

Local Power.



## What is a CCA and why is it Important for San Diego?

### ***Community Choice Aggregation (CCA)***

CCA is a public power alternative that allows cities and residents within San Diego County and the San Diego Gas & Electric (SDG&E) territory to purchase energy over SDG&E transmission and distribution assets with varying percentages of local, renewable energy content. SDG&E is a Public Utilities Commission (PUC) mandated partner in this endeavor, and will provide infrastructure and customer service to support the transmission and distribution of renewable energy to CCA customers. The CCA endeavors to purchase renewable energy from local and remote generators and sell it to CCA customers.

CCA's are an increasingly popular model in California and beyond. Currently, Marin Clean Energy is the first operational CCA in California. Through Clean Power SF, the City of San Francisco will be launching its CCA program in 2013. Numerous other CCA initiatives are under study around the state and country. CCA's are considered a highly effective means of encouraging free market competition, and according to the Galvin Electricity Initiative, are the best tool for combating climate change.

### ***Emphasis on Local Renewable Power and Efficiency***

California's landmark Energy Efficiency (EE) Strategic Plan, issued in 2008 and updated in 2011, is built on the foundation of zero net energy buildings. "Zero net energy" means that the electricity demand of the building is met with energy efficiency measures and onsite solar PV generation. In addition to providing resources for CCA Customers to make low to no cost Energy Efficiency Upgrades, the Study will focus electricity procurement efforts in 2 ways.

1. Existing Renewable Energy Systems

*Procure electricity via Virtual Net Metering and Feed in Tariffs from residential and commercial renewable energy systems – establishing a network based energy marketplace*

2. Vertical Integration of Renewable Energy Assets

*Assess investment and ownership models for SDED Renewable Energy Production Facilities*

## **Overview of CCA Technical Study Project Team**

### **1. Local Power – CCA Scenario Financial Modeling**

Local Power Inc. (LPI) has over 15 years of experience with energy policy, consulting, advisory, and design services for a diverse group of energy sector clients. We have been at the forefront of electricity restructuring debate since 1993, and created CCA, as well as the nation's first renewable energy bond authority (H Bonds in San Francisco), and the Localization Portfolio Standard (LPS) concept. LPI provides expertise to local governments seeking to deploy comprehensive distributed energy resource (DER) portfolios. Our recent clients have included:

- City and County of San Francisco (CleanPowerSF CCA Program);
- City of Boulder (Boulder's Energy Future);
- Sacramento Municipal Utility District (Community SolarShares)
- County of Sonoma (Sonoma Renewable Energy Secure Community);
- California Energy Commission (San Luis Obispo Renewable Energy Secure Community).

LPI was founded to empower local communities seeking to build their energy independence and cut carbon emissions, by taking advantage of long-term disruptive trends in energy. Our team has combined their thought-leadership in municipal renewable energy finance and local technology integration to develop the ClimateWorx™ platform, a robust analytical toolset designed to accelerate and optimize DER deployment at variable scales.

#### ***Local Power Inc. CCA Financial Modeling Capabilities***

ClimateWorx™ is comprised of several modules; the one that will be employed for this feasibility study is a 'Cost of Service' model that estimates the revenue requirements for a CCA based on a variety of inputs, and compares this figure against the rates customers would have paid under the incumbent investor-owned utility (San Diego Gas & Electric). The model shows the impact of the deployment of demand side assets (behind-the-meter, i.e. on a customer's property) and supply side assets (both in-front-of-the-meter and behind-the-meter) on the CCA's revenue requirements and total revenue as well as the community's local capital retention and job creation.

Deploying a mix of behind-the-meter renewable generation and efficiency assets in addition to traditional utility-scale renewable generation plants and conventional power purchase agreements is a novel approach within the utility industry. While companies in the broader energy industry have designed business models to finance and deploy onsite energy production and efficiency assets, the utility industry has not embraced these innovations for a variety of reasons, and there are to our knowledge no other consulting firms poised to deliver this analytical approach. The ClimateWorx™ analytical framework allows the CCA to embrace these business model innovations, and estimates the potential of renewable distributed generation and energy efficiency deployed under 'power purchase agreements' and 'guaranteed savings' to achieve a maximum acceleration of energy localization that is achievable economically.

*Local Power Scope of Work - Utilizing ClimateWorx™ CCA Modeling Software, Run multiple CCA supply scenarios to determine cost effectiveness of a City of San Diego CCA*

**2. Advanced Energy Solutions – SDG&E Resource Portfolio Cost Analysis, Exit Fee Assessments, Quality Assurance**

Advanced Energy Solutions (AES) provides consulting services in the areas of power project development, regulatory policy, economic analysis, California Independent System Operator (CAISO) requirements, markets, transmission planning and interconnection expansion, offer preparation, and rates. AES has provided expert testimony and analysis to renewable and merchant generator developers, transmission companies, state agencies, cities, consumers and environmental groups in California as well as other areas of the United States. It has provided technical and regulatory analysis to its clients in determining environmentally and economically superior alternatives in meeting their energy and capacity needs.

AES has participated in numerous CAISO transmission planning activities and electricity planning initiatives. The principal and founder of Advanced Energy Solutions, Jaleh Firooz, is an energy market and transmission system expert with more than 30 years of experience in the electric utility industry. She has worked for San Diego Gas and Electric for over twenty years in the engineering, operations, transmission, resource planning, procurement, and regulatory affairs areas, and is one of the original and key participants in the deregulation of California's electricity industry and the formation of the CAISO.

AES will serve as technical lead and will review all research and ratepayer information prior to and after delivery to Local Power, the 3<sup>rd</sup> contractor. Details of AES's work are found in the following Scope of Work.

**Advanced Energy Solutions Scope of Work**

<b>OBJECTIVE 1</b>	Forecast San Diego Area Peak Demand over Study Horizon (2013 – 2020). <ol style="list-style-type: none"> <li>1. SDG&amp;E Bundled Customer Peak Demand</li> <li>2. San Diego area Direct Access (DA) and Community Choice Aggregation (CCA) peak demand</li> </ol>
<b>OBJECTIVE 1</b>	Project San Diego area Local Capacity Requirement (LCR) over study horizon. Need to make assumptions about SONGS availability and its impact on the San Diego area LCR.
<b>OBJECTIVE 3</b>	Project Greater Imperial Valley-San Diego area LCR over study horizon and determine if it becomes binding.
<b>OBJECTIVE 4</b>	Assemble SDG&E's future resource plan (i.e., planned resources not yet built but signed and approved or signed and not approved). This resource plan would need to Include enough Resource Adequacy (RA) capacity to: <ol style="list-style-type: none"> <li>1. Meet San Diego area Local Capacity Requirement (LCR)</li> <li>2. Meet Greater Imperial Valley-San Diego area LCR</li> </ol>

	<ul style="list-style-type: none"> <li>3. Meet Peak Bundled Load + 15% Planning Reserve Margin</li> <li>4. Comply with Renewable Portfolio Requirements (RPS)</li> <li>5. Comply with carbon emission limitations</li> <li>6. Comply with flexible generation requirements</li> </ul>
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**3. Rising Tide Partners – Project Management and Reporting**

Rising Tide Partners (RTP) is a community focused strategic planning and marketing group, specializing in creating and publicizing unique outreach and community engagement projects, campaigns and partnerships for water and renewable energy projects. It provides strategy, campaign planning and campaign fulfillment services for municipal and private sector clients. Clients include the Encina Wastewater Authority, Maya Advertising, the US Environmental Protection Agency and the San Elijo Joint Powers Authority.

As 1 of 3 contractors working on the San Diego Energy District’s CCA Technical Feasibility Study, Rising Tide Partners is focused on non rate-related aspects of the feasibility study, as articulated in the following Scope of Work.

***Rising Tide Partners Scope of Work***

<b>OBJECTIVE 1</b>	Request, Obtain, and QA Required Hourly Load and Market Price Datasets (to be used as financial model inputs).
<b>OBJECTIVE 2</b>	Research and Draft Feasibility Report.
<b>OBJECTIVE 3</b>	Research and Develop Topical Fluency and Management Expertise in E3 Software
<b>OBJECTIVE 4</b>	Utilizing E3 Software and Other Available Tools, Determine Cost-Effective Mechanisms to Fund Energy Audits of the Entire Residential/Commercial Building Population in City of San Diego and Identify Top 10-20% “energy hog” A/C units and refrigerators for priority replacement.
<b>OBJECTIVE 5</b>	Compile all results into CPUC Implementation Plan format.

**Relationship Between Contractors**

Local Power will use proprietary CCA financial modeling software to evaluate the cost-effectiveness of various City of San Diego electricity supply scenarios to be included in the technical feasibility study. All customer data information gathered for the ClimateWorx™ software package used by Local Power will be delivered directly to Local Power by SDG&E. Rising Tide Partners will compile the financial model results and market price and exit fee projections developed by Local Power and Advanced Energy Solutions into a final report for submittal to the San Diego Energy District Foundation and for public dissemination.

## Attachment A

### What is the San Diego Energy District Foundation?

*SDED Foundation Mission Statement* (<http://www.sandiegoenergydistrict.org/>)

The SDED Foundation seeks to educate government officials and citizens about the benefits of energy choice, and to promote the development of Community Choice Aggregation (CCA) as an alternative source of electricity supply in San Diego County.

*SDED Foundation Vision Statement*

The SDED Foundation seeks to further stimulate robust growth of the renewable energy in San Diego, and provide consumer choice in electricity providers.

*Organizational Goals*

The SDED Foundation was launched in 2011 to advocate for the establishment of a local energy districts under Community Choice Aggregation (CCA), California State Law (AB117 & SB790).

The SDED Foundation's goals are to:

1. Educate Community Leaders
  - a. Provide education to leaders in every San Diego County political jurisdiction about the benefits of energy choice through the CCA structure.
2. Establish Technical Feasibility and Implementation Models
  - a. Support the development of a technical feasibility study and CPUC-mandated CCA Implementation Plan for political jurisdictions in San Diego County.
3. Educate San Diego Citizens
  - a. Provide information about energy choice, competitive rates, innovation, financing and greater economic development from local energy projects focused on energy efficiency, solar, and other forms of local renewable generation.