

# Team Name: Tibre Enterprises & San Miguel Power Association

Clifton, Colorado & Ridgway, Colorado

Agrivoltaics, Service to the Community, & enhancing Grid Resilience



## Organization Overview

Set on a 22-acre farm in western Colorado, **Tibre Enterprises** is a family-owned farming operation with a mission to 1) Serve our local community by donating a portion of both the foods grown as well as the electricity generated to the IQ community where we live & 2) help further the concept of agrivoltaics as an important part of the transition to clean energy to both the farming community as well as solar developers. The decisions we make today regarding vegetation choice beneath solar panels will influence the health of hundreds of thousands of acres of land.

### Team member:

**San Miguel Power Association**, a Touchstone Energy cooperative, serves a large portion of Southwestern Colorado. **"It is the Mission of the San Miguel Power Association, Inc. to provide our members with safe, reliable, cost-effective, and environmentally responsible electrical service, while demonstrating both cooperative responsibility and support for the communities we serve."** SMPA demonstrates their commitment to this goal by 1) offering one of the most effective IQ programs in the nation 2) funding grants to support local organizations that are actively working to improve the financial stability of local businesses & expand entrepreneurial opportunities, & 3) providing up to \$51,000 per student in college scholarships to area students.

SMPA owns & operates two CSGs 1) the 1 MWac **Paradox Valley CSG**, & 2) the 200 kW Ac **IQ Solar CSG** with over 80 LMI households who receive free electricity.

SMPA assisted with design and interconnect of the **Last Dollar CSG** for which SMPA is the PPA offtaker of the energy which feeds its signature **Totally Green** fund.

<https://www.smpa.com/content/sign-totally-green>

## Project Overview

Tibre Enterprises will be building the 2.3 MWdc **Bookcliff CSG** on our farm at 3335 E ¼ Rd., Clifton, CO. We will be using an agrivoltaic design, raising the panels high enough above the ground to continue normal farming activity beneath the solar array. Our overarching goals with the project are 1) To serve our IQ community by donating at least 50% of the electricity to LMI households as well as fresh produce to the local food banks to support their hunger relief programs, 2) Partner with Colorado State University to continue the research of the symbiotic relationship between solar, soil health & crops, & to help identify seeds that are regionally adapted to our area, & 3) Partner with Grid Alternatives and utilize the workforce development they provide.

SMPA will be conducting a feasibility study on possible CSG sites in Ridgway, Colorado that would include battery storage to help provide grid resiliency to the system, allowing us to supply energy to our customers during those times when our main transmission feeder lines are out of service. The solar energy produced during the daytime will be stored in the battery bank and delivered during SMPA's peak demand period, **providing significant demand charge savings from our wholesale power supplier**. The solar energy produced during outage conditions could extend the power backup time and enable daily recharge providing limited power to the town during periods of extended outage that might last longer than days.

In addition to the resilience provided by the energy storage, and the potential cost savings afforded by the demand reduction, this project will be partially structured as a **community owned CSG, & fifty percent of the output would be dedicated to IQ customers**

## Meaningful Benefits

**The Bookcliff Community Solar Garden will provide the following meaningful benefits to our community:**

- 1). Greater Household Savings We will provide a reduction in electricity bills for our residential subscribers.
- 2). LMI Household access By working with Energy Outreach Colorado, the Grand Junction Housing Authority & other LMI subscriber organizations at least 50% of the electricity will be donated to LMI households.
- 3). Community ownership. BCSG will be owned by community members who live on & manage the farm
- 4). Workforce Development The construction of our solar array & the ongoing maintenance over its expected 25-year life span will offer job opportunities for both apprentices wanting to gain experience in the solar industry as well as journeyman workers who will earn prevailing wages.

**The Ridgway Microgrid will provide the following meaningful benefits to our community:**

- 1), solar energy produced during the daytime will be stored in the battery bank and delivered during SMPA's peak demand period, providing significant demand charge savings to our subscribers
- 2). Provide easy access for LMI households through our program of weatherization plus free subscription to the solar array
- 3). Increase grid resilience through battery backup
- 4). Coop owned microgrid would provide local Ridgway community participation and benefit other Town Net Zero initiatives
- 5). Workforce development through partnerships with a regional nonprofit or technical college that offers renewable energy education or training.