19,779.00												

Overview of Fiscal Status:

Table 2 below summarizes the fiscal status of Project 2.2 by task as of the end of the current reporting period.

Table 2: Fiscal Status by Task – Project 2.2

Task Number	Budget	Invoiced To-Date	Fiscal Status *
2.2.1	\$236,563	\$0	OT
2.2.2	\$182,543	\$0	OT
2.2.3.a	\$242,995	\$0	OT
2.2.3.b	\$215,842	\$0	OT
2.2.7	\$22,557	\$0	OT

*Fiscal Status – Please indicate if you are “On Track” (OT), OverBudget (OB), or UnderBudget (UB)