

# Commonwealth Energy Biogas/PV Mini-Grid Renewable Resources Program

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

**Contract No. 500-00-036**

### **Identify Required Permits**

Project No. 0 Program Administration

*Task 0.2.5a Deliverable*

**Prepared For:**  
California Energy Commission  
Public Interest Energy Research Renewable Program

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# Preface

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The Public Interest Energy Research (PIER) Program supports public interest energy research and development that will help improve the quality of life in California by bringing environmentally safe, affordable, and reliable energy services and products to the marketplace.

The PIER Program, managed by the California Energy Commission (Commission), annually awards up to \$62 million to conduct the most promising public interest energy research by partnering with research, development, and demonstration (RD&D) organizations, including individuals, businesses, utilities, and public or private research institutions. PIER funding efforts are focused on the following six RD&D program areas:

- Buildings End-Use Energy Efficiency
- Industrial/Agricultural/Water End-Use Energy Efficiency
- Renewable Energy
- Environmentally-Preferred Advanced Generation
- Energy-Related Environmental Research
- Strategic Energy Research

For more information on the PIER Program, please visit the Commission's web site at: <http://www.energy.ca.gov/research/index.html> or contact the Commission's Publications Unit at 916-654-5200. For Commonwealth Program-specific information, please visit the Program web site at: <http://www.pierminigrid.org>.

What follows is a report for the **California Energy Commission Public Interest Energy Research Program, Contract Number 500-00-036**, generated by the **Commonwealth Energy Team**. The report is entitled **Identify Required Permits**. This programmatic research, development, and demonstration contributes to the **Renewable Energy** component of the PIER program.



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## Introduction

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In June 2001, the Commonwealth Energy Team was awarded a programmatic contract under the California Energy Commission’s Public Interest Energy Research (PIER) Program to conduct research on strategies for making renewable energy more affordable in California. The Commonwealth Energy approach involves assessing the combined potential of biogas and photovoltaic (PV) resources in a defined study area and identifying how these resources could be developed in a complementary and cost-effective manner. The Commonwealth Energy Team conducted this research in a real world setting so that the findings could be applied elsewhere in California and thereby benefit more California ratepayers. The local area Commonwealth Energy selected for its renewable energy research activities is the Chino Basin, located southeast of Los Angeles and referred to in this report as the “mini-grid” or “study area.”

### 1.1 Program Background

The Chino Basin is rich in solar and biogas resources. Moreover, it is a rapidly growing area with substantial and yet increasing electrical loads. The underlying goal of the Commonwealth Energy PIER Renewables Mini-Grid Program is to identify potential Chino Basin Building Integrated PV (BIPV) and biogas energy projects, bring innovative technologies and business practices to these projects, assess the benefit to the local electricity distribution system (the “mini-grid”), and then use the findings to develop a business model for siting cost-effective, renewable energy projects. A description of the Commonwealth Energy PIER Program, including the results of some of the work undertaken to date, is presented on the program Web site at <http://www.pierminigrid.org>.

### 1.2 Overview of Project 0—Program Administration

The goal of Project 0 is to coordinate and integrate the technical and administrative elements of all of the Commonwealth Program projects. Under Project 0, Itron coordinates R&D efforts to ensure that Commonwealth Program deliverables meet PIER guidelines for technical and economic performance, and to ensure that deliverables are submitted within budget and schedule. Coordination activities include the creation of a Renewable Program and Project Technical Advisory Committees (RPAC/TAC),

documentation of match funds committed and received, and identification and receipt of all required permits for each program element, facilitation of critical project review (CPR) and RPAC meetings, creation and maintenance of a program website, and preparation of monthly and annual program reports. This report identifies all required permits for each Program activity under Task 0.2.5a.

### 1.3 Task 0.2.5a: Identify Required Permits

The purpose of this deliverable is to identify and list the necessary permits for the research and demonstration technologies implemented in each Project. Table 1 provides a review of the permit requirements for each technology research application and identifies the location and specific permit name and application number where applicable.

**Table 1: Listing of Permits Required Under Commonwealth Energy Programmatic Contract**

Technology Application	Site Location	Permit Name	Application Number(s)	Permit Required
Bioreactor	Mid-Valley Landfill San Bernadino CA	Solid Waste Facilities Permit (SWFP)	Not Applicable	Amendment
Bioreactor	Mid-Valley Landfill San Bernadino CA	Waste Discharge Requirement (WDR)	Not Applicable	Amendment
Dairy Manure Slurry Holding Tank	IEUA RP-1 Ontario, CA	Permit to Construct and Operate	427533	Yes
sludge holding tank				
Two Blending Tanks				
Digester No.4				
Sludge Dewatering				
Ferric Chloride Storage and Injection				
Microturbines	IEUA RP-1 Ontario, CA	Rule 441 Research Permits	385949, 385950, 385953, 385954, 385960, 385961, 385963, 385985	Extension

**Table 1: Listing of Permits Required Under Commonwealth Energy Programmatic Contract (Continued)**

<b>Technology Application</b>	<b>Site Location</b>	<b>Permit Name</b>	<b>Application Number(s)</b>	<b>Permit Required</b>
Biogas Cleaning Systems	IEUA RP-1 Ontario, CA	N/A	N/A	No
Ultrasound TWAS Treatment	Riverside	N/A	N/A	No
60 kW BI-PV	Chino, CA IEUA Admin. Bldg.			See building permit/inspection
6 kW BI-PV	Davis, CA (PVUSA)			See building permit/inspection