

# MONTHLY PROGRAM REPORT

JUNE 2002

COMMONWEALTH BIOGAS/PV MINI-GRID RENEWABLE RESOURCES  
RD & D PROGRAM

*Making Renewables Part of an Affordable and Diverse  
Electric System in California*

CONTRACT NO. 500-00-036

REPORT PREPARED BY: COMMONWEALTH ENERGY TEAM

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Program Team Members: Commonwealth Energy (Commonwealth), Regional Economic Research, Inc (RER), CH2MHill (CH<sub>2</sub>), Endecon Engineering (Endecon), Renewable Energy Development Institute (REDI) and Zaininger Engineering (ZECO).

## PLANNED ACCOMPLISHMENTS FOR THIS PERIOD:

During this initial reporting period, the Program team planned to kick-off several project and task activities, including:

- **Project 0 - Task 0.1:** Prepare for and attend the Program Kick-Off Meeting,
- **Project 1.1 - Task 1.1.1:** Begin to developed the Initial Study Area base map, and initiate the review of the previous related Biogas/PV Technical and Market Potential Assessments,
- **Project 1.1 - Task 1.1.3:** Begin to develop the database structure to be used on Sewage Treatment and Landfill Facilities,
- **Project 3.3 - Task 3.3.1 a:** Begin to compile database of Public Sector Clients, and
- **Project 3.3 - Task 3.3.1 b:** Begin to compile database of BI-PV Equipment Vendors and Service Providers.

**WHAT WAS ACCOMPLISHED THIS PERIOD:**

*Project 0: Program Administration*

The Commonwealth PIER Program Team prepared material and attended the Program Kick-off meeting held at the California Energy Commission (Commission) on May 29th. Agenda topics included:

- Overview of work statement and contract clarification efforts,
- Integration of the Program with new or on-going activities of key team members,
- PIER Program Contract Requirements for initiation of Project 1.1,
- Intellectual and Proprietary Property,
- Overview of Review Process,
- Coordination of M & E Plan Development with Project 3.2,
- Project Reporting Format,
- Establishing the Commonwealth Renewables Mini-Grid PIER Program Website, and
- Telecommunication Options for Selected RPAC meetings.

Two contractual documents, “*Exhibit A, Work Statement*” and “*Exhibit B, Deliverables and Due Dates*” were briefly discussed. Revisions finalized prior to the kick-off meeting were incorporated into each of these documents, and presented to the Commission and the Commonwealth Team Members as final deliverables. Additionally, the Kick-Off Meeting Minutes were prepared for submission to the Commission and the Commonwealth Team Members as a final deliverable.

*Project 1.1: Program Planning and Analysis*

The Commonwealth Planning and Analysis Project Team kicked off project activities at a meeting held at RER’s San Diego office on June 26<sup>th</sup>. The Team’s proposed boundary description and mapping of the Initial Study Area was reviewed and criteria related to the final minigrid region, was discussed by the Team and Commission staff.

Work began on Task 1.1.1 as RER researched and reviewed previous renewable resource assessment reports. A preliminary definition of the mini-grid area was developed as well as a map of the Chino Basin area (Study Area), which centers on the agricultural areas where dairy activities are concentrated.

REDI coordinated with CH<sub>2</sub> regarding the potential for including BI-PV in the biomass databases under Task 1.1.2.

Under Task 1.1.3, a database structure was developed, highlighting elements common to sewage treatment plants, landfill facilities, areas being investigated for the biogas elements of the program. Additionally a photovoltaic (PV) application database for sewage treatment plants was initiated.

The Commonwealth Team initiated the data collection effort for biogas in late June, as work began on Task 1.1.4.

RER and ZECO began discussions regarding the data requirements for modeling the local electric system.

*Project 2.1: Enhanced Landfill Gas Production Using Bioreactors*

Work has yet to begin on this project, per Program schedule.

*Project 2.2: Enhanced Energy Recovery through Optimization of Anaerobic Digestion and Microturbines*

Work has yet to begin on this project, per Program schedule.

*Project 3.1: Dairy Waste to Energy*

Work has yet to begin on this project, per Program schedule.

*Project 3.2: Building Integrated PV (BI-PV) Testing and Evaluation Project*

Work has yet to begin on this project, per Program Schedule.

*Project 3.3: Building Integrated PV (BI-PV) on Public Facilities*

REDI began the work on Task 3.3.1, using the identified initial geographic boundaries and compiling various maps for the Chino Basin Study Area. The use of zip codes by region was discussed with RER, Standard Industry Classification Codes for public facilities were identified, and a mailing list of over 2,800 contacts was compiled. Additionally, an Access database structure was discussed and developed to fulfill the requirements of this task. REDI reviewed and compiled lists of solar energy manufacturers, suppliers and service providers and then contacted the individuals from these compiled lists to verify information as well as to request product or service literature.

**HOW WE ARE DOING COMPARED TO PLAN:**

All three of the Projects that are currently active, are proceeding on schedule and in accordance with the Commonwealth Program work plan.

**SIGNIFICANT PROBLEMS OR CHANGES:**

There are no problems or changes that were encountered during this reporting period to report. Current progress will result in the Program being completed on time and within budget.

**EXPECTED ACCOMPLISHMENT DURING THE NEXT PERIOD:**

*Project 0: Program Administration*

RER expects to begin work on Task 0.2.2, and will be conducting teleconferences collecting requirements and input from Commonwealth Team Members and Commission staff regarding the PIER Commonwealth Biogas/PV-Mini-grid Renewable Resources RD & D Program Website.

Program and Project specific administrative tasks will continue, including coordination of the Commonwealth Team Members, Monthly Progress Reports, Monthly Program Highlights and Monthly Program Reports.

*Project 1.1: Program Planning and Analysis*

The Commonwealth Team plans to begin collecting available facility data under Task 1.1.5. Work will continue on updating the sewage treatment plants and landfill facilities databases, and work is expected to begin on developing information for the Task 1.1.3 and Task 1.1.4 inventory reports.

*Project 2.1: Enhanced Landfill Gas Production Using Bioreactors*

Per Program schedule, work will not begin on this project.

*Project 2.2: Enhanced Energy Recovery through Optimization of Anaerobic Digestion and Microturbines*

Work is expected to commence on this Project with Task 2.2.2 as a draft site selection report is begun. Additionally, Task 2.2.3 work will begin as Thermal Hydrolysis and Ultra System Design and Construction drawings are started.

*Project 3.1: Dairy Waste to Energy*

Per Program schedule, work will not begin on this project.

Project 3.2: Building Integrated PV Testing and Evaluation Project

Work is expected to begin under Task 3.2.1 as Endecon prepares for the Kick-Off Meeting and drafts the BI-PV Test and Evaluation Plan. Additionally, candidate selection is expected to begin for the Project 3.2 Technical Advisory Committee.

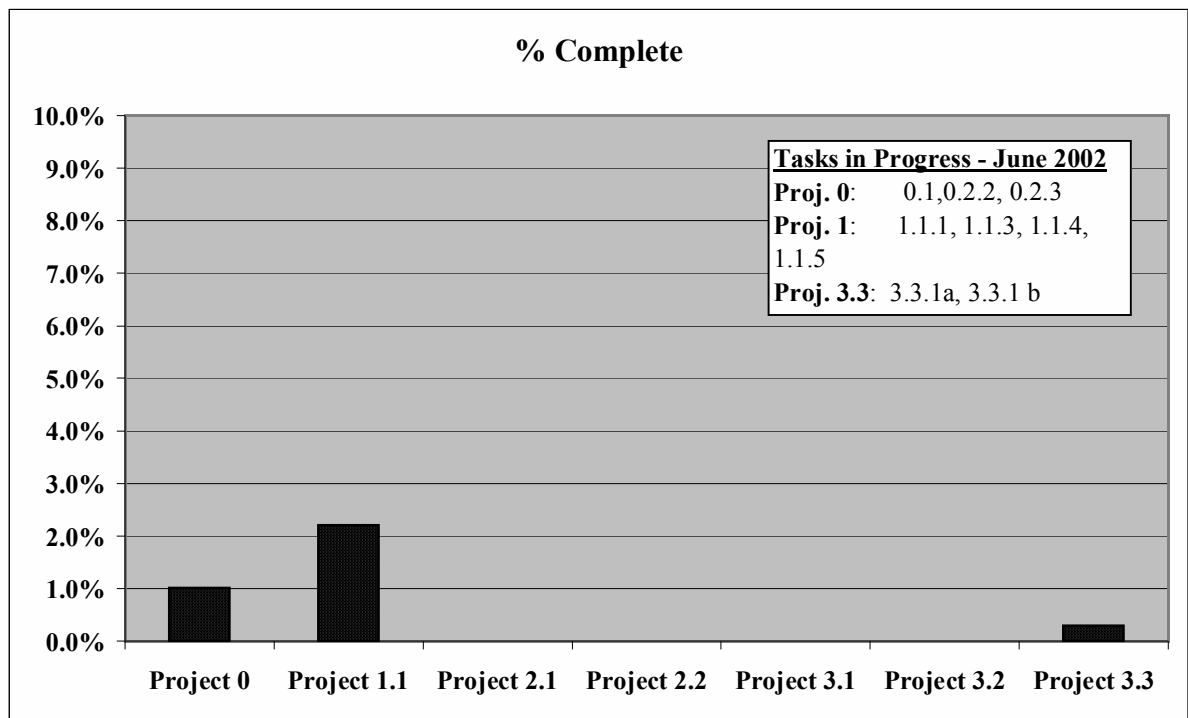
Project 3.3: Building Integrated PV on Public Facilities

It is expected that that BI-PV database development under Task 3.3.1 will be completed and submitted for review.

**OVERVIEW OF PROGRAM STATUS:**

Figure 1 below summarizes the overall Commonwealth Program status by project number and task as of the end of the current reporting period.

**Figure 1: Summary of Program – Project Percentage Complete**



**OVERVIEW OF PROGRAM FISCAL STATUS:**

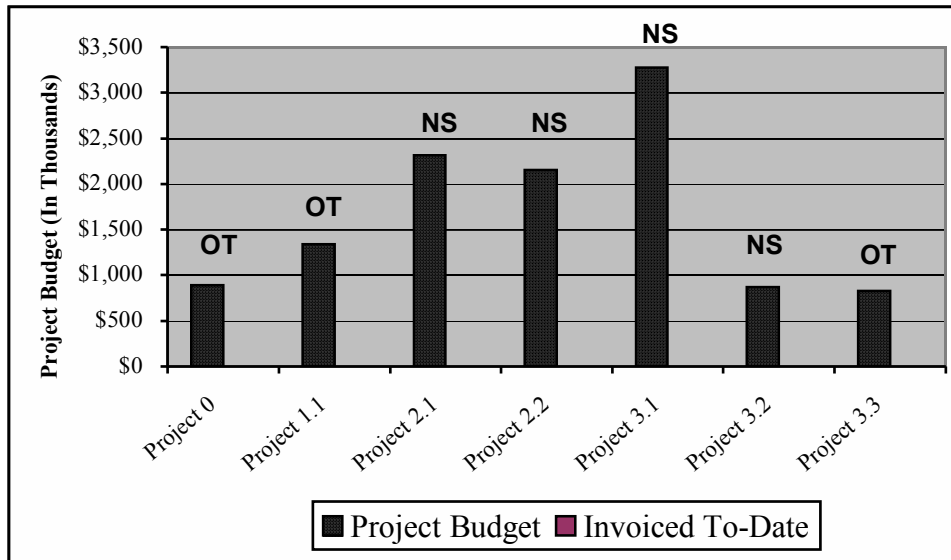
Table 1 below summarizes the fiscal status of the Commonwealth Program by Project as of the end of the current reporting period.

**Table 1: Program Fiscal Status By Project Number**

<b>Project Number</b>	<b>Project Budget</b>	<b>Invoiced To-Date</b>	<b>Fiscal Status *</b>
Project 0	\$ 889,771	0	OT
Project 1.1	\$1,336,613	0	OT
Project 2.1	\$2,315,999	0	NS
Project 2.2	\$2,153,740	0	NS
Project 3.1	\$3,274,664	0	NS
Project 3.2	\$ 870,099	0	NS
Project 3.3	\$ 827,686	0	NS

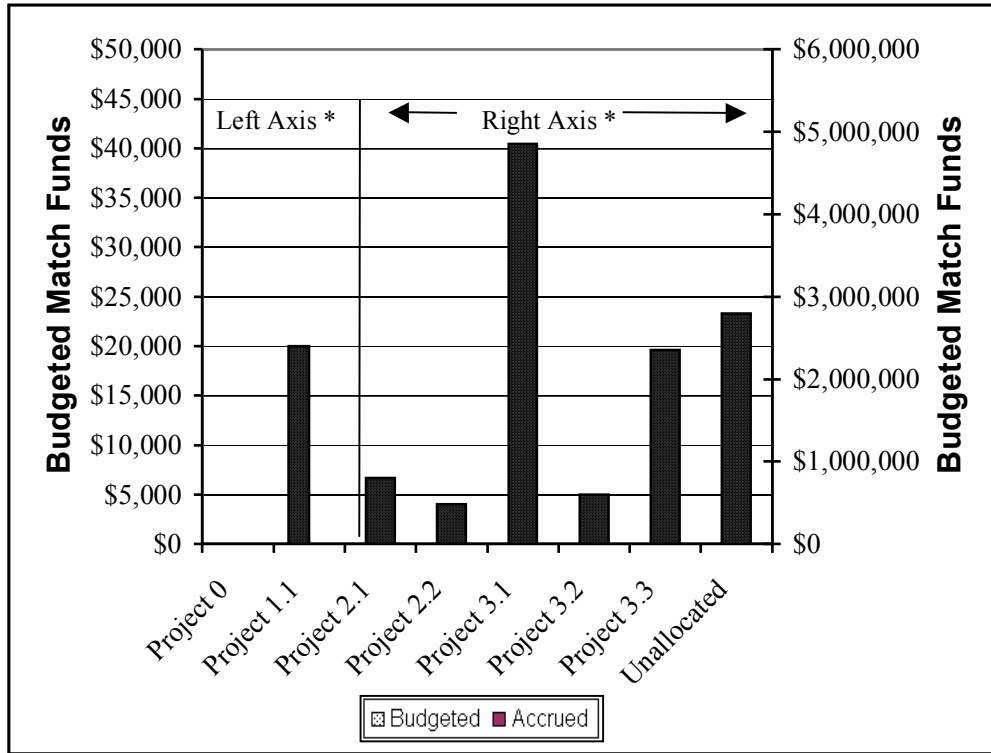
\*Fiscal Status = (OT) "On Track", (OB) "OverBudget", (NS) "Not Started" (UB) "UnderBudget"

**Figure 2: Program Fiscal Status**



\*Fiscal Status = (OT) "On Track", (OB) "OverBudget", (NS) "Not Started" (UB) "UnderBudget"

**Figure 3: Program Fiscal Status Match Funds**



\* The Budgeted Match Funds for Project 1.1 are significantly lower than Projects 2.1 through Project 3.3, therefore, we have utilized a left and right axis with differing value levels, which allows us to better highlight the Project Match Funds.