

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:

The Project Team expected to have the Task 1.1.1 Assessment Review Draft Report completed and delivered to the Commission Program Manager. Other Project 1.1 activity planned for August included refining the preliminary study area geographic boundary to better reflect the resource potential in the area and the location of various substations and key distribution feeders that will help the Commonwealth Team define the Program's mini-grid.

The Team planned to complete the database development and populate it for sewage treatment plants, which may lead to Project 2.2 opportunities and for landfill facilities, which may serve as host for the bioreactor project. We also planned to start developing information required for the associated Task 1.1.3 and 1.1.4 inventory reports. The Team also planned to initiate the Task 1.1.2 data collection and database development work on the agricultural facilities database. We also plan to begin our preliminary work on the Agricultural Waste Inventory Report. Finally, the Project Team planned to begin electric distribution system data collection for Task 1.1.6.

What we actually accomplished this period:

Task 1.1.1- Review Previous Statewide/Southern CA Renewable Resource Technical & Market Potential Assessments and Transmission/Distribution Mini-Grid Definition:

- A draft renewable resource assessment review report for California was developed and sent to the Commission Project Manager for review. Comments were received and we began the process of addressing these issues and making revisions to the report where applicable. Comments were also received from the Commission Project Manager on the initial mini-grid definition and map that had been sent to the Commission for review.

Task 1.1.2 Develop Database of Agricultural Facilities in So. California, targeting the Chino Basin:

- REDI provided CH₂MHill with data fields relating to BIPV requirements for inclusion into Biomass databases. CH₂MHill continued the data collection and database development activity for agricultural facilities.

Task 1.1.3 Serve as Host for Bioreactor Demonstration Project:

- CH₂MHill continued the data collection and database development activity for landfill facilities that could serve as a host for a bioreactor facility. We were successful in collecting much of the data requested in the previous month and in finalizing the database structure for these potential bioreactor sites. We did not, however, receive all of the information requested and were unable to complete this database as planned. Initiated the write-up of the Inventory Reports for the elements of the Program as requested.

Task 1.1.4 Collect Information on Sewage Treatment Plants:

- CH₂MHill continued the data collection and database development activity for sewage treatment facilities that could serve as a host for a bioreactor facility. We were successful in collecting much of the data requested in the previous month and in finalizing the database structure for these potential bioreactor sites. We did not, however, receive all of the information requested and were unable to complete this database as planned. Initiated the write-up of the Inventory Reports for the elements of the Program as requested.

Task 1.1.5 Collect Information on PV System Siting Requirements & Identify Potential Candidate sites for Commercial PV Systems:

- RER began searching for publicly available information on commercial and industrial buildings in Southern California. Sources initially included City Departments of Economic Development, U.S. Census Bureau, and Internet websites,
- RER and REDI acquired data regarding kilowatt-hour consumption per square foot organized by building type and SIC code,
- REDI determined the number of public agency buildings that are located within the “Chino Basin” target zone through the public agency database,
- REDI developed a preliminary estimate of the technical potential for photovoltaic power systems within the target area for existing public agency buildings,
- REDI is in the process of contacting local planning agencies to determine the expected growth of public agency facilities within the target area with the purpose of estimating the future technical potential for photovoltaic power systems,

- REDI reviewed the report by the Governor’s Office of Planning & Research, contacted work group members: “Comprehensive California Report on a Renewable Energy Investment Plan” Prepared by Interagency Green Accounting Working Group for OPR, July 2002,
- REDI reviewed reports by Southern CA Association of Governments, identified useful information: Draft 2001 Regional Transportation Plan (planning assumptions and growth forecasts thru 2025), 1998 Regional Transportation Plan 2000 / 01 Regional Economic Forecast, Regional Housing Needs Plan (demographics, forecasts), 1996 Regional Comprehensive Plan (public finance, economics),
- Capital Improvement Programs (local five-year plans generally, reviewed annually for budgets) being requested from local agencies,
- GIS Data (compiled by regional agencies such as SANDAG – general plans, assessors’ parcels, land use, transportation, other public data) being requested from SCAG,
- State Architect’s Office (school construction and modernization) – schedule for new and modernizing schools being reviewed for BI-PV opportunities and for growth estimates,
- Properties Managements Departments (local government, management of existing facilities) being contacted for information regarding planned growth and locations of existing facilities, and
- CA Executive Branch organization chart (state offices for facilities information) being used to identify other agencies to contact for further planning studies.

Task 1.1.6 Collect Information on Transmission/Distribution System:

- Information on substations within the greater Chino Basin study area was received from Southern California Edison. This information included the locations and distribution circuit sizes (KVA) for each substation.

Task 1.1.8 Develop Generation Profiles of the combined biogas resources and PV based upon 1) proposed program; and 2) fully realized mini-grid market potential:

- RER began developing the PV generation profiles, which will be used in the power flow modeling in Task 1.1.9. This task was begun ahead of schedule. Different system configurations are being examined as there are several that have potential.

Task 1.1.13a Preparation of Measurement and Evaluation Plan:

- Work was initiated on developing the measurement and evaluation (M&E) plans for Project 3.2. The project specific evaluation plans developed under that project were reviewed in order that they support the needs of the overall program M&E objectives.

How we are doing compared to our plan:

- All tasks are on schedule, with the only exception being Tasks 1.1.2a, 1.1.3 and 1.1.4, where, as noted, we did not receive all information requested, and as such were unable to complete the databases as originally planned.

Significant problems or changes:

Task 1.1.2 a:

CH2MHill initiated the database collection in late July and into August. There is some concern regarding obtaining the necessary information from individual parties, in order to move forward. We will continue to track, and will review progress, and/or continued delays, in next month's status report.

Task 1.13 and Task 1.1.4:

The only significant change or problem in this Program was the delay experienced in collecting data from sewage treatment plants and landfill facilities. In general, staff was not as available, or as able to respond to our requests, as rapidly as we had hoped. In all cases the entities we contacted were helpful and willing to provide the requested data. The difficulties arose because staff were on vacation and/or had higher priorities than responding to our requests. We followed up with staff regarding this matter and are confident that all of the requested information will be provided in the following month.

Progress and expenditures will result in project being completed on time and within budget.

What we expect to accomplish during the next period:

We plan to complete the final versions of the renewable resource assessment review report and the initial mini-grid definition and map. We plan to complete the sewage treatment plant and landfill facilities database, which will serve as host for bioreactor databases and associated Inventory Reports. We also hope to complete most of the data collection and database development work on the agricultural facilities database. We are anticipating not being able to finalize the agricultural facilities database for submittal, until November. We anticipate this delay from the original schedule in order to be able to incorporate a recently released update of data from agricultural facilities as well as data from food processing facilities that we are presently collecting. We also plan to start the Agricultural Waste Inventory Report in September.

We plan to continue developing the BI-PV database under Task 1.1.5 with an emphasis on detailed information on public buildings within the mini-grid area. The detailed information will support the prioritization of potential sites for Project 3.3.

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We plan to complete most of the local T & D data collection from Southern California Edison under Task 1.1.6 and begin developing local T & D model under Task 1.1.9a.

Work on Task 1.1.7 is expected to begin around the middle of next month. This work will mostly involve collecting cost information on the various technologies to be examined in the mini-grid market potential study.

We plan to continue developing the PV generation profiles and start developing the Waste Water Treatment, landfill and dairy waste to energy generation profiles under Task 1.1.8.

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

Task No.	Description	Start Date		Due Date		Status (%)
		Planned	Actual	Planned	Actual	
1.1.1	Review previous CA technical and market potential assessments.	6/5/02	6/5/02	8/4/02		95%
1.1.1	“Preliminary definition” of Program mini-grid region	6/5/02	6/5/02	8/4/02		95%
1.1.2a	Develop DB of Agricultural Facilities.	6/19/02	7/20/02	10/18/02		25%
1.1.2b	Develop Ag GIS report.	6/19/02	8/12/02	11/18/02		20%
1.1.3a	Develop Landfill DB.	6/19/02	6/19/02	8/19/02		60%
1.1.3b	Develop Landfill GIS report.	6/19/02	6/19/02	9/3/02		30%
1.1.4a	Develop WWT facility DB.	6/19/02	6/19/02	8/19/02		60%
1.1.4b	Develop WWT GIS report.	6/19/02	6/19/02	9/3/02		30%
1.1.5	Develop BIPV systems DB	8/5/02	8/5/02	10/18/02		15%
1.1.6	Develop T&D System DB	6/5/02	6/26/02	9/19/02		30%
1.1.8	Develop Generation Profiles	10/14/02	8/15/02	12/27/02		25%
1.1.13	Develop M&E Plans	6/5/02	7/15/03	6/07/03		1%

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Overall Schedule for Project 1.1:

Task Name	Duration	Start Date	End Date	Cost	2003				2004			
					Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
Project 1.1 - Program Planning and Analysis	267.5 days	Thu 5/30/02	Mon 6/9/03	\$0.00								
Task 1.1.1 Review Tech & Market Assessments	43 days	Thu 5/30/02	Sun 8/4/02	\$18,902.00								
Task 1.1.2a - Dev. DB of Agri. Facilities	65 days	Sat 7/20/02	Fri 10/18/02	\$85,561.50								
Task 1.1.2b - Agri Facilities GIS Inventory Rpt	65 days	Sat 7/20/02	Fri 10/18/02	\$85,561.50								
Task 1.1.3a - Landfill DB	43 days	Wed 6/19/02	Mon 8/19/02	\$66,865.00								
Task 1.1.3b - Landfill GIS Inventory Rpt.	54 days	Wed 6/19/02	Tue 9/3/02	\$66,865.00								
Task 1.1.4a - WWT DB	43 days	Wed 6/19/02	Mon 8/19/02	\$93,136.00								
Task 1.1.4b - WWT GIS Inventory Rpt.	54 days	Wed 6/19/02	Tue 9/3/02	\$93,136.00								
Task 1.1.5 - BIPV DB	55 days	Mon 8/5/02	Fri 10/18/02	\$78,177.00								
Task 1.1.6 T&D System DB	62 days	Wed 6/26/02	Thu 9/19/02	\$63,391.00								
Critical Program Review Meeting	21 days	Mon 11/4/02	Tue 12/3/02	\$20,678.00								
Task 1.1.7 - Market Potential Assessment	66 days	Fri 9/13/02	Fri 12/13/02	\$44,896.00								
Task 1.1.8 - Generation Profiles	55 days	Thu 8/15/02	Fri 12/27/02	\$11,363.00								
Task 1.1.9a - Power Flow Analysis Model	44 days	Wed 9/4/02	Mon 11/4/02	\$29,000.00								
Task 1.1.9b - Power Flow Analysis Report	99 days	Thu 9/26/02	Tue 2/11/03	\$165,623.00								
Task 1.1.10 - Prioritized List of Pilot Projects	54 days	Mon 10/21/02	Fri 1/3/03	\$172,132.00								
Task 1.1.11a Prepare Draft Rpt Outline	32 days	Thu 9/19/02	Fri 11/1/02	\$18,540.00								
Task 1.1.11b - Draft Report for Proj. 1.1	54 days	Tue 12/3/02	Mon 2/17/03	\$139,046.00								
Task 1.1.11c - Final Report for Proj. 1.1	21 days	Mon 3/10/03	Tue 4/8/03	\$157,586.00								
Critical Program Review Meeting	15 days	Tue 4/8/03	Tue 4/29/03	\$20,679.00								
Task 1.1.12 - Coordination with RPAC	44 days	Tue 4/8/03	Mon 6/9/03	\$0.00								
Task 1.1.13a - M&E Plans for Proj. 3.2	86 days	Mon 7/15/02	Mon 11/11/02	\$0.00								
Task 1.1.13b - M&E Plans for Overall Program	111 days	Fri 1/3/03	Fri 6/6/03	\$35,251.00								

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

Task Number	Budget	Invoiced To-Date	Fiscal Status *
1.1.1	\$18,902.00	\$0	OB
1.1.2a	\$85,562.00	\$0	OT
1.1.2b	\$85,562.00	\$0	OT
1.1.3a	\$66,865.00	\$0	OT
1.1.3b	\$66,865.00	\$0	OT
1.1.4a	\$93,136.00	\$0	OT
1.1.4b	\$96,136.00	\$0	OT
1.1.5	\$78,177.00	\$0	OT
1.1.6	\$63,391.00	\$0	OT
1.1.8	\$11,363.00	\$0	OT
1.1.13	\$35,251.00	\$0	OT

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

Project 1.1.1 Overbudget Explanation: More effort was expended than was budgeted on Task 1.1.1 attempting to identify prior studies and reports on technical and market potential

in California. The limited number of reports that were found is believed to be all that are available after an exhaustive search. It was deemed necessary to expend the time to ensure that all available resources were identified. In addition, the definition of the mini-grid was added to this task without additional budget resources for this task.