

# **Clean Energy: What's Next?**

## **Part 1**

**February 20, 2018**

# Introduction

**Rick Brown, PhD, President  
TerraVerde Energy**

- **Founded 2009**
- **Independent Energy Advisor**
- **CASBO Strategic Alliance  
Partner since 2013**
- **Solar at over 200 sites:  
schools, municipal facilities,  
transit and water agencies**
- **\$50 Million on Prop 39  
Energy conservation  
measures**
- **Battery storage at 70 sites**
- **TerraGrid**

**Cary Garcia, Best Practices  
Coordinator, LGC/SEEC**

# Webinar Purpose

- **Describe changing energy policy and market conditions and evolving technologies**
- **Identify new opportunities for public agencies to generate cost savings and new revenues, and, meet sustainability and climate policy goals**

# Solar: Current Situation

## 1. Policy Issues

- TOU Shift
- CCA Net Metering

## 2. Commercial Issues

- Asset Management
- Project Performance Reporting
- Market Consolidation

## 3. Technology Issues

- Cost/Watt



# Solar: What's Next?

## 1. Policy Issues

- NEM 3.0
- DAC Preferences/Programs
- ITC Ruling

## 2. Commercial Issues

- Distributed Energy Resource Programs

## 3. Technology Issues

- Smart Inverters, Dispatchable Loads



# Battery Storage: Current Situation

## 1. Policy Issues

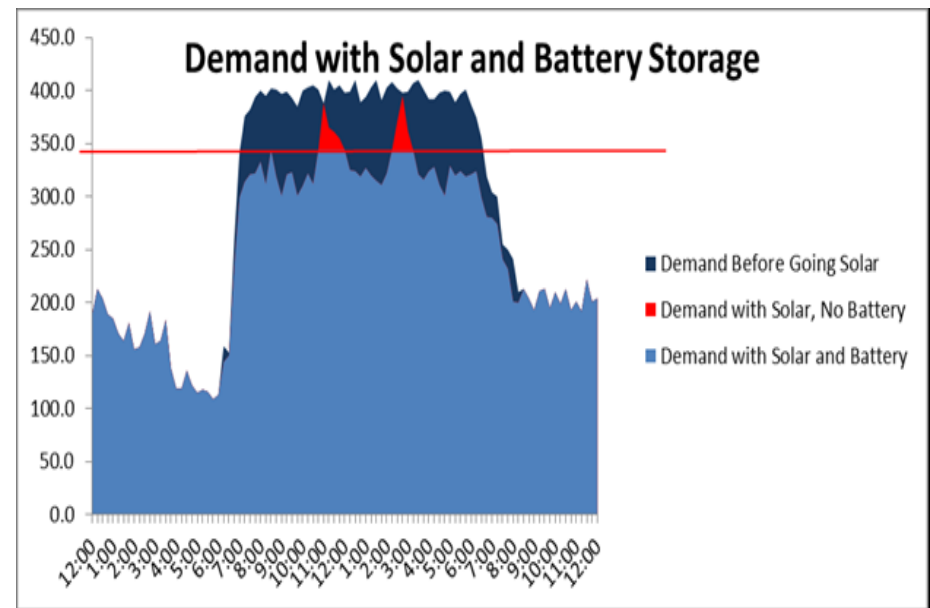
- SB 2868
- Grid Services
- SGIP/Battery incentives

## 2. Commercial Issues

- Asset Management
- Business Models

## 3. Technology Issues

- Sizes continue to evolve (i.e. no standard size)



# Battery Storage: What's Next?

## 1. Policy Issues

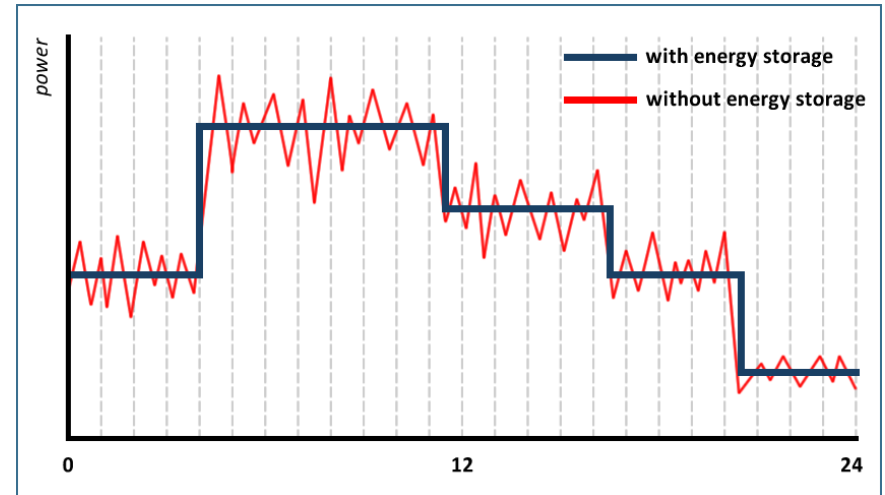
- Round Trip Efficiency/Measuring GHG Impacts
- Multiple Use Applications

## 2. Commercial Issues

- Market transformation/Pricing

## 3. Technology Issues

- Telemetry/security
- Smart inverters





# Community Choice Aggregation

## 1. Definition

“Community Choice Aggregation, also known as Community Choice Energy (abbreviated CCA and CCE by various parties), is a local, not-for-profit governmental program that buys and may generate electrical power on behalf of its residents, businesses, and governmental entities.”

## 2. Current Situation

- **CCAs Currently Serve 1.85 Million Ratepayers**
  - <https://cleanpowerexchange.org/california-community-choice/>

## 3. What's Next

- PCIA
- CPUC Oversight?

### Operational CCA/CCEs

**MCE Clean Energy**  
*(includes Marin and Napa Counties, parts of Contra Costa and Solano Counties [1])*  
**Sonoma Clean Power**  
*(includes Mendocino County in mid-2017)*  
**Lancaster Choice Energy** (2)  
**Clean Power San Francisco**  
**Peninsula Clean Energy**  
*(San Mateo County)*  
**Redwood Coast Energy Authority**  
*(Humboldt County)*  
**Silicon Valley Clean Energy**  
*(Santa Clara County)*  
**Town of Apple Valley** (3)

### 2018 Launch (anticipated)

**City of Solana Beach** (4)  
**City of San Jose** (5)  
**Contra Costa County**  
*(as part of MCE Clean Energy)*  
**East Bay Community Energy**  
*(Alameda County)*  
**Los Angeles Community Choice Energy** *(Los Angeles County)*  
**Monterey Bay Community Power**  
*(Monterey, Santa Cruz and San Benito Counties)*  
**Sierra Valley Energy** *(Placer County)*  
**Valley Clean Energy Alliance**  
*(Yolo County, Cities of Davis and Woodland)*

### Exploring / In Process

**City of Hermosa Beach** (6)  
**City of Pico Rivera** (7)  
**City of San Jacinto** (8)  
**Butte County**  
**Fresno County**  
**Inyo County**  
**Kings County**  
**Nevada County**  
**Riverside County**  
**San Diego County**  
**San Joaquin County**  
**San Luis Obispo County\***  
**Santa Barbara County\***  
**Solano County**  
**Ventura County\***  
*\*Central Coast Tri-County*



# Questions



# Contact Information

**Rick Brown, PhD, President  
TerraVerde Renewable  
Partners, LLC**

700 Larkspur Landing Circle,  
Suite 140  
Larkspur, CA 94939

T: 707-953-2885

[Rick.Brown@TVRPLLC.com](mailto:Rick.Brown@TVRPLLC.com)

[www.TVRPLLC.com](http://www.TVRPLLC.com)

**Cary Garcia  
Statewide Local  
Government Energy  
Efficiency Best Practices  
Coordinator**

(916) 448-1198 ; 329

[cgarcia@lgc.org](mailto:cgarcia@lgc.org)