

**Commonwealth Energy's PIER
Renewables Affordability
Mini-Grid Program**

Initial Determination of the Mini-Grid Region

**Prepared Under Contract No. 500-00-036
Project 1.1 – Task 1.1.1**

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October 11, 2002

Commonwealth PIER Program -- Biogas/PV Distributed Generation Mini-Grid Region

The Commonwealth PIER Renewables Program *Planning and Analysis Project* work scope calls for establishing an electric T&D system “mini-grid” in Southern California within which a market potential and grid impacts study, and a number of pilot renewable generation projects will be implemented by the Commonwealth Team. Two of the Program’s early objectives within this first Project are to assess: a) the potential for select advanced biogas and building integrated photovoltaic electric generation within a small region, and b) the impacts of the future development of these selected generation resources on the local electric utility distribution and subtransmission systems. In order to allow work on these objectives to progress in the early stages of the program, an initial determination of the mini-grid study area is required. In addition to being located in a relatively local geographical region with respect to the electric system, the selected mini-grid must satisfy several additional criteria, including:

- A significant recoverable livestock waste resource,
- A building infrastructure undergoing growth,
- A growing wastewater treatment and solid waste disposal infrastructure,
- A significant number of publicly-owned facilities, and
- An electric distribution system with significant intertie(s) to the transmission infrastructure.

Initial investigations by the Commonwealth Team have identified and selected one prime location within Southern California that satisfies these initial requirements. This local area is generally referred to as the Chino Valley Basin. The map in Figure 1 identifies the selected mini-grid in a bold black area that the Commonwealth Program describes as the *Chino Basin Mini-grid Area*. The area includes, but is not limited to, the communities of Chino and Ontario. As noted previously, the initial electric transmission and distribution data collected to date indicates that the mini-grid area will focus on the portion of the initial study area that is approximately West of Interstate 215 and south of I-10. This updated focus will, by design, affect the geographical distribution of the renewable resource information collected under most of the data collection tasks under the Program’s initial Planning and Analysis Project¹.

¹ Solid waste (Landfill) resource data will necessarily include operational facilities outside of the minigrd region in order to locate a suitable solid waste disposal facility that may be agreeable to implement the proposed bioreactor project.

Figure 1: Commonwealth Biogas/PV PIER Program Mini-Grid Region

