

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

PROJECT 1.1 – PROGRAM PLANNING AND ANALYSIS

REPORT PREPARED BY: COMMONWEALTH ENERGY TEAM

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**What we planned to accomplish this period:**

Activity in October was to focus on the follow-up activities from the RPAC/Critical Program Review (CPR) meeting held on September 24<sup>th</sup>, as well as responding to comments previously received on the various submitted Planning and Analysis Task deliverables. It was anticipated that responses to the Commission's comments on the *Agricultural Waste Database and Inventory Report* would be completed and the final report submitted to the Commission. This will mark the completion of the first three biogas resource assessment tasks under Project 1.1 (Task 1.1.2, Task 1.1.3 and Task 1.1.4). It was also anticipated that work would continue on the Task 1.1.11.b, Final Report in October. This continued report development and revision effort will incorporate comments received on the various earlier Project 1.1 task draft reports and comments received during the RPAC/CPR meeting and subsequent follow-up meetings.

Itron and CE Team member ZECO anticipated reviewing all comments on the Task 1.1.9.b draft report received from the Commission on October 1<sup>st</sup>, and after incorporating these comments into the deliverable, plans to submit the Task 1.1.9b final report to the Commission and the Project 1.1 Technical Advisory Committee (TAC) for their review.

**What we actually accomplished this period:**

*Task 1.1.2 Develop Database of Agricultural Facilities in S. California, targeting the Chino Basin*

- The CE team staff collected and assembled information in response to comments from the Commission on the revised *Agricultural Database and Inventory Report*. Additional information was collected, and revisions were made to the report.

- Project Team members continued to provide limited support to efforts to refine the biogas market potential evaluations being used in the mini-grid impacts assessment and prioritization tasks.

Task 1.1.7 Assess Market Potential within Mini-Grid

- Itron worked on addressing the comments received from the Commission on the draft final Task 1.1.7 *Market Potential within Chino Basin Mini-Grid Report*. The draft report was forwarded to the Project 1.1 TAC for review on September 2nd, and placed on the Private-side of the CE Program Website. No comments were received from the Project 1.1 TAC members with the exception of Southern California Edison.

Task 1.1.8 Development of Generation Profiles

- Itron worked on addressing the comments received from the Commission on the draft of the Task 1.1.8 *Biogas and BI-PV Generation Profiles Report*. This report was also forwarded to the Project 1.1 TAC for review, and placed on the private-side of the CE Program Website. No comments were received from the TAC members.

Task 1.1.9b Conduct Power Flow Analysis within Mini-Grid Target Area

- Itron and ZECO responded to the external technical comments and Itron submitted the final Task 1.1.9b report to the Commission on October 15<sup>th</sup>.

Task 1.1.10 Prepare Prioritized List of Projects for PV and Biogas Systems

- No updates were required for the BI-PV project prioritization in October. CH<sub>2</sub>MHill revised the prioritization of the identified biogas projects in light of comments received from the RPAC and Commission staff at the CPR meeting in late September. The primary change was to eliminate projects proposed at Regional Plant 5 (RP-5). Instead of including projects at that location, the Project Team identified projects that would be completed at RP-1 in order to achieve the objective of the fostering the development of cost-effective centralized dairy digester projects. The effort built on information previously collected by Team members and new input received after the CPR meeting from Commission staff. Information developed as part of the ongoing work in Project 3.1 focused on developing a revised Project Implementation Plan was also considered. The draft revision of the prioritization report was prepared, although will not be finalized pending completion of the revisions to the Project 3.1 Implementation Plan.

Task 1.1.11 Prepare Planning and Analysis Project Final Report

- Work continued on the Final Report. This included assembling key findings for each of the early tasks. In general, much of the effort associated with preparing the final report has been completed and limited work was conducted during this period. Finalization of the report awaits completion of the revised prioritization of

projects and completion of the revised implementation plan for Project 3.1. As noted in the previous monthly reports, coordination of the key findings of this project with the initial activities of Projects 2.1, 2.2 and 3.1 was also undertaken so that efforts on subsequent tasks would be aligned with the key findings of Project 1.1 to be presented in the final report. Some of these findings include:

- Continue to work with leading landfill bioreactor host candidate site (Mid-Valley Landfill owned by San Bernardino County) such that the landfill bioreactor project (Project 2.1) can be implemented in a way that takes advantage of an existing commercial-scale facility that is under development and builds on the lessons learned at the two Yolo County projects and advances the bioreactor concept towards a commercialization status in California.
- Efforts related to increased energy production from enhanced anaerobic digestion at wastewater treatment plants (Project 2.2) should focus on the development of pilot projects using two separate ultrasound technologies (instead of one ultrasound technology and one thermal hydrolysis technology) at the Riverside wastewater treatment plant. This treatment plant has several characteristics including a favorable process configuration that is representative of other treatment plants in the State, making it well suited for more detailed analysis.
- Efforts related to digester gas cleaning for microturbines should focus on potential projects at IEUA Regional Plant 1 (RP-1). This plant has experience using a variety of power generation equipment and gas cleaning systems and is well suited to future projects.
- Focus dairy waste to energy projects (Project 3.1) on centralized dairy waste digestion projects. Special focus should be on building upon lessons learned at existing projects and placing special emphasis on defining the environmental and other regulatory and market factors that drive project implementation and economics. Also, efforts in future projects should build on the analysis of what has been learned at other dairy waste to energy projects. Some of these findings are being presented in the *Digester Comparison Report* and in the *Project 3.1 Test Plans and Protocols* prepared as part of the early deliverables under Project 3.1.

#### **How we are doing compared to our plan:**

Work continues to progress generally as anticipated. Although there have been challenges within a few of the tasks, the majority of these challenges have been resolved, and have not seriously effected the revised project schedule or the overall project budget as a whole.

#### **Significant problems or changes:**

There are no significant fiscal problems to report on during this period and work is proceeding within the Project 1.1 budget. As reported previously, there have been several

task-level budget transfers to date; however, progress and expenditures will result in project being completed on time under the revised schedule and within the original project budget.

**What we expect to accomplish during the next period:**

Activity in November will focus on completing the outstanding tasks related to prioritization of the project options. It is anticipated that responses to the Commission’s comments on the Agricultural Waste Database and Inventory Report will be completed and the final task report will be submitted to the Commission. It is also anticipated that the Project Prioritization work under Task 1.1.10 will be essentially completed and submitted to the Commission for review and comment.

Additionally, Itron anticipates making final revisions to the Task 1.1.7 and Task 1.1.8 Final Reports and submitting them to the Commission for review and approval.

Work will continue on Task 1.1.11.b, the draft *Project 1.1 Planning and Analysis Project Final Report*, with the CE Team integrating the final resource inventory and analysis results from Task 1.1.2, Task 1.1.7, Task 1.1.8 and Task 1.1.10 into the draft report.

Itron and ZECO will review any additional comments from Commission staff on the Task 1.1.9b final report, and incorporate these comments or edits as appropriate.

**Status of Milestones and Deliverables:**

Table 1 below summarizes the status of Project 1.1 task deliverables as of the end of the current reporting period.

**Table 1: Summary of Project Status and Deliverables – Project 1.1**

Task No.	Description	Start Date		Due Date		Status (%)
		Planned	Actual	Planned <sup>1</sup>	Actual <sup>1</sup>	
1.1.1	Review previous CA technical & market potential assessments	6/5/02	6/5/02	8/4/02	10/31/02	100%
1.1.1	“Preliminary definition” of Program mini-grid region	6/5/02	6/5/02	8/4/02	10/31/02	100%
1.1.2a	Develop DB of Agricultural Facilities	6/19/02	7/20/02	01/17/03	07/31/03	97%
1.1.2b	Develop Ag GIS report	6/19/02	8/12/02	01/17/03	07/31/03	97%
1.1.3a	Develop Landfill DB	6/19/02	6/19/02	10/25/02	12/15/02	100%
1.1.3b	Develop Landfill GIS report	6/19/02	6/19/02	10/25/03	12/15/02	100%
1.1.4a	Develop WWT facility DB	6/19/02	6/19/02	10/31/02	12/15/02	100%

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Task No.	Description	Start Date		Due Date		Status (%)
1.1.4b	Develop WWT GIS report	6/19/02	6/19/02	10/31/03	12/15/02	100%
1.1.5	Develop BIPV systems DB	8/5/02	8/5/02	12/03/02	2/5/03	100%
1.1.6	Develop T&D System DB	6/5/02	6/26/02	02/16/03	06/10/03	100%
1.1.7	Market Potential Assessment	11/10/02	9/13/02	08/01/03	07/31/03	99%
1.1.8	Develop Generation Profiles	12/11/02	8/15/02	09/08/03	DR: 09/08/03	99%
1.1.9 a	Conduct Power Flow Analysis (T&D Model)	10/14/02	09/23/02	02/16/03	06/10/03	100%
1.1.9 b	Conduct Power Flow Analysis (Summary Reports)	11/15/02	09/02/03	09/11/03	DR: 09/21/03	95%
1.1.10	Prepare Prioritized List of Projects for PV and Biogas Systems	12/03/02	11/04/02	09/10/03	DR: 09/10/03	98%
1.1.11a	Prepare Draft Report Outline for Project 1.1	1/17/03	02/10/03	02/21/03	7/13/03	100%
1.1.11b	Prepare Draft Report for Project 1.1	3/08/03	04/18/03	09/26/03		60%
1.1.13a	Develop M&E Plans for Project 3.2	6/5/02	7/15/03	09/26/03		12%
1.1.13.b	Develop Other M&E Plans	9/12/03	Dave??	1/06/04		??%

Note 1: "Planned" dates per revised Program Schedule submitted to CEC on September 17, 2003. "Actual" Dates include both the draft report (DR) date (above) and final report submittal dates (below), where appropriate.

Explanation of any Difference(s) in Project 1.1 Schedule

The following discussion provides the explanation for the reported changes in the schedule at the project task/deliverable level:

Task 1.1.2: Develop Database of Agricultural Facilities – The difficulties in obtaining information on the representative dairy loads delayed completion of this database and the Inventory Report. Information has been collected and the document was resubmitted to the Commission. Comments were received from the Commission on the revised document and the appropriate responses are being prepared. The anticipated completion of this document in October will not impact the overall schedule as another task (Task 1.1.10) is on the critical path for completion of Project 1.1.

Task 1.1.10: Prepare Prioritized List of Projects for PV and Biogas Systems – This task started on schedule. The completion of this work has been delayed by

approximately three months. This will allow for incorporation of the findings of the expanded Mini-Grid Impacts Analysis and the finalization of the Project 3.1 Implementation Plan within the prioritized list of PV and Biogas projects.

*Task 1.1.11b: Prepare Final Project 1.1 Report -* The start of this task has been delayed by approximately six weeks. This change was made to accommodate the completion of the tasks related to the *Agricultural Waste Database and Inventory Report*, as well as to allow for incorporation of the *Mini-Grid T&D Impacts Analysis* and guidance of the RPAC at the September CPR meeting. These changes, however, are consistent with other aspects of the program, which also needed to await incorporation of the revised findings of the Mini-Grid impacts analysis.

Overview of Fiscal Status:

Table 2 below summarizes the fiscal status of Project 1.1 by task as of the end of the current reporting period.

**Table 2: Fiscal Status by Task – Project 1.1**

<b>Task Number</b>	<b>Budget</b>	<b>Invoiced To-Date</b>	<b>Fiscal Status *</b>
1.1.1	\$ 18,902.00	\$18,902.00	OB
1.1.2a	\$ 85,562.00	\$0	OT
1.1.2b	\$ 100,562.00	\$0	OT
1.1.3a	\$ 66,865.00	\$66,865.00	OT
1.1.3b	\$ 66,865.00	\$66,865.00	OT
1.1.4a	\$ 93,136.00	\$93,136.00	OT
1.1.4b	\$ 96,136.00	\$93,136.00	OT
1.1.5	\$ 87,177.00	\$85,780.00	OT
1.1.6	\$ 98,840.00	\$98,840.00	OT
1.1.7	\$ 96,896.00	\$0	OB
1.1.8	\$ 15,363.00	\$0	OT
1.1.9	\$114,174.00	\$37,040.00	OT
1.1.10	\$172,132.00	\$0	OT
1.1.11a	\$ 18,540.00	\$0	OT
1.1.11b	\$ 114,046.00	\$0	OT
1.1.11c	\$ 27,809.00	\$0	OT
1.1.12	\$ 41,357.00	\$0	OT
1.1.13	\$ 25,251.00	\$0	OT

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

**Figure 1 :Overall Schedule for Project 1.1:**

