

# SoCalREN

**DRAFT**

**Energy Efficiency Business Plan**

**Public Sector Chapter**

**November 2016**

# Table of Contents

A. SoCalREN Public Sector Vision.....	1
B. SoCalREN’s Public Sector Proposal Compared to Prior Program Cycles .....	3
C. Sector-Level Budget .....	3
D. Annual Net Savings (Contribution Estimates) .....	4
E. Sector Overview .....	5
F. Public Sector Market Trends and Challenges.....	11
G. SoCalREN’s Approach to Achieving Goals.....	17
H. Leveraging Cross-Cutting Resources .....	30
I. Integrated Demand Side Resources (IDSR) .....	32
J. SoCalREN Helping to Meet State Policy Goals .....	33
K. SoCalREN’s Partners and Commitment to Coordination .....	36
L. Statewide Administration and Transition Timeline .....	40
M. Solicitation Strategies.....	40
N. Metrics and EM&V Considerations .....	41
O. EM&V Research Needs and Considerations.....	48
Appendix A: Stakeholder Feedback – Public Sector.....	A-1
Appendix B: Compliance Checklist .....	B-1

DRAFT

# SoCalREN Public Sector Chapter

## A. SoCalREN Public Sector Vision

### Vision

*SoCalREN envisions a future in which public agencies and their constituents play an active leadership role in shaping ZNE communities that are safe, secure, resilient, affordable and sustainable.*

California's Zero Net Energy (ZNE) future is fast approaching. ZNE drives energy resource integration, comprehensive energy savings, and a reduction of greenhouse gas (GHG) emissions. Public agencies play a critically important role in achieving ZNE goals and meeting the state's aggressive energy and climate goals<sup>1</sup>. Unleashing the potential of the public sector to lead by example and motivate community action is key to charting the pathway to ZNE communities.

By focusing on the design and development of ZNE communities and creating appropriate metrics and milestones to measure progress, public agencies can move beyond individual building by building solutions to community-wide solutions that consider all sources and uses of energy within their boundaries, identify the best approaches for coordinated project investments and leverage broader opportunities and benefits for their citizens<sup>2</sup>.

*A ZNE Community offsets its annual energy usage through equivalent generation of renewable energy and intelligent management of energy demand to achieve a low to zero carbon footprint.<sup>3</sup>*

The Southern California Regional Energy Network (SoCalREN) is helping realize its vision by providing public agencies with the expertise, resources and support they need to create a safe, secure and resilient energy future that is decarbonized, diversified, and decentralized.

Public agencies can achieve ZNE communities by implementing energy efficiency (EE) and distributed energy resources (DER) measures in their own facilities and assets, educating and

---

<sup>1</sup> Zero Net Energy 2.0, Rocky Mountain Institute, RMI Outlet, March 12, 2012.

<sup>2</sup> From Zero Energy Buildings to Zero Energy Districts, NREL Abstract, ACEEE White Paper 2016.

<sup>3</sup> Carlisle, N., Van Geet, O., Pless, Shanti, "Definition of a Zero Net Energy Community," National Renewable Energy Laboratory, Technical Report NREL/TP-74A2-46065, November 2009.

engaging communities in energy programs and strategies, undertaking energy master planning, and adopting local regulations, codes, and standards that support a ZNE future.<sup>4</sup>

### Public Agency Milestones on the Pathway to ZNE

- Agency is knowledgeable and actively engaged in supporting energy efficiency and ZNE
- Agency has completed energy efficiency and DER upgrades in its own facilities and assets
- Agency has developed a local or community energy master plan, coordinated with a regional energy plan, as a roadmap for action addressing energy and GHG reduction targets and strategies
- Agency is promoting energy efficiency and ZNE awareness and engagement in its community
- Agency has adopted model codes, standards and policies that support ZNE and is effectively achieving code compliance

Achieving this vision requires a focus on the distinctive needs and requirements of the public agency customer. Public agencies face unique challenges and barriers that include limited technical resources to identify, develop and implement projects, inadequate and limited access to data about building performance, financing hurdles, unique procurement requirements, protracted decision-making processes, and managing within a political environment, among others.<sup>5</sup>

As an entity managed by the public sector for the public sector, SoCalREN is uniquely suited to overcome these barriers and unlock the potential for public agency energy leadership and collective energy actions.

The SoCalREN target market is a subgroup of the newly created public sector market segment. It includes over 730 cities, counties, tribes, K-12 schools, local government hospitals and hospital districts, water districts, wastewater districts, sanitation districts, ports, airports, and special districts within the Southern California Edison (SCE) and Southern California Gas (SoCalGas) service territories.

***The mission of the SoCalREN is to shepherd public agencies to increase energy efficiency adoption and lead their communities on the pathway to ZNE.***

<sup>4</sup> PCAST (President’s Council of Advisors on Science and Technology). 2016. Report to the President: Technology and the Future of Cities. Executive Office of the President. Washington, D.C. URL

<sup>5</sup>Bain, R., and Rothschild. L., “Driving Energy Efficiency in the Public Sector,” ACEEE White Paper, 2016.

## Goals

Over the next 10 years, SoCalREN will seek to achieve the following goals:

- Save XX GWh, XX MW, and XX MM therms over an eight year period.
- Increase the percentage of agencies completing EE and DER upgrades to their own buildings and facilities from xx% to yy%.
- Increase the percentage of public agencies engaging their communities in energy actions and ZNE strategies, thereby reducing overall community energy consumption.
- Increase the ability of public agencies to meet local, regional and state energy targets and policy goals through (1) creating a regional energy master plan and (2) creating regional energy information databases.
- Increase the percentage of agencies adopting model codes, standards and policies that support implementation of ZNE communities.

Details regarding the intervention strategies supporting these goals can be found in **Section G. SoCalREN's Approach to Achieving Goals**.

## B. SoCalREN's Public Sector Proposal Compared to Prior Program Cycles

In previous program cycles, the SoCalREN public sector program has successfully provided comprehensive one-stop energy efficiency services to increase adoption of energy efficiency by public agencies. This program (formerly called SoCalREC) is expanding in the 2018-2025 Program Cycle to reach many more agencies as well as to include targeted DER services. In addition, the 2018-2025 Business Plan adds new and modified program offerings that build public agency capacity and expertise to lead by example in their communities, as described in **Section G. SoCalREN's Approach to Achieving Goals**.

Compared to prior program cycles, the Public Agency (SoCalREC) budget has been changed to enable the public sector to drive the market to ZNE communities. Resources that previously supported the Water-Energy Nexus pilot, the Community Energy Efficiency Permit Management System (CEEPMS), the Public Agency Revolving Loan Fund, and the Public Agency Loan Loss Reserve have been reallocated to SoCalREN's Intervention Strategies. This realignment is based on a combination of factors including completion of tasks, integration of some tasks into the existing programs as well as elimination of tasks based on implementation experience.

## C. Sector-Level Budget

SoCalREN is reallocating its existing portfolio budget to fund its enhanced public sector intervention strategies. The following budget is a summary of SoCalREN's public sector budget. These values are based on estimates of the proposed strategies outlined in Section G. As SoCalREN implements the strategies described in this business plan chapter, the budget will be

evaluated over time to respond to market changes, needs of the portfolio and regulatory directives. Further details on these changes will be reflected annually in SoCalREN's September Compliance filing as dictated by D.16-08-019.<sup>6</sup>

**Table 1. Sector-Level Budget**

Year	Annualized Budget	% of Portfolio
2017 <sup>7</sup>		
2018		
2019		
2020		
2021		
2022		
2023		
2024		
2025		
2026		
2027		

## D. Annual Net Savings (Contribution Estimates)

**Table 2. Annual Sector Net Goals**

Year	GWh	% Portfolio	MW	% Portfolio	Million Therms	% Portfolio
2017						
2018						
2019						

<sup>6</sup>

<sup>7</sup> 2017 values reflect current program budgets as filed in September 1, 2016 EE Funding Compliance filing

2020						
2021						
2022						
2023						
2024						
2025						
2026						
2027						

## E. Sector Overview

### Target Audience

The newly designated public sector customer segment is composed of local, state, and federal government, K–12 and higher education, and special districts (**Table 3**).

**Table 3. Public Sector Customer Segments**

Local	State	Federal	Education
<ul style="list-style-type: none"> <li>• Cities</li> <li>• Counties</li> <li>• Special districts</li> <li>• Solid waste Facilities</li> <li>• Water districts</li> <li>• Wastewater districts</li> <li>• Hospitals</li> <li>• Correctional facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Buildings</li> <li>• Park facilities</li> <li>• Hospitals</li> <li>• Correctional facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Buildings</li> <li>• Postal service</li> <li>• Hospitals</li> <li>• Military bases</li> <li>• Correctional facilities</li> </ul>	<ul style="list-style-type: none"> <li>• K–12 school districts</li> <li>• Higher education (UC/CSU, Community Colleges, Teaching Hospitals)</li> </ul>

The **SoCalREN target audience is a sub-segment** within the SCE and SoCalGas service territories that includes cities, counties, tribes, K-12 schools, local government hospitals and hospital districts, water districts, wastewater districts, sanitation districts, ports, airports, and other special districts. Currently, SoCalREN eligible agencies comprise:

- 220 cities, townships and tribes
- 12 counties



- 150 water districts, wastewater districts, and other special districts
- 348 K-12 school districts

## Segment Overview

Public sector agencies represent a significant group of energy end users through the operation of facilities and public amenities ranging from police stations and schools to wastewater treatment plants and streetlights<sup>8</sup>. A report submitted to Cal EPA by the Green Building Initiative Task Force in 2004 stated that based on floor space, an average of 18% of all buildings are owned by the public sector, and that in California publically owned buildings are estimated to consume 10% of the state's non-residential energy use<sup>9</sup>. As a result, public agencies have a unique potential to “lead by example,” by creating cost savings that benefit the local economy and by inspiring local action.

The California Public Utilities Commission (CPUC) recognizes this potential. As part of the Rolling Portfolio process in 2015, the CPUC established the public sector as a distinct market segment. This action provides the opportunity to design and tailor approaches that enable public agencies to fully participate in helping the State attain its aggressive climate action goals<sup>10</sup>.

The California Long Term Energy Efficiency Strategic Plan (CLTEESP) calls for local governments to play a greater leadership role in energy efficiency to meet state goals<sup>11</sup>. The CLTEESP calls for local governments to lead by example with energy use practices in their own facilities; to lead their communities with innovative energy efficiency programs; to lead adoption of higher energy efficiency standards (“reach codes”); to lead energy code compliance enforcement; and to ensure that local government energy efficiency expertise becomes widespread and typical<sup>12</sup>.

### The California Energy Efficiency Strategic Plan

#### Vision for Local Governments

*“By 2020, California’s local governments will be leaders in using energy efficiency to reduce energy use and global warming emissions both in their own facilities and in their communities.”*

**The Value Proposition.** Because public agencies are accountable for ensuring the overall safety and security of their communities, they have a related interest in ensuring a safe, secure, reliable and affordable energy supply. When energy reliability is compromised, such as when grid service fails, the consequences to communities are significant, disruptive and costly. Public agencies are

<sup>8</sup> Bain, R. and Rothschild, L., “Driving Energy Efficiency in the Public Sector,” ACEEE White Paper, 2016

<sup>9</sup> “Green Building Action Plan”, prepared by Green Building Initiative Task Force, September, 2004

<sup>10</sup> Order Instituting Rulemaking Concerning Energy Efficiency Rolling Portfolios, Policies, Programs, Evaluation, and Related Issues 13-11-005, issued October 22, 2015 by ALJ Edminster.

<sup>11</sup> “California Energy Efficiency Strategic Plan (CEESP), California Public Utilities Commission and California Energy Commission, January 2011, p. 85

<sup>12</sup> “California Energy Efficiency Strategic Plan (CEESP), California Public Utilities Commission and California Energy Commission, January 2011, p.

the ‘first responders’ to deal with the consequences of power outages and brownouts. The costs of response for the agency can be significant and the effects on communities, particularly disadvantaged communities, can be catastrophic<sup>13</sup>. As such, public agencies have an increasingly critical stake in improving resiliency and performance of the energy systems that serve them, which includes mobilizing community and business resources to implement decentralized community scale energy solutions.

As technology, economics and environmental concerns drive inevitably toward a more integrated, decentralized and community scale energy future, public agencies have a critically important role to play<sup>14</sup>. They have significant influence in shaping energy outcomes in their communities through their own actions to reduce energy, through their regulatory authority to adopt new energy codes and standards, and through their ability to establish effective programs and incentives to inspire voluntary actions within their communities.

Perhaps most important, the transformation of energy resources required to achieve California’s energy and environmental targets necessitates a central role for local governments to bring market actors together. As the proliferation of DER drives an industry paradigm shift, local governments will increasingly play a key role in creating partnerships of developers, vendors, and utilities with local communities and governmental entities that will support local resilience, energy security and sustainability goals<sup>15</sup>.

## Market Gaps

Within Southern California, the public sector landscape consists of three significant participants: public agencies, service providers and investor owned utilities (IOUs) (**Figure 1**). Public agencies represent the demand or need in the market as customers. The IOUs, SoCalGas and SCE, not only provide energy services but also incentives and financing programs for public agencies to reduce their energy usage and demand. They also administer local government partnership (LGP) programs that offer additional financial incentives and technical assistance for participating public

---

<sup>13</sup> Bain, R. and Rothschild, L. “*Driving Energy Efficiency in the Public Sector*,” ACEEE White Paper, 2016.

<sup>14</sup> Vance, C. and C. Perkins., “*Scaling Up Fast and Transforming Markets with Regional Energy Networks*,” The American Council for an Energy-Efficient Economy, 2014

<sup>15</sup> Mans, Ulrich, “Role of Local Governments in Promoting Renewable Energy Businesses,” ICLEI Global Reports, 2012.

agencies. Consultant service providers offer a la carte services and include a variety of industry players such as engineering firms, contractors, third-party financing firms and full-suite, turnkey service providers such as energy performance contracting (EPC) companies and energy service companies (ESCOs). These consultants provide technical services such as audits, project design, project financing and/or construction services to complete projects.

Each of these participants represents a unique perspective. For example, many service providers drive for large investments from their customers by bundling projects and measures across multiple sites to create a more long-term cost-effective proposal. Risk-averse public agencies are challenged with justifying all the costs and possibly shelving all the projects as a result. IOU's design and deliver programs based on broad customer categories, such as small business, industrial and large commercial. Local governments own and operate a variety of building types that may not be properly targeted by utility programs and own assets such as streetlights that do not fit the mold of a typical utility program<sup>16</sup>.

In addition, several common public agency characteristics, including those listed below, contribute to the creation of market gaps<sup>17</sup>:

- Need for transparency
- Complex decision-making process
- Multiple constituencies and stakeholders
- Multiple and competing goals
- Aversion to risk
- Diversity in priorities and needs
- Political dynamics
- Unique funding constraints
- Hard to reach communities

**Figure 1: Public Sector Participants and Market gaps**



<sup>16</sup> Bain, R. and Rothschild, L. "Driving Energy Efficiency in the Public Sector," ACEEE White Paper, 2016

<sup>17</sup> Chamberlin, B., Lahr, J., Nushwat, M., "Streamlining EE in the Local Government Sectors," ACEEE Abstract, 2008.

Resource constraints, usually in the form of budget and staff, are common in the public agency sector. While the private sector has mostly caught up with similar losses from the recession of 2008, the public sector has not, resulting in more work for fewer people and further straining existing resources. Nonetheless, public agencies remain interested in implementing energy efficiency projects and programs. In fact, public agency representatives have had a growing appreciation for the complexity of project implementation and the necessity of additional support and guidance through the process. This is due to experienced time delays in both obtaining the necessary funding as well as construction inconsistencies.

Service providers, in most cases, have the specific knowledge and expertise to support key aspects of energy efficiency project implementation. However, these services are not always contiguous, as customers are often required to engage several different firms representing the various trades on a single project. For example, one project may have three different firms representing engineering, architecture and contracting. This results in a fragmented approach to services and a lack of ownership and accountability. EPC companies and ESCOs offer a consolidated solution, but the lack of transparency, limited procurement control and high costs associated with these options often make them untenable for public agencies<sup>18</sup>.

IOUs in Southern California provide support to public agency energy efficiency projects in three ways: 1) financial incentives, rebates and on-bill financing (OBF); 2) limited advisory support; and 3) partial technical support. Financial support for energy efficiency projects through incentives, rebates and OBF is important, but generally favors projects with discrete simple measures. This causes more complex projects to be delayed or stalled indefinitely. SoCalGas and SCE also provide advisory and administrative support for public agencies by dedicating account representatives to each customer. Some public agencies receive further support during project development through their LGPs such as benchmarking, audits and additional incentive payments for projects. While these services are useful for public agencies, they are not offered consistently, can be difficult to access, and do not comprehensively address all agency barriers and needs.

In addition to market gaps related to energy efficiency project delivery, there is also a significant market gap in regional energy planning and access to actionable energy data for decision-making.

## Snapshot of Usage

Overall, the public sector makes up approximately 15% (8,200 GWh) of total non-residential electricity usage within the SCE territory, and makes up approximately 11% (146 million therms) of total natural gas usage within the SoCalGas territory.<sup>19</sup>

Local government and K-12 schools are responsible for 75% of public sector electricity consumption and approximately 65% of public sector natural gas consumption<sup>20</sup> and constitute its most diverse customer group. Local government and K-12 school customer accounts include

---

<sup>18</sup> Bain, R. and Rothschild, L., “*Driving Energy Efficiency in the Public Sector*,” ACEEE White Paper, 2016

<sup>19</sup> Southern California Edison and Southern California Gas Draft Business Plans, Public Agency Chapters (October 18, 2016 – SoCalGas; and October 28, 2016 -- SCE).

<sup>20</sup> Natural gas usage for K-12 is extrapolated from SoCalGas Public Sector chapter as their “Education” segment usage is not categorized.

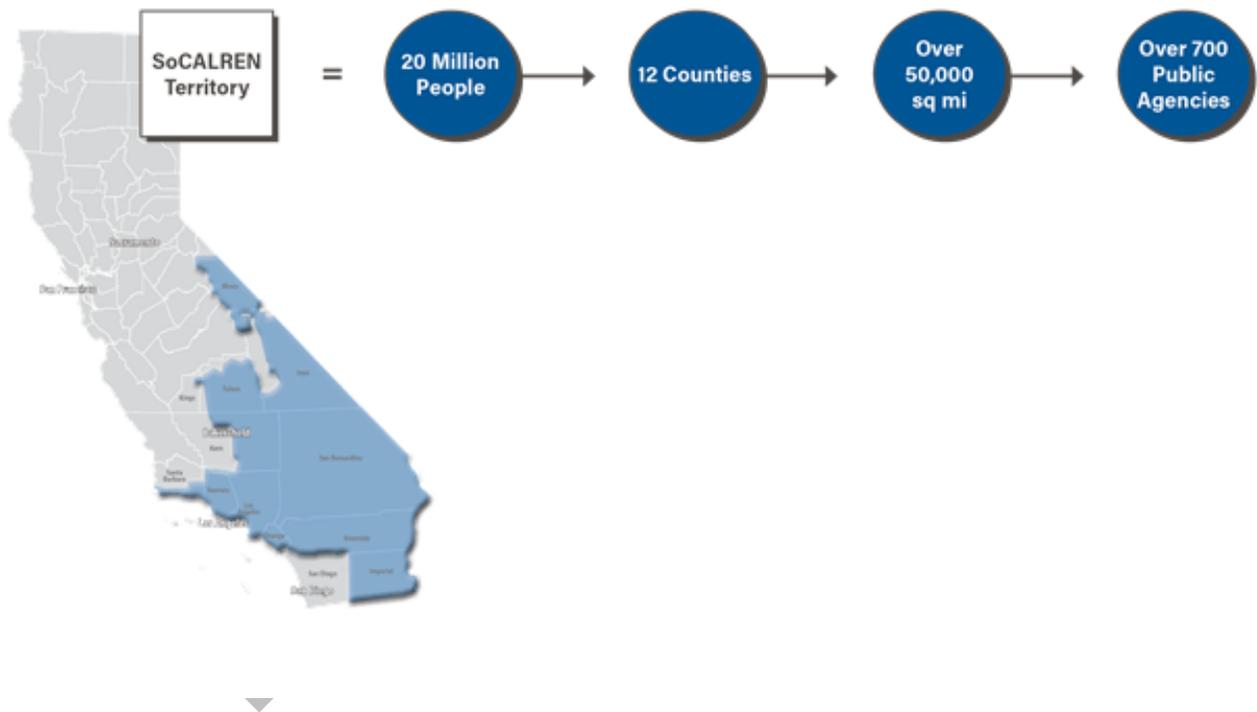
a broad diversity of building types and infrastructure such as offices, classrooms, auditoriums, water production and treatment facilities, ports and airports, healthcare facilities, and street and park lighting, etc. While some of these types of public sector facilities are relatable to counterparts in the commercial sector, there are very significant and unique differences in the way that public sector buildings and facilities are constructed, occupied, operated, managed, repaired and upgraded.

The design and implementation of energy efficiency programs to serve the public sector must therefore be tailored to meet these unique public sector characteristics and needs to successfully reach the sector's energy efficiency potential.

## Geography

SoCalREN serves the target audience within the geographic region covered by SCE/SoCalGas and located in **Figure 2** below.

**Figure 2: SoCalREN Service Territory**



## Energy Efficiency Potential

Because the public sector is a newly created market segment in the Energy Efficiency Rolling Portfolio, there are no comprehensive studies on public sector characteristics, goals and market potential. In the most recent Goals and Potential study completed in 2015 by Navigant Consulting,

the energy efficiency potential for the public sector was included within the commercial sector.<sup>21</sup> Although no definitive studies have yet been undertaken to measure the Public Sector energy savings potential within the SoCalREN service area, based on its 3 years of public sector customer energy analysis and program implementation experiences, SoCalREN is confident that there exists a tremendous untapped energy efficiency potential within the newly created public sector market segment. It is anticipated that a specific public sector energy efficiency goals and potential study led by the CPUC and covering the SCE, SCG and SoCalREN territories will be completed by 2018. These future studies will be extremely useful in further defining and refining SoCalREN's Public Sector program approaches to maximize effectiveness.

In their draft Public Sector chapters, both SCE and SoCalGas propose an interim sector potential calculation methodology that uses a percent of Commercial Sector potential as a proxy for public sector potential. Although an expedient approach, SoCalREN believes that the proposed methodology would result in an inaccurate assessment of Public Sector potential due to the fact that many of the types of buildings, facilities and infrastructure that are owned and managed by public agencies have few analogies in the commercial sector e.g., water production and treatment facilities, wastewater conveyance and treatment facilities, streetlight systems, ports, airports, correctional facilities, transportation systems and depots, parks, K-12 classrooms and educational facilities, etc.

Given these unique attributes for public sector buildings and facilities it would be prudent to exercise caution in extrapolating energy efficiency potential in the absence of directed analysis. In addition, current potential studies that exist for the commercial sector do not incorporate the needed changes and updates that are mandated by SB 350 and AB 802 related to doubling of existing building energy efficiency by 2030 as well energy savings measurement at the meter to include "to code" potential.

## F. Public Sector Market Trends and Challenges

Several important market trends are influencing the public sector. These include the growing requirement for public agencies to help achieve the state's climate goals, growing demand from communities for cleaner energy solutions, new opportunities for local governments to shape energy use driven by emerging technologies and new policies.

**Regulatory and Legislative Goals.** Public agencies are increasingly accountable for contributing to the reduction of GHGs and helping to achieve the State's aggressive climate goals. Many public agencies are adopting climate action plans as a roadmap for reducing GHG emissions and in many cases they include targets that are more stringent than those required by the state. These plans will become increasingly important as the energy industry transforms and more responsibility for energy resiliency and safety shifts to local governments.

---

<sup>21</sup> Navigant Consulting for The California Public Utilities Commission, California Investor-Owned Utilities, and Itron, Program Assessments study: Statewide Institutional IOU Energy Efficiency Partnership Programs-- Draft Report, October 9, 2012.

**Technology Driving Community Scale Energy Solutions.** A major future trend affecting the public sector market includes the effects of emerging technologies and the changing energy environment that enable implementation of integrated, decentralized community scale energy systems.<sup>22</sup> More and more, public agencies are looking at technologies such as self-generation, storage, sophisticated energy management systems and micro-grids. Increasingly, local governments will be motivated less by cheaper energy and more by local flexibility, environmental and resilience objectives and providing greater customer choice. Working collectively, local governments will drive development of community renewable resources, resilient microgrids, and integrate with other services such as water and wastewater.

**Local Control of Energy Delivery.** In addition to regulatory requirements and technological advances, other trends affecting local governments include the opportunities for adoption of community choice aggregation (CCA).<sup>23</sup> CCA's give local governments more control over the types and amounts of energy consumed by their communities, both to support renewable generation and to control costs. Through a CCA, a local government can develop a generation portfolio that diversifies fuel and technology types, reduces environmental impacts, and is more stable in cost. The CCA can choose to develop its own energy resources and thereby decide which resources will be developed and where. A CCA's local perspective and its primary mission to serve its constituents rather than maximize profits for shareholders puts it in a position to 1) implement energy efficiency programs in order to lower overall energy costs for the community and 2) develop potentially more expensive renewable energy projects to meet local demand.<sup>24</sup>

**Locally Led Energy Financing.** Property Assessed Clean Energy (PACE) is a financing mechanism that local governments are able to provide through partnerships with financing agencies.<sup>25</sup> tool that enables property owners to pay for energy efficiency and DER retrofits through their property taxes, local governments can develop PACE as a means to drive greater energy efficiency and clean energy projects in their communities. Other financing options include SoCalREN's energy lease financing and construction loan fund.

**Growing Variety of Funding Sources Driving More Opportunities.** Cap and trade funds, Californai Energy Commission, Green Bonds, new financing mechanisms from the banking industry, community energy projects, and federal funds (Department of Energy (DOE), among others, are making it more feasible for public agencies to fund energy solutions for their communities.

**Growing Community Demand for Energy Sustainability.** Many public agencies are experiencing growing interest and demand from their constituents to provide clean, reliable, affordable energy resources. Communities are coming together to take more control of the energy they use – both to cut their gas and electricity bills and to help combat climate change.

---

<sup>22</sup> Farrell, J, "Beyond Utility 2.0 to Energy Democracy," Institute for Local Self-Reliance, 2014.

<sup>23</sup> Hunt, Tam, Growing Community Energy Efforts Shifting the Utility Model in California, GreenTech Media, March 4, 2015

<sup>24</sup> Farrell, John. Advantage Local-Why Local Energy Ownership Matters, Institute for Local Self-Reliance September 2014.

<sup>25</sup> Property Assessed Clean Energy (PACE) Financing of Renewables and Efficiency, NREL Energy Analysis, July 2010.

Engagement and education by public agencies will enable communities and individuals to exercise real market power and add a further dimension to wider energy market reforms.<sup>26</sup>

**Increasing Requirement for Energy Equity and Social Justice.** Ensuring energy affordability and broader access to energy efficiency and DER by diverse communities with approaches that address the needs of disadvantaged community members is critically important.<sup>27</sup> As the adoption of more advanced distributed energy technologies by residents and businesses accelerates, public agencies will serve an essential role to ensure that disadvantaged communities benefit and are not left behind in the energy system transformation that is rapidly occurring.

## K–12 Education

**Proposition 39 Funding.** Over two-thirds of public school buildings statewide are over 25 years old. Proposition 39 provides almost \$400 million for schools to retrofit and modernize their facilities. According to the Prop 39 K-12 Snapshot, the estimated energy cost savings from Prop 39 projects is nearly \$60 million, equivalent to over 200 million pounds of avoided carbon. Schools are taking advantage of Prop 39 funds, completing lighting, HVAC, and controls measures, however they are constrained by limited expertise, staffing and implementation resources to complete projects.<sup>28</sup>

## Barriers and Challenges

While the public agency sector may be rife with opportunity, capturing the savings is not always straightforward. Public agencies face unique challenges and barriers to action. The designation of the public sector as a separate market segment was based, in part, on the recognition of these unique barriers and the need to tailor program offerings to overcome them. These barriers to action include limitations on technical, financial, data and procurement resources as described in **Table 4**.

---

<sup>26</sup> Harvey, M, “Community Based Innovations in Energy Efficiency,” Massachusetts Institute of Technology, Energy Efficiency Strategy Report, April 29, 2011.

<sup>27</sup> Ettenson, L. and Heavey, C., “California’s Golden Energy Efficiency Opportunity: Ramping UP Success to Save Billions and Meet Climate Goals.,” National Resources Defense Council, August 2015. P.14.

<sup>28</sup> “Proposition 39-- K-12 Snapshot,” California Energy Commission, [http://www.energy.ca.gov/efficiency/proposition 39](http://www.energy.ca.gov/efficiency/proposition%2039).

Table 4. Barriers Table

Barriers	Problems & Challenges	Observed Impacts from Barriers	Potential Solutions	Intervention Strategies
<b>Public Sector customers lack capacity and expertise</b>	<ul style="list-style-type: none"> <li>- Limited technical expertise and knowledge of energy projects and issues<sup>29</sup></li> <li>- No clearly defined role for public agencies in energy leadership</li> <li>- Energy management not a core competency</li> </ul>	<ul style="list-style-type: none"> <li>- “Cream skimming” project selection</li> <li>- Inability to identify and evaluate relative merits of various energy project opportunities and delayed or non-action on those opportunities</li> <li>- Failure to understand the public benefits of energy efficiency</li> <li>- Difficulties with energy project management and construction oversight</li> <li>- Risk aversion<sup>30</sup></li> </ul>	<ul style="list-style-type: none"> <li>- Provide comprehensive whole building efficiency and IDER solutions</li> <li>- Implement staff education and training program to promote Strategic Energy Management (SEM)</li> <li>- Create consolidated and simplified program offer</li> <li>- Increase customer confidence through trusted end to end advisory and technical assistance services</li> <li>- Capacity building for public agency staff and community through engaging and accessible education modules delivered through web portal that is customized for each agency/community, resulting in increased energy awareness and support for ZNE project opportunities</li> </ul>	<p>Refer to:</p> <ul style="list-style-type: none"> <li>- Energy Efficiency Project Delivery</li> <li>- Engage and Educate Communities in Energy Programs &amp; Strategies</li> </ul>
<b>Siloed markets</b>	<ul style="list-style-type: none"> <li>- Siloed nature of available energy services and funding causes confusion and slows action</li> <li>- Fragmented policies and proceedings</li> <li>- Fragmented, competing and confusing program offers</li> <li>- Siloes within public agencies cause different</li> </ul>	<ul style="list-style-type: none"> <li>- Customer confusion and reluctance to act</li> <li>- Disincentives for holistic &amp; longer term energy solutions</li> <li>- Weak or misaligned strategic goals</li> <li>- Many promising project opportunities are not pursued.</li> </ul>	<ul style="list-style-type: none"> <li>- Integrate program offerings to encompass all resource types and promote IDER solutions</li> <li>- Continue streamlined and simplified one-stop program approach to help agency staff better identify, implement and manage projects</li> <li>- Advocate for policies that integrate Public Sector customer issues across proceedings</li> <li>- Coordinate offerings by providing access to resources through customized web portal</li> <li>- Promote customer behavior change actions</li> <li>- Establish clear local goals and targets that</li> </ul>	<p>Refer to:</p> <ul style="list-style-type: none"> <li>- Energy Efficiency Project Delivery</li> <li>- Engage and Educate communities in Energy Programs &amp; Strategies</li> </ul>

<sup>29</sup> Local Government Partnerships Value and Effectiveness Study Final Report, Opinion Dynamics. p. 67

<sup>30</sup> Toward an Entrepreneurial Public Sector, Clark, Anna Fountain, Public Personnel Management, September 2016.

	departments to have competing goals and demands		resonate with community while aligning with state policies	
<b>Inadequate access to customer data</b>	<ul style="list-style-type: none"> <li>- PAs and PIs lack customer data</li> <li>- Limited access to actionable energy data for informed decision-making</li> <li>- Lack of regional/statewide energy information system</li> <li>- Lack of resources for local and regional benchmarking and building labeling</li> </ul>	<ul style="list-style-type: none"> <li>- Absence of comprehensive energy master plan to guide decision-making</li> <li>- Reluctance to develop and adopt model energy codes, standards and policies</li> <li>- Less effective locational &amp; temporal EE and DER deployment</li> <li>- Non-productive investment of time and effort by PAs/Pis</li> </ul>	<ul style="list-style-type: none"> <li>- Create regional energy master plans and databases</li> <li>- Promote best practice codes, standards and policies across public agencies in the region</li> <li>- Draft and promote model local ordinances on energy usage disclosure and building benchmarking</li> <li>- Design program that will leverage metered data for program evaluation, measurement and verification</li> </ul>	<p>Refer to:</p> <ul style="list-style-type: none"> <li>- Develop Regional Energy Master Plans and Regional Energy Databases</li> <li>- Develop and Adopt Model Energy Codes, Standards and Policies</li> </ul>
<b>Public Sector unique challenges</b>	<ul style="list-style-type: none"> <li>- Performance uncertainties contributing to risk aversion</li> <li>- Hesitation to try unproven services or products</li> <li>- Extensive requirements for public and transparent procurement processes</li> <li>- Lengthy decision-making timelines</li> <li>- Competing and politically sensitive priorities</li> </ul>	<ul style="list-style-type: none"> <li>- Current programs do not fully appreciate or meet Public Sector needs</li> <li>- Lack of attention to risk reduction and public stakeholder buy-in</li> </ul>	<ul style="list-style-type: none"> <li>- Focus on strategic engagement with PS stakeholders and PS decision-makers</li> <li>- Customized and turn-key offerings to meet unique needs of public agencies</li> </ul>	<p>Refer to:</p> <ul style="list-style-type: none"> <li>- Energy Efficiency Project Delivery</li> <li>- Engage and Educate communities in Energy Programs &amp; Strategies</li> </ul>

<b>Financial challenges</b>	<ul style="list-style-type: none"> <li>- Multiple and competing demands for limited financial resources<sup>31</sup></li> <li>- Short term budget planning horizons</li> <li>- Rigid funding and budget requirements/restrictions</li> <li>- Inability by some agencies to use multi-year financing for projects</li> </ul>	<ul style="list-style-type: none"> <li>- PAs and PIs “out of synch” with project funding and approval requirements and timelines</li> <li>- PA financial support through incentives, rebates and OBF generally favors projects with simple discrete measures, thus leaving more holistic and complex projects to be delayed or ignored</li> </ul>	<ul style="list-style-type: none"> <li>- Develop project schedule and funding approaches/options that align with PS fiscal calendar and decision making processes</li> <li>- Develop and offer new financing options for public agencies such as Revolving Loan Funds and Energy Lease Financing</li> <li>- Work with private market actors to develop energy savings guarantee financing agreements that are customized to public sector needs</li> </ul>	<p>Refer to:</p> <ul style="list-style-type: none"> <li>- Energy Efficiency Project Delivery</li> </ul>
<b>Strict procurement requirements</b>	<ul style="list-style-type: none"> <li>- Strict project procurement and bidding legal requirements for public agencies</li> <li>- Slow and complex procurement cycle<sup>32</sup></li> </ul>	<ul style="list-style-type: none"> <li>- Projects may be delayed or dropped</li> <li>- Staff may not have the capacity and resources to initiate and stay on top of a lengthy public procurement process</li> </ul>	<ul style="list-style-type: none"> <li>- Offer procurement and project management options, such as Job Order Contracting and turn-key project management assistance that overcome institutional barriers and accelerate project completion</li> </ul>	<p>Refer to:</p> <ul style="list-style-type: none"> <li>- Energy Efficiency Project Delivery</li> </ul>

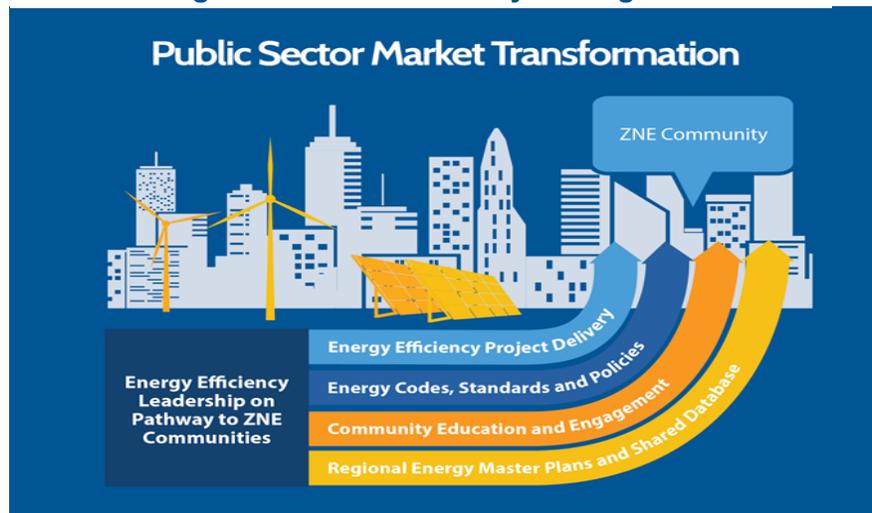
<sup>31</sup> “Financing Energy Efficiency Projects,” Government Finance Review, Energy Star, February 2003.

<sup>32</sup> SoCalREN, “Local Government Energy Efficiency Resources Guidebook 4: Project Procurement.” September 2013.

## G. SoCalREN's Approach to Achieving Goals

The public sector needs the right assistance, resources and support if it is to successfully lead communities to a ZNE future. SoCalREN addresses this challenge, fills public sector market gaps and directly supports the goals of the CLTEESP through four key intervention strategies. (**Figure 3**).

**Figure 3: SoCalREN's Key Strategies**



### One-Stop Service Delivery

SoCalREN's services are provided through one-stop end-to-end service delivery that improves the customer experience, builds capacity and expertise, and inspires a level of public agency awareness and confidence that motivates action. (**Figure 4**).

**Figure 4: SoCalREN's One-Stop Services**



- **Streamlined, Integrated Services.** By delivering integrated services that address the full range of needs and requirements of public agencies, SoCalREN is able to assist them to better understand their choices, and drive greater participation and higher adoption of energy efficiency programs.
- **Shared Resources and Learning.** SoCalREN provides agencies with customized tools and resources that they otherwise would have to develop on their own, saving them time, money and staff. Agencies engaging with one another and learning from one another results in higher adoption rates, better results and increased expertise. SoCalREN connects agencies through peer-to-peer workshops and training, provides access to shared online resources, and participates in subject matter online learning communities.
- **Impartial Advice.** Often public agencies are approached by IOUs, private vendors, ESCO's and others to implement projects or participate in energy savings programs and often they do not know how to weigh the benefits and risks of various options. As a public entity, SoCalREN is able to offer valuable third-party advice to agencies as a trusted advisor, without concern from the agency about conflicts of interest or up-selling of other products and services.
- **Side-by-Side Guidance.** SoCalREN has learned through experience that side-by-side guidance and support is perhaps the most important driver for agencies to adopt energy efficiency actions at a much higher rate. SoCalREN staff assists agencies much like a sherpa supports a climber ascending a mountain. Using this metaphor, SoCalREN climbs the mountain with the agency, while at the same time the agency is learning about best practices from the other sherpas doing similar work with other agencies. Collectively agencies move up the mountain faster than if they were climbing alone and in the process gain valuable expertise and access to resources along the way. The Program provides a set of tools and templates and continuously works to incorporate market changes to ensure agencies are taking the most effective route to the top. Ultimately, public agencies will have climbed up the mountain enough times so that one day they will have the expertise and capacity to do it on their own.

## Intervention 1 - Energy Efficiency Project Delivery

SoCalREN's Energy Efficiency Project Delivery Program fills market gaps and provides public agencies with an integrated, objective and comprehensive energy efficiency solution. Services include, but are not limited to energy planning, energy use analysis, investment grade audits, design scopes of work, incentive and financing support, financial analysis, and obtaining procurement assistance, bid analysis, and construction management support. In addition, public agencies receive project management services to guide them through the entire process.

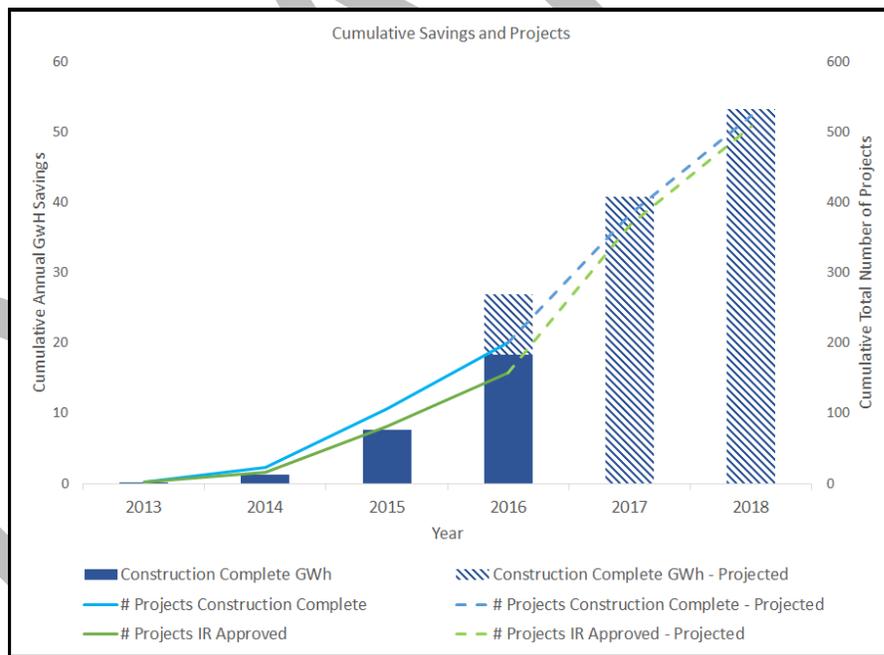
SoCalREN continuously refines its program services to assist agencies with their key challenges such as choosing the right technology, developing accurate cost proposals and accessing financing, procurement and construction support. One of the most effective aspects of the program is that it expands and contracts to meet each agency's needs with customized services.

The program focuses on a whole building, deep retrofit approach.

The program focuses on reaching disadvantaged communities. The program currently maintains almost 40 percent participation from agencies with disadvantaged communities and strives to serve customers in geographically remote areas. In addition, the program is coordinating efforts with 12 local government partnerships (LGP) programs. Each agency type and partnership requires a flexible approach that must be adapted with a unique set of services, often on a project by project basis.

Since its launch in September 2013, SoCalIREN has developed and refined its approach and core principles to ensure significant results in the form of energy savings. The Project Delivery Program has identified over 550 various energy efficiency project opportunities including mechanical, retro-commissioning, lighting, street lighting, water pumping and process optimization. To date, the program has completed construction on more than 200 of these projects. In addition to electric savings, the program has also been able to show successful completion of projects totaling 1445 kW demand and over 99,000 therm savings. By the end of 2018, the program anticipates having achieved 53 GWh annual electric savings over its first five years.

**Chart 1** shows the trend in performance for completed projects and energy savings year over year since program launch in late 2013. The year 2016 starts a sharp trajectory that is maintained in the 2017 and 2018 calendar years as the program evolves to become even more cost-effective and efficient.



**Chart 1: Cumulative Savings and Projects**

**Agency Participation.** Currently, 90 agencies are enrolled in the program. The program has a proven track record of engaging communities, particularly those who do not typically implement energy efficiency projects or are underserved. The Program is in high demand from new agencies which ensures it will continue its strong trajectory of growth. Agency participation has increased annually in both quantity as well as diversity of agency type. **Figure 5** shows the different public agency sub-segments currently enrolled in the Program. Each agency sub-segment has unique requirements for its buildings and infrastructure and therefore needs customized services.

**Figure 5: SoCaIREN’s Current Enrollments**

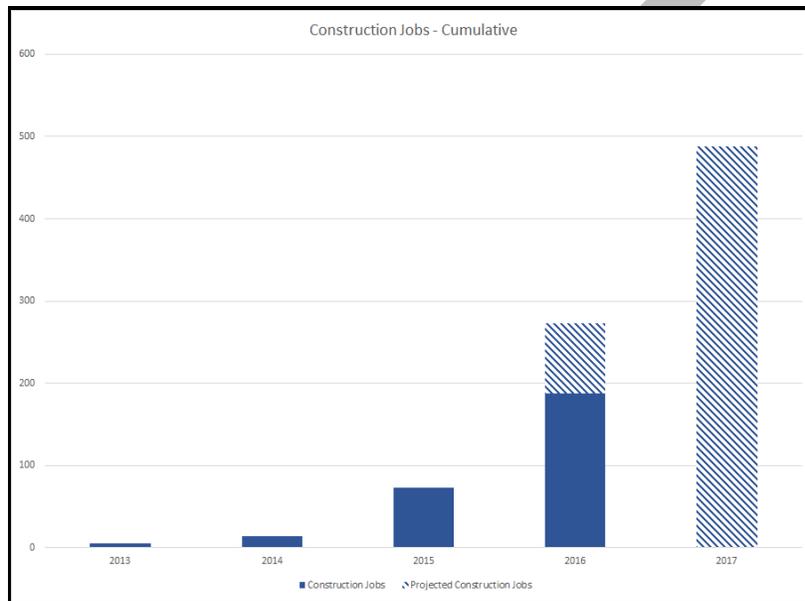


These 90 agencies represent over 10 percent of the eligible public agency sector market in the SoCaIREN territory, a region that is equivalent to the population of Arizona, Massachusetts and Indiana combined. The program currently serves over five different agency types including cities, counties, special districts, school districts and water agencies. Each of these segments has unique requirements for their buildings and infrastructure. **Chart 2** shows program enrollment year over year.



**Chart 2: Cumulative Program Enrollments by Year**

**Local Economic Development.** As the program identifies and implements energy retrofits with public agencies, it also helps create socio economic wealth for their communities. The program works to leverage utility incentive dollars to promote project construction spending and ultimately create new jobs. By the end of 2017 nearly 500 construction jobs had been created through program activity. Construction jobs are calculated using the project’s construction value and estimating \$92,000 in project costs will equate to one construction job. **Chart 3** shows the trend of job creation over the years. It shows a significant increase in the 2016 calendar year which is a function of the large amount of projects being completed. Calendar year 2017 is another jump in the program’s upward trend.



**Chart 3: Cumulative Construction Jobs**

**Table 5** describes the barriers, example tactics and implementation timeline for Intervention 1.

**Table 5. Intervention 1 – Project Delivery**

Intervention strategy	Barriers	Example Tactics	Existing, Modified, or New	Short, Mid, Long Term
<b>Energy Efficiency Project Delivery</b>	<ul style="list-style-type: none"> <li>Limited internal capacity and expertise</li> <li>Limited access to resources</li> <li>Strict procurement requirements</li> </ul>	Energy planning	Existing	S, M, L
		Energy use analysis	Existing	S, M, L
		Investment grade audits	Existing	S, M, L
		Design scopes of work	Existing	S, M, L
		Incentives and financing support	Existing	S, M, L
		Financial analysis	Existing	S, M, L

Intervention strategy	Barriers	Example Tactics	Existing, Modified, or New	Short, Mid, Long Term
	<ul style="list-style-type: none"> <li>Difficulty understanding complex offerings</li> <li>Difficulty navigating IOU processes and requirements</li> <li>Increasingly complex energy management</li> <li>Lack of access to financing</li> <li>Siloed energy efficiency and DERs limit GHG reduction potential</li> </ul>	Procurement assistance	Existing	S, M, L
		Bid analysis	Existing	S, M, L
		Construction management support	Existing	S, M, L
		Strategic energy management	Existing	S, M, L
		Construction loan fund	Existing	S, M, L
		Side-by-side technical assistance	Existing	S, M, L
		Tools and templates	Existing	S, M, L
		Peer-to-peer learning and best practices	Existing	S, M, L
		Expand one-stop EE project delivery to include Integrated Demand Side Management (IDSM) audits and recommendations	New	M, L
<b>Partners:</b> Public sector customers, engineering firms, National Joint Powers Authority (NJPA), Gordian Group, IOUs, publically owned utilities				

## Intervention 2 – Engage and Educate Communities in Energy Programs and Strategies

The community energy engagement intervention strategy positions public agencies as leaders in conveying the value of energy efficiency and greenhouse gas reduction strategies and programs. SoCalREN seeks to position public agencies to lead community awareness campaigns, to engage stakeholders, build public awareness of local, regional and state efforts and drive participation in utility core programs. SoCalREN will enroll public agencies to engage their constituents about energy and ZNE programs and strategies, with a focus on disadvantaged and hard to reach communities.

Effective community engagement is a key tool to drive widespread adoption of energy efficiency.<sup>33</sup> Once there is the will to act, communities can get involved in a variety of ways, including adopting energy saving behaviors, supporting local projects, and policy advocacy. However, there are numerous obstacles that can prevent involvement, such as the problem of energy poverty, as well as other pressing priorities within the local community. Despite the challenges, more and more communities are coming together to take greater control of the energy they use – both to cut their gas and electricity bills and to help combat climate change. In addition, jurisdictions that are more participatory and have high levels of civic engagement are more likely to engage in sustainability activities.<sup>34</sup>

SoCalREN's intervention strategy aims to help public agencies lead and inspire communities to engage in clean energy solutions. Public agencies can tap into community enthusiasm and commitment – whether it is helping people struggling with energy bills or playing a part in reducing the carbon intensity in buildings and transportation. Community leaders as well as local grassroots organizations can be motivated to support energy efficiency for its public benefits, including economic well-being of community members, and to support community carbon mitigation goals. Leaders and groups can build awareness as well as add credibility for utility programs and local innovative energy initiatives.

While most existing programs encourage individual action, achieving deep energy efficiency deployment is only achievable with a collective action commitment by communities, aided by targeted services, information tools and financial resources. Underlying this assumption is evidence that local governments and community groups may provide a critical platform of trust, social networks, innovative ideas and the expanded capacity required to achieve more effective efficiency campaigns.<sup>35</sup>

A goal of a community-based education campaign is for the public agency to engage trusted community networks in order to create excitement and commitment for adopting energy efficiency.<sup>36</sup> Creating a community campaign will include these elements:

- Standardized information about programs and processes for efficient access
- Data about individuals and communities to heighten awareness of and learning about their energy usage and encourage behavior change through competition
- A flexible campaign platform that is customizable based on community goals including adjustable incentives and agency-specific look and feel.
- Tapping into local networks, word of mouth, and community action to build trust and enthusiasm for local energy strategies and utility core programs.

---

<sup>33</sup> Michaels, Harvey, “Community Engagement: A Potential Transformative Path to Greater Energy Efficiency,” Massachusetts Institute of Technology Energy Efficiency Project White Paper, August 2011.

<sup>34</sup> Portney, K.E; Berry, J.M. (2010). “Participation and the Pursuit of Sustainability in US Cities.” *Urban Affairs Review* (46:1), pp. 119–139.

<sup>35</sup> The Connected Community: Local Governments as Partners in Citizen Engagement and Community Building, Alliance for Innovation, October 15, 2010.

<sup>36</sup> Collaborative Project Team, Recommendations for Community Based Energy Program Strategies, Oregon Energy Trust Final Project Report, June 2005.

- Rewards, competition and incentives to generate enthusiasm for energy efficiency

The strategy will result in more community education and engagement by removing the burden for participating agencies to create their own resources. Through access to proven model engagement strategies, customizable tools and templates, a web-based customizable engagement and education platform, project management services and shared learning, community leaders and local organizations, will be motivated to support energy efficiency for its public benefits, including the economic well-being of community members, and for its contribution to meeting carbon mitigation goals. **Table 6** describes the barriers, example tactics and implementation timeline for Intervention 2.

**Table 6. Intervention 2 – Community Education and Engagement**

Barriers	Example Tactics	Existing, Modified or New	Short, Mid, Long Term
<ul style="list-style-type: none"> <li>• Limited awareness of benefits of community engagement in EE</li> <li>• Limited capacity and expertise to promote awareness and engagement</li> <li>• Limited capacity and expertise to develop tools, templates, and community engagement strategies</li> <li>• Limited ability to learn from other agencies about best practices</li> </ul>	Work with agencies to build awareness and design customized community education strategies and engagement campaigns	Modified	S, M, L
	Provide project management services to assist with all aspects of plan implementation.	New	S, M, L
	Provide technical assistance to design and execute community engagement strategies.	Existing	S, M, L
	Provide access to an online resource library with community engagement information, and create customizable templates.	Modified	S, M, L
	Encourage peer-to-peer training and workshops; online community, shared case studies, best practices and training.	Existing	S, M, L
<b>Partners:</b> All public agencies, LGPs, community stakeholders, IOUs			

## Intervention 3 – Develop Regional Energy Master Plans and Regional Energy Database

By definition, energy systems, like transportation systems, are regional in scale. To design and implement the most effective energy programs at the local level, it is important to understand energy use and energy opportunities within a region.

At present there is no entity undertaking regional scale energy master planning for the public sector in Southern California. Energy planning is carried out in a fragmented and sporadic fashion. Energy planning at the local level, if done at all, is typically part of a local climate action plan (CAP) or energy action plan (EAP). Local CAPs and EAPs are not connected or coordinated in any comprehensive way and their data are not accessible or readily shared among agencies to inform decision-making. Variability of scope and specificity of CAPs and EAPs, combined with incomplete information and subjectivity across jurisdictions, inhibits the ability to maximize understanding of energy and climate program impacts.<sup>37</sup>

In addition, sub-regional energy planning is undertaken in varying degrees by Associations of Governments and Councils of Government such as the Southern California Association of Governments (SCAG), San Bernardino County Association of Governments (SANBAG), Coachella Valley Association of Governments (CVAG), San Gabriel Valley COG, South Bay COG, and Western Riverside COG. Not every government association or COG does energy planning and those that do typically do not have readily accessible or usable data for local government action.<sup>38</sup> In addition, some higher education institutions are providing some of the data tools for regional energy planning, such as the Energy Atlas led by UCLA, however Energy Atlas currently only covers the County of Los Angeles.

Local governments are in a unique position to lead the process, because they are close to their constituents and understand their needs and interests, play an important role in affecting citizen and business attitudes about energy use, and have significant powers to improve the way energy is used (e.g., policy creation and enforcement, direct financial support).<sup>39</sup>

Because public agencies need a consistent and systematic framework for transforming their community to a ZNE future, the SoCalREN proposes to lead the development of regional energy master plans and regional energy databases. A regional energy master plan provides the context required to guide near-term to long-term strategic decisions on energy demand, energy supply, energy efficiency as well as DER opportunities. It provides a public agencies with a framework to identify and inform community-wide and regional activities that support state, regional, and local energy and GHG goals.<sup>40</sup> It also helps ensure that application and investment of scarce staff and financial resources are coordinated with a data-driven understanding of which opportunities are best to pursue and what regional synergies and efficiencies can be leveraged to achieve the right

---

<sup>37</sup> Anzar, A, Day, M, Doris, E. and Mathur, S, “City Level Energy Decision Making: Data Use in Energy Planning, Implementation and Evaluation in US Cities,” National Renewable Energy Lab Technical Report, July 2015

<sup>38</sup> Ibid.

<sup>39</sup> Zaleski, S. and Lunn, M., “Guide to Community Energy Strategic Planning,” U.S. Department of Energy, March 2013, p.

<sup>40</sup> Gilleo, A. and Riberio, D., “Regional Energy Efficiency Efforts: Energy for the Power of 32 Region and Beyond,” ACEEE White Paper, March 2016.

local and regional energy initiatives. “Particularly in a time of tightening budgets and rising energy costs, developing a community energy strategic plan can be an important component of good governance, and it can also put governments in a prime position to capture future funding opportunities as they arise, because they have proactively identified their goals and priority actions.”<sup>41</sup>

A regional energy master plan identifies energy usage patterns (i.e., where energy is coming from - both centralized and distributed, how much is used, who uses it, when they use it) and identifies the best opportunities for regional energy efficiency actions, regional DER actions, and regional GHG mitigation actions. Regional plans provide a context for identifying appropriate local action, focusing on efforts that will return the most positive impact for the greatest number of citizens/customers, and helping to identify how public agencies can take collective action to implement more cost effective energy solutions. The regional energy master plan is also essential in engaging public agencies to take collective action to address locational grid constraints or weaknesses and develop optimum solutions that benefit both the grid and their communities. <sup>42</sup>

Local governments need energy data to complete climate action plans, to track performance in meeting climate and energy goals, and to identify significant energy demand reduction opportunities in their communities. A regional building information database and an energy usage tracking and benchmarking platform will provide agencies with a standardized profile of their energy use that allows comparison to other agencies. It would also provide an inexpensive way to understand energy use in general and support prioritization of actions as well as provide the foundation for analytical work investigating city morphologies and their energy and emission profiles.<sup>43</sup>

SoCalREN will work with UCLA and other stakeholders/partners to create regional energy information databases. **Table 7** describes the barriers, example tactics and implementation timeline for Intervention Strategy 3.

**Table 7. Intervention 3 – Energy Master Plans and Energy Databases**

Intervention Strategy	Barriers	Example Tactics	Existing, Modified or New	Short, Mid, Long Term
<b>Develop Regional Energy Master Plans and Regional Energy Databases</b>	<ul style="list-style-type: none"> <li>No entity doing regional energy master planning for public agencies</li> </ul>	Develop regional energy master plans.	New	M, L
	<ul style="list-style-type: none"> <li>No systematic, region-wide platform for</li> </ul>	Provide project management services to assist local agencies with energy plan development.	New	S, M, L

<sup>41</sup> Zaleski, S. and Lunn, M., “Guide to Community Energy Strategic Planning,” U.S. Department of Energy, March 2013, p.

<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

Intervention Strategy	Barriers	Example Tactics	Existing, Modified or New	Short, Mid, Long Term
	implementing ZNE strategies <ul style="list-style-type: none"> <li>• No connection among local climate action plans to inform local and regional decision-making</li> <li>• Limited access to data for decision-making and benchmarking</li> <li>• Lack of integrated regional databases to identify regional and shared EE and IDSR opportunities</li> </ul>	Enable local governments to access information from the Regional Master Plans and databases to identify energy efficiency and energy project opportunities.	New	M, L
		Provide access to an online resource library with information and materials to support local energy planning capacity building and expertise.	New	S, M, L
		Host peer-to-peer training and workshops; case studies and best practices; training and webinars.	New	S, M, L
		Provide streamlined access to energy data for benchmarking and other energy planning purposes.	Modified	S, M, L
		Provide development and support to expand regional tools such as UCLA's Energy Atlas.	Modified	S, M, L
		Link data among sources such as SEED, utility billing data, LGP energy programs, and SoCalREN.	New	S, M, L
		Support DOE to support BEDES to help agencies make energy investment decisions.	Existing	S, M, L
		Implement searchable web-based energy mapping system to display agency EE project details and support	New	S, M, L

Intervention Strategy	Barriers	Example Tactics	Existing, Modified or New	Short, Mid, Long Term
		aggregation of region-wide GHG inventory baseline		
<b>Partners:</b> All public agencies, UCLA, CEC, and DOE				

## Intervention 4 - Develop and Adopt Model Energy Codes, Standards, and Policies

Reach codes allow local governments to aggressively pursue local sustainable energy actions and the CPUC's goal of achieving ZNE. The key feature of reach codes is that they are meant to anticipate the next round of codes so that the market and stakeholders are prepared. Reach codes provide an opportunity to test the effectiveness of increasing the stringency of existing codes at a local level prior to disseminating the code on a statewide basis. Additionally, reach codes help to transform the marketplace and shape the development of future model codes by bringing high performing buildings into the mainstream.<sup>44</sup>

SoCalREN will provide the 200+ local governments within its territory with one-stop end-to-end support to design and adopt energy reach codes. (See **SoCalREN Cross-Cutting Chapter: Codes and Standards**). Through this strategy, SoCalREN seeks to accelerate local government implementation of energy efficiency, ZNE and GHG reduction goals and standards through the use of their regulatory authority. This would include developing, adopting and implementing model policies and programs focusing on improving the energy efficiency of existing buildings and on ZNE building energy policies and codes (on both a mandatory and voluntary basis) focused on new construction.

SoCalREN's model energy codes, standards and policy support includes promoting the adoption of codes that address:

- Better compliance with and enforcement of state and local energy code requirements
- Benchmarking
- Retrofit upon sale requirements
- EV ready policies and standards
- ZNE new construction requirements
- ZNE policies, standards and incentives for existing buildings
- Policies that encourage and support actions to design and develop decentralized ZNE communities

SoCalREN's reach code strategy provides access to critically important technical assistance, customized and actionable energy and GHG emissions data and reporting for their jurisdictions,

---

44

and expert advisory and training services that support enhanced code development and enforcement activities. This strategy will drive greater energy code compliance, enhanced code enforcement, and innovative regional approaches to successfully develop and adopt energy reach codes.

SoCalREN will support codes and standards enforcement and compliance through collaboration with the Solar Energy Action Committee (SEAC), led by the County of Los Angeles. The group is working with industry and local governments to design streamlined processes and manuals to achieve consistency and better code compliance. The program is also expanding to include other DER energy measures. **Table 8** describes the barriers, example tactics and implementation timeline for Intervention 4.

**Table 8. Intervention 4 - Model Energy Codes, Standards, and Policies**

	Barriers	Example Tactics	Existing, Modified or New	Short, Mid, Long Term
<b>Develop and Adopt Model Energy Codes, Standards, and Policies</b>	<ul style="list-style-type: none"> <li>Limited capacity, expertise and resources</li> <li>Complex and changing regulatory environment difficult to navigate</li> <li>Lack of access to energy data necessary for effective code development</li> <li>Limited building department and code development budgets</li> <li>Risk averse political environments</li> </ul>	Model code identification and planning.	New	S, M, L
		Reach code development services to draft and adopt codes.	New	S, M, L
		Provide technical assistance to compile, analyze, and provide access to actionable energy data.	New	S, M, L
		Technical assistance in measuring, collecting, and tracking data following adoption of model codes to document impacts.	New	S, M, L
		Provide access to online resource portal to support model code evaluation, development, and adoption.	New	S, M, L
		Organize local government peer-to-peer workshops and training in codes.	New	S, M, L
<b>Partners:</b> All public agencies, building officials, CALBO, SEAC				

## Anticipated Pilots

Public agencies are increasingly realizing the benefits and opportunities of decentralized energy systems to support energy and GHG goals, energy reliability and security, and more equitable and affordable energy resources for their communities. Public agencies are able to bring together various market actors, including the private sector, community stakeholders, IOUs and other governmental entities to accelerate these positive changes. SoCalREN provides the platform to test ZNE community strategies.

SoCalREN will design and develop **ZNE Demonstration Projects** to inform the pathway to a sustainable, resilient energy future. The demonstration projects will identify and develop the best technical knowledge, approaches and practices for public agencies to engage stakeholders and form strategic partnerships to create Community Energy Districts. They will also help identify technical, economic and regulatory barriers that need to be addressed and overcome for these ZNE community projects to achieve widespread realization.

The demonstration projects will test assumptions and evaluate results that will guide development of future decentralized energy prototypes and will incorporate the lessons learned into future program design. The demonstration projects aim to identify key enabling tools and processes for public agency planning and implementation of ZNE. Analytical tools for community energy assessment and concepts for ZNE communities will be tested and validated through the design and implementation of these selected pilot projects.

SoCalREN will ensure that the development of these demonstration projects will be coordinated with SCE, SoCalGas and all other key stakeholders that need to participate in the design and implementation process. The demonstration projects will complement and build on the work being performed under the CEC's Advanced Energy Communities (AEC) grants. SoCalREN is currently a partner with UCLA on one of the AEC project grants awarded by the CEC. SoCalREN's demonstration projects will align with the CPUC and CEC direction to move toward a ZNE future and will be focused on the greater benefits and synergies that can be achieved from decentralized and community-scale energy district design approaches.

## H. Leveraging Cross-Cutting Resources

SoCalREN's cross cutting sectors support adoption of energy efficiency in public agencies. Following is a brief description of how the cross-cutting initiatives fit into the public sector strategy.

### Financing

Funding has historically been one of the biggest barriers to energy retrofits.<sup>45</sup> Agencies either do not have the funding available to complete projects or do not have the expertise to successfully submit financing applications. SoCalREN provides services that address both of these challenges to assist public agencies in implementing energy retrofit projects. These financing related services

---

<sup>45</sup> Energy Efficiency Financing in California: Needs and Gaps," Harcourt Brown and Carey, Inc., July 8, 2011. p.34

are offered alone or in conjunction with the Program's other services, such as project management and other technical assistance through the comprehensive project delivery process.

SoCalREN's approach provides specialized information and expert analysis that is objective and transparent. SoCalREN offers customized financial advisory services to ensure projects are bundled appropriately and all available funding sources are considered including the Energy Lease Financing (ELF) product offered by the program. SoCalREN provides assistance in completing and monitoring financing applications to ensure the maximum amount of funding is secured for the agency. This approach involves a coordinated effort with utilities and ongoing implementation of best practices and lessons learned.

In addition, using (non-rate payer) ARRA funds, SoCalREN offers a revolving loan fund to provide project construction period financing to public agencies. This fund helps overcome the limitation in on-bill financing (OBF) programs that do not disburse any funds to the agency until after construction is finished and a project is certified as complete by the IOU. This can be a major impediment to OBF utilization by public agencies.

SoCalREN will continue to increase awareness of financing through the implementation of targeted and general outreach efforts, including the hosting of various types of events to attract the complete spectrum of public agency property owners, contractors, and financial industry professionals. For financing related fact sheets, see Appendix X.

See ***Cross-Cutting Chapter - Financing***, p. X.

## Workforce, Education, and Training

SoCalREN is committed to efforts that ensure energy efficiency measures are properly installed, operated and maintained by a skilled and trained workforce in order to increase energy savings by reducing lost or foregone energy savings. SoCalREN is also committed to efforts that will help workers from minority, low-income and disadvantaged communities gain better access to career-track opportunities in the energy economy, and defined pathways for advancement into higher skilled and higher wage jobs. SoCalREN recognizes the significant local economic development and workforce development benefits that can be generated from proper planning and execution of public agency energy efficiency and ZNE projects both in their own buildings and facilities and within their communities.

Emerald Cities is the SoCalREN partner on workforce development and its high level objectives are to:

- Ensure high quality work standards are embedded into public agency energy projects.
- Enable underrepresented workers and companies to participate more in public and private sector energy projects.
- Connect the various workforce development stakeholders to help achieve the above objectives.

The SoCalREN Public Sector program will continue to collaborate with Emerald Cities in the implementation of the work plan to make progress toward these objectives and will strive to expand the understanding and utilization by public agencies of local and disadvantaged workforce hiring in the planning and implementation of their energy projects.

In addition, SoCalREN will maintain consistency with the Workforce Education and Training goals of California's Existing Buildings Energy Efficiency Acton Plan (AB 758) by supporting the development and employment of a high performance industry for every level of professional involved in energy efficiency transactions. SoCalREN will also support SB 350 in its directive to "Coordinate with the California Workforce Investment Board, the Employment Training Panel, the California Community Colleges, and other entities to ensure a qualified, well-trained workforce is available to implement the program requirements."

See **Cross-Cutting Chapter - WE&T**, p. X.

## Marketing

SoCalREN provides local marketing, education and outreach to public agencies to increase awareness and encourage program participation. Marketing is focused on driving growth and sustainability, engaging hard to reach and disadvantaged communities, assessing program satisfaction, and delivering tools and information that build agency awareness, capacity and expertise.

## Codes and Standards

SoCalREN's intervention strategies for reach code and standards are described in section X, p.x. Also see **Cross-Cutting Chapter - Codes and Standards**, p. X.

# I. Integrated Demand Side Resources (IDSR)

## Targeted DSR

In alignment with future regulatory direction from the CPUC, SoCalREN will design and implement program enhancements to the Energy Efficiency Project Delivery platform to include DER audit, analysis and project recommendation services. SoCalREN has learned that for most public agencies enrolled in the Program, energy efficiency retrofits are just the beginning. Many want to achieve deeper energy savings and greater energy self-reliance through renewable generation, energy storage and sophisticated energy management systems as well as greater water efficiency savings. The proposed DER program enhancements, once implemented, promise to harness even greater energy savings and GHG emissions reductions from public agencies.<sup>46</sup> Elements of this program enhancement will include:

- Design a DER services portfolio to include integration of renewables, energy storage, demand response, energy management and water efficiency optimization for public agencies
- Develop a methodology of integrating DER activities into the program's one-stop process
- Develop the specific strategies, tools and templates and integrate best industry standards into the project delivery manual (PDM)

---

<sup>46</sup> California Energy Commission. 2015. 2015 Integrated Energy Policy Report. Publication Number EC-100-2015-001-CMF.

- Identify the technical expertise required for each of the DER resource areas and manage a competitive process to assemble the best team of expert consultants and practitioners
- Build expertise among SoCalREN staff and subconsultants through training and development of best practices protocols across all DER energy service areas
- Develop new public agency facing marketing and outreach collateral materials to reflect the new DER program offerings
- Engage with key stakeholders, including utilities, in the design and implementation of the DER program
- Define and launch a pilot phase of the DER public agency program to test and demonstrate essential components of the new project delivery systems and approaches prior to full program implementation.

## Electric Vehicles and Demand Response

As part of its proposed targeted IDSR services, SoCalREN will incorporate an analysis of integrated project elements related to the expanding market penetration by electric vehicles and the need for additional electric vehicle charging infrastructure within every California community. Cities and counties are ideally suited to integrating and deploying electric vehicle charging stations as part of developing low-carbon ZNE communities. SoCalREN will work with public agencies to design, incentivize and deliver electric vehicle infrastructure through its regional and local energy master planning processes.

## J. SoCalREN Helping to Meet State Policy Goals

Table 10. Summary of Relevant Energy Efficiency Policies, Guidance and SoCalREN Support

Policy	Guidance	SoCalREN's Support
<b>CPUC Guidance Decision (D.12-11-015) for Regional Energy Networks.</b>	<ul style="list-style-type: none"> <li>• Conduct activities that utilities cannot or do not intend to undertake</li> <li>• Pilot activities where there is no current utility offering, and where there is potential for scalability to a broader geographic reach, if successful</li> <li>• Pilot activities in hard to reach markets, whether or not there is a current utility program that may overlap</li> </ul>	<p>SoCalREN is successfully meeting the criteria established by the CPUC.</p> <ul style="list-style-type: none"> <li>• <b>See chart, p. 40</b>, on how SoCalREN services address gaps not filled by LGPs. SoCalREN proposes to continue piloting of new program offerings including implementation of IDSR demonstration projects.</li> <li>• SoCalREN is successfully assisting hard to reach markets. Over 40% of SoCalREN's enrolled agencies encompass disadvantaged communities.</li> </ul>
<b>California Long-Term Energy Efficiency</b>	<ul style="list-style-type: none"> <li>• Lead by example in their facilities</li> <li>• Lead their communities with</li> </ul>	<ul style="list-style-type: none"> <li>• The SoCalREN intervention strategies and tactics directly align with these goals and</li> </ul>

<p><b>Strategic Plan (CLTEESP)</b></p>	<p>innovative energy efficiency programs</p> <ul style="list-style-type: none"> <li>• Lead adoption of higher energy efficiency standards or ‘reach’ codes</li> <li>• Lead energy code compliance enforcement</li> <li>• Ensure LG energy efficiency expertise becomes widespread and typical</li> </ul>	<p>provide the requisite expertise, support and knowledge for public agencies to better meet these goals and objectives</p> <ul style="list-style-type: none"> <li>• <b>Intervention 1: Energy Efficiency Project Delivery Program</b></li> <li>• <b>Intervention 2: Community Education and Engagement</b></li> <li>• <b>Intervention 3: Regional Master Planning and Databases</b></li> <li>• <b>Intervention 4 : Model Codes, Policies and Standards</b></li> </ul>
<p><b>AB 758 Existing Buildings Energy Efficiency Action Plan (Action Plan)</b></p>	<ul style="list-style-type: none"> <li>• Lays out a 10-year roadmap to mobilize market forces and transform California’s existing building stock into high performing and energy-efficient buildings</li> <li>• Establishes requirements for providing energy assessments, benchmarking, energy ratings, cost effective energy improvements, financing options, public outreach and education and workforce training.</li> <li>• Encourages local governments to implement innovative efficiency programs and gather relevant experience for wider application.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intervention Strategy 3: Regional Master Planning and Databases</b> provides the foundation for the public sector to benchmark existing buildings, identify best energy retrofit opportunities, implement community scale programs and measure impacts</li> <li>• <b>Intervention Strategy 4: Model Codes, Policies and Standards</b> will promote adoption of reach codes that will encourage and/or incentivize adherence to AB758</li> </ul>
<p><b>AB 350 Clean Energy and Pollution Reduction Act</b></p>	<ul style="list-style-type: none"> <li>• Mandates a 50% renewable energy content in the state’s overall electricity mix and a doubling of energy efficiency goals for existing buildings by 2030</li> <li>• Addresses barriers for low income customers to EE and weatherization, especially in disadvantaged communities</li> <li>• Requires that local governments are encouraged to participate in efficiency program implementation where appropriate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Implementation Strategy 1: Project Delivery; IDSR Demonstration Pilot Projects</b> - Through incorporation of DER resources into the one-stop project delivery, agencies will achieve greater adoption and implementation of integrated projects that drive significant GHG reductions in their communities</li> </ul>
<p><b>SB 375 Sustainable Communities and</b></p>	<ul style="list-style-type: none"> <li>• Requires local governments to implement long-term</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intervention Strategy 3: Regional Master Planning and Databases</b> support</li> </ul>

<p><b>Climate Protection Act</b></p>	<p>integrated planning of land use and transportation</p> <ul style="list-style-type: none"> <li>• Drives critical public agency initiatives such as the Southern California Regional Transportation Plan and Sustainable Communities Strategy to reduce per capita GHG emissions in the Southern California Association of Governments region 8% by 2020, 18% by 2035 and 21% by 2040 against the 2005 baseline year</li> </ul>	<p>implementation of SB 375 by integrating energy planning with transportation and land use planning</p>
<p><b>AB 802</b></p>	<ul style="list-style-type: none"> <li>• Mandates use of metered data for measurement of impacts from energy efficiency program interventions</li> <li>• Offers local governments a very relevant framework to implement building benchmarking and labeling ordinances that accurately reflect what building operators and tenants see on their energy bills</li> <li>• Program Administrators can now receive credit for energy savings from, and provide incentives and support for, EE projects that help public sector entities meet current energy code requirements where previously, Program Administrators could only count the energy savings for projects where the improvements exceeded code requirements</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intervention Strategy 3: Regional Master Planning and Databases</b> supports implementation of AB 802 by creating regional energy plan databases that will enable local governments to access actionable data and identify the best opportunities for effective program development and implementation</li> </ul>
<p><b>AB 32 and AB 197</b></p>	<ul style="list-style-type: none"> <li>• Extends carbon emissions reduction target to 40% below 1990 levels by 2030</li> <li>• Local government Climate Action Plans identify how they will comply</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intervention Strategies 1 through 4</b> provide the tools and guidance for public agencies to successfully complete retrofits in their own facilities, to support community energy actions, and to adopt the regulatory framework to drive adoption of ZNE communities that will significantly reduce greenhouse gas emissions</li> </ul>

<b>ZNE Legislation</b>	<ul style="list-style-type: none"> <li>• All new residential construction is required to be ZNE beginning in 2020 (CLTEESP)</li> <li>• All new commercial construction is required to be ZNE beginning in 2030 (CLTEESP)</li> <li>• Up to 50% of existing buildings retrofitted must achieve ZNE by 2030 (CLTEESP)</li> </ul>	<ul style="list-style-type: none"> <li>• SoCalREN's business plan is focused on shepherding the public sector to create ZNE communities</li> <li>• Its four intervention strategies, along with the IDSR Demonstration Pilots, will provide the roadmap for the public sector to lead compliance with State's ambitious ZNE legislation and policies</li> </ul>
------------------------	---	---

## K. SoCalREN's Partners and Commitment to Coordination

To effectively fulfill its mission, SoCalREN actively partners with public agencies, NGO's, private sector organizations, utilities and state and federal agencies, as shown in **Table 11** (partial list).

**Table 11. SoCalREN's Partners**

Partner Type	Organization
<b>Public Agency Partners</b>	220 Cities, Townships and Tribes 12 Counties 150 Water, Wastewater and Special Districts 348 K-12 School Districts Councils of Government (COGs) Local Government Partnerships (LGPs) National Joint Powers Authority (NJPA) Solar Energy Action Committee (SEAC) Community Choice Aggregators (CCAs)
<b>State and Federal Agencies</b>	University of California Los Angeles (UCLA) California Energy Commission (CEC) Department of Energy (DOE) The National Renewable Energy Laboratory (NREL)
<b>Non-Governmental Organizations</b>	The Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC) Emerald Cities Collaborative
<b>Utilities</b>	Southern California Edison Southern California Gas Publicly-owned utilities

<b>Private Sector</b>	The Gordian Group Private Sector Financiers and Lenders Energy Engineering Firms Energy Project Contractors
-----------------------	--

## Commitment to Coordination

### IOU Coordination

SoCalREN coordinates closely with SCE and SCG to ensure seamless customer communication and avoid duplication of services. The Opinion Dynamics EM&V study of the REN's found that "the RENs and the IOUs have coordinated well."<sup>47</sup> SoCalREN has established a set of protocols for coordinating with the IOUs when enrolling agencies to ensure a seamless customer experience for the agency and to avoid confusion about roles and responsibilities. As a non-resource program, all the work of the SoCalREN public sector programs ultimately accrues as attribution to the IOUs. SoCalREN works closely with the IOUs to ensure that the SoCalREN tracks the activities it provides agencies that support completion of energy efficiency projects. SoCalREN will bring this same level of coordination and cooperation as the program expands into the new and enhanced services outlined in its Business Plan and ensure that SoCalREN's services continue to be complementary and not duplicative of IOU programs.

### Local Government Partnership Coordination

SoCalREN complements and fills the gap of the services provided by other CPUC funded programs available to Public Agencies. SoCalREN and the Local Government Partnerships (LGPs) work harmoniously to provide services to local governments in filling gaps and meeting needs.

By design, the SoCalREN complements and supplements the work of IOU LGP'S. As a program of the IOU's, LGP's provide assistance and resources to local governments to help them implement energy efficiency projects in their own facilities. Within the SCE/SCG territory, there are 25 partnership groups serving just under half of cities and counties within the territory. LGP's do not serve schools districts, water districts, sanitation districts, or other special districts. SoCalREN is able to fill this gap to reach the more than 100 cities and counties and the other public agencies not reached by the LGP program. SoCalREN also provides deeper and more comprehensive one-stop services that include more sophisticated building and facility audits, project management, competitive procurement, construction management support, additional non-ratepayer funding and financing options and completion of incentive and financing applications on behalf of the agencies.

The Opinion Dynamics EM&V study observed that: "The RENs entered markets with existing program administrators, such as the IOUs and MCE. Learning how best to cooperate with other stakeholders in California was a necessary hurdle to overcome. Several staff at both RENs

<sup>47</sup> PY 2013–2014 Regional Energy Networks Value and Effectiveness Study, Opinion Dynamics Corporation, January 5, 2016, p. 62

mentioned that it was difficult and time-consuming learning how to manage having multiple program administrators in the same space. However, both RENs have developed processes for coordinating with the IOUs to differentiate their products and attempt to create synergies through cooperation. The IOUs and the RENs indicate that regular meetings help with this needed coordination.”<sup>48</sup>

In addition, Opinion Dynamics stated that “One key area where SCE/SCG and REN services overlap is technical assistance. According to the IOUs, they offer similar technical assistance to local government (and public agencies) through the LGPs, schools programs, and Custom and Express Efficiency programs. However, SoCalREN and the IOUs agree that their offerings are distinct in terms of the level of engagement involved. For instance, the IOUs’ technical assistance may address one piece of the process of developing EE projects, while SoCalREN provides assistance through the entire process. Public Agency Program survey respondents provided similar feedback. Half of the respondents (13 of 28) mentioned that SCE/SCG offers services similar to those of SoCalREN. Six respondents mentioned similar technical assistance services, such as audits, project design assistance, savings estimates, incentive application assistance, and procurement assistance. Additionally, one survey participant highlighted the different level of engagement that SoCalREN offers: “[The IOUs] do offer programs, but do not go above and beyond the way [SoCalREN] does.”<sup>49</sup> “Local governments in SoCalREN’s territory that belong to LGPs (i.e., who were also in the LGP survey for the 2013–2014 LGPs study) indicated that more services and products were available to them. Compared to LGP Implementers, 35 in the LGP survey, a statistically larger number of participants in the Public Agency Program indicated a substantially greater number and variety of EE services and products available to them since the RENs began.”<sup>50</sup> **Table 11** compares and lists the services available to public agencies in SCE and SCG service territories through both LGP’s and the SoCalREN.

**Table 11. Comparison of LGP and SoCalREN Services**

Services	SCE/SoCalGas Local Government Partnerships	SoCalREN
<b>Types of Public Agencies Served</b>	<ul style="list-style-type: none"> <li>• Cities</li> <li>• Counties</li> </ul>	<ul style="list-style-type: none"> <li>• Cities</li> <li>• Counties</li> <li>• Water/wastewater Districts</li> <li>• K-12 Schools</li> <li>• Special Districts</li> <li>• Community Colleges</li> </ul>
<b>Date Program Started</b>	<ul style="list-style-type: none"> <li>• 1997</li> </ul>	<ul style="list-style-type: none"> <li>• 2013</li> </ul>

<sup>48</sup> PY 2013–2014 Regional Energy Networks Value and Effectiveness Study, Opinion Dynamics Corporation, January 5, 2016, p. p.70

<sup>49</sup> PY 2013–2014 Regional Energy Networks Value and Effectiveness Study, Opinion Dynamics Corporation, January 5, 2016, p. 44

<sup>50</sup> PY 2013–2014 Regional Energy Networks Value and Effectiveness Study, Opinion Dynamics Corporation, January 5, 2016, p.47

<b>Target Market</b>	<ul style="list-style-type: none"> <li>• 200 Cities and Counties</li> </ul>	<ul style="list-style-type: none"> <li>• 730 Public Agencies</li> </ul>
<b>Market Served to Date</b>	<ul style="list-style-type: none"> <li>• 100 Cities and Counties</li> </ul>	<ul style="list-style-type: none"> <li>• 90 Public Agencies</li> </ul>
<b>Procurement Assistance</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• Access and extensive support to both customized and turnkey procurement approaches for energy projects</li> <li>• Bid analysis</li> </ul>
<b>Integration with Distributed Energy Resources (DER)</b>	<ul style="list-style-type: none"> <li>• Limited to EE and DR only</li> </ul>	<ul style="list-style-type: none"> <li>• Ability to leverage non-rate payer funds to integrate DER and water efficiency</li> </ul>
<b>Technical Assistance</b>	<ul style="list-style-type: none"> <li>• Limited technical assistance to identify projects that have potential downstream incentives/rebates</li> </ul>	<ul style="list-style-type: none"> <li>• Customized technical support from project identification to completion, including investment grade audits to identify all energy saving opportunities, design scopes of work and provide construction management support.</li> </ul>
<b>Energy Planning</b>	<ul style="list-style-type: none"> <li>• Templates and funding to develop local Energy Action Plans for municipal operations with a focus on EE electric and gas savings</li> </ul>	<ul style="list-style-type: none"> <li>• Lead development of regional and sub-regional Energy Master Planning towards ZNE</li> </ul>
<b>Financial Support</b>	<ul style="list-style-type: none"> <li>• 0% On-Bill Financing</li> <li>• Enhanced incentives for participation in downstream utility programs</li> </ul>	<ul style="list-style-type: none"> <li>• Financial Analysis for projects to compare different financing options</li> <li>• Support with financing &amp; incentive applications and process</li> <li>• Assistance with Energy Project Lease Financing (ELF)</li> <li>• Prop 39 support</li> <li>• Construction Loan Revolving Fund (non-ratepayer funds)</li> </ul>
<b>Access to Energy Data</b>	<ul style="list-style-type: none"> <li>• Municipal-level data on request</li> <li>• Aggregate community-level data on request</li> </ul>	<ul style="list-style-type: none"> <li>• SoCalREN dependent upon transparency of data from the IOUs. Individual agencies must submit CISR forms to obtain data, which SoCalREN assists agencies to complete.</li> <li>• SoCalREN works with UCLA to enhance existing databases to provide reliable community and municipal level data.</li> </ul>
<b>Energy Project Expertise to</b>	<ul style="list-style-type: none"> <li>• Account Representatives provide limited project support to partnership cities and counties</li> </ul>	<ul style="list-style-type: none"> <li>• Provides dedicated support at every stage to each participating agency through an assigned Project Manager along with access to engineering and</li> </ul>

<b>Implement Projects</b>		construction support
<b>Community Energy Projects</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and implement ZNE Demonstration Pilot Projects with selected agencies</li> </ul>
<b>Community Outreach</b>	<ul style="list-style-type: none"> <li>• Co-branded marketing to promote utility core programs</li> </ul>	<ul style="list-style-type: none"> <li>• Development and sharing of tools and resources to inspire local energy action</li> <li>• Customized support to engage community stakeholders and inspire local energy action</li> </ul>
<b>Codes &amp; Standards</b>	<ul style="list-style-type: none"> <li>• T24 Building Code Training for Local Governments</li> <li>• Cost-effectiveness study for adoption of reach codes</li> <li>• Funding to develop reach code</li> </ul>	<ul style="list-style-type: none"> <li>• End-to-end support to design and adopt energy reach codes</li> </ul>
<b>Sharing of Best Practices for Sustainability Efforts</b>	<ul style="list-style-type: none"> <li>• SEEC Annual Best Practices Forum</li> <li>• Regular communication with regional partnership</li> </ul>	<ul style="list-style-type: none"> <li>• Sub-regional peer-to-peer workshops and trainings on relevant topics</li> <li>• Access to shared online resources and learning communities</li> </ul>

### Coordination with RENs and CCAs

SoCalREN holds periodic conference calls and meetings with BayREN and Marin Clean Energy to share information, reports, and program data. There is close collaboration as well on lessons learned, potential program enhancements, and REN related policies and approaches.

## L. Statewide Administration and Transition Timeline

SoCalREN is not a designated statewide administrator for energy efficiency programs.

## M. Solicitation Strategies

SoCalREN program administration, design and implementation is currently and will continue to be outsourced to third parties that have been selected through a competitive bidding process by Los Angeles County, the administrator of SoCalREN. These contracts are not due to be renewed by the county until 2020. The intent is to continue to outsource virtually all components of program implementation in the future, pursuant to local government procurement and contracting requirements.

## N. Metrics and EM&V Considerations

As a non-resource program, the SoCalREN success metrics encompass a range of measures including energy savings (from IOU incentive-eligible projects), continued program growth and expansion to reach a majority of the public sector market, customer satisfaction, serving hard to reach and disadvantaged communities, workforce development support, building public sector capacity and expertise, and alignment with CPUC, CEC and State goals. Following are metrics for each intervention strategy (**Tables 12 – 15**).

DRAFT

DRAFT

**Table 12: Intervention Strategy**

SoCalREN Energy Efficiency Business Plan: Public Sector Metrics Table									
Problem Statement	Ten Year Vision	Desired Market Effects	Intervention Strategies	Market Effect Metrics	Baseline	Metric Source	Short Term Target (1-3 years)	Mid Term Target (4-7 years)	Long Term Target (8-10+ years)
Limited staff capacity and expertise, inadequate access to technical assistance, and inherent complexities of public sector decision-making, make it difficult for public agencies to complete energy efficiency projects in their own facilities	All public agencies within the SoCalREN are leading by example, having designed and implemented energy efficiency and ZNE strategies that have significantly reduced their agencies' energy use and GHG emissions	A growing number of public agencies within the SoCalREN territory have completed energy efficiency and ZNE projects in their own facilities and assets	Energy Efficiency Project Delivery Program	Energy savings achieved as a % of total EE potential for sector	Energy efficiency baseline and potential (TBD)	Metered energy savings	TBD	TBD	TBD
				Number of enrolled agencies as % of eligible agencies within territory	Total number of eligible SoCalREN agencies as of 2018	Agency participation data	TBD	TBD	TBD
				Percent of enrolled agencies serving disadvantaged communities		CAL Enviro Screen data	TBD	TBD	TBD

				Percent of participating agencies highly satisfied with program services		Participating agency satisfaction survey results	TBD	TBD	TBD
--	--	--	--	--	--	--	-----	-----	-----

DRAFT

**Table 13: Intervention Strategy 2**

Problem Statement	Ten Year Vision	Desired Market Effects	Intervention Strategies	Market Effect Metrics	Baseline	Metric Source	Short Term Target (1-3 years)	Mid Term Target (4-7 years)	Long Term Target (8-10+ years)
Lack of expertise, resources and understanding of the public benefits of educating and engaging community members in energy efficiency and ZNE actions and initiatives	Public agencies are actively leading and engaging their communities to reduce energy use and GHG emissions	A growing number of SoCalREN public agencies are engaging and educating their communities about energy efficiency and ZNE opportunities, programs and strategies	Community Energy Education and Engagement Program	Percent of agencies actively engaging their communities on EE and ZNE	Total number of eligible SoCalREN agencies as of 2018	SoCalREN Database	TBD	TBD	TBD
				Percent of agencies actively engaging their disadvantaged communities on EE and ZNE		CAL Enviro Screen data	TBD	TBD	TBD

**Table 14: Intervention Strategy 3**

Problem Statement	Ten Year Vision	Desired Market Effects	Intervention Strategies	Market Effect Metrics	Baseline	Metric Source	Short Term Target (1-3 years)	Mid Term Target (4-7 years)	Long Term Target (8-10+ years)
Lack of expertise, resources and understanding of the public benefits of implementing Regional Energy Master Plans as a roadmap for creating clean, reliable, safe and affordable community-scale energy resources within the region	Public agencies have utilized the data outputs and analyses from the Regional Energy Master Plans to become leaders in promoting ZNE community strategies and have made significant progress on the pathway to ZNE	Regional and subregional energy master plans have been completed, providing a comprehensive and data-rich energy profile and identifying the most promising energy project opportunities within the SoCalREN territory	Regional Energy Master Planning and Shared Regional Databases Development	Number of Energy Master Plans completed	Zero	SoCalREN database	TBD	TBD	TBD

**Table 15: Intervention Strategy 4**

Problem Statement	Ten Year Vision	Desired Market Effects	Intervention Strategies	Market Effect Metrics	Baseline	Metric Source	Short Term Target (1-3 years)	Mid Term Target (4-7 years)	Long Term Target (8-10+ years)
Local governments have limited expertise, capacity and resources to understand, develop and adopt energy reach codes	There is widespread activity by local governments to develop and adopt model and reach energy codes that encourage, promote and mandate energy efficiency and ZNE actions within their communities	Local governments are actively developing and implementing model and reach energy codes as well as a local legal framework for ZNE policies, standards and requirements	Model Energy Codes, Standards and Policies Development & Adoption	Percent of local governments adopting model and reach codes, standards and policies.	220 local governments (permitting authorities) within SoCalREN territory	SoCalREN database	TBD	TBD	TBD

## O. EM&V Research Needs and Considerations

Few evaluation studies on the public sector have been completed. Studies have been done on the IOU LGP programs that indicate that local governments need assistance in identifying supplemental funding sources, overcoming staff capacity challenges, compiling and analyzing energy use data, and need more technical support in the identification and implementation of projects.

In 2016, Opinion Dynamics completed a process evaluation of the Energy Efficiency Project Delivery Program (formerly called SoCalREC).<sup>51</sup> “All SoCalREN Public Agency Program participants stated that, as a result of the program, they now had access to such technical services as audits, design, or construction management assistance, and 93% of the participants indicated that they had access to EE expertise that their organizations did not have. Three-quarters of participants stated that working with the Public Agency Program reduced the amount of time needed to implement projects. Across the board, participants indicated a high level of knowledge by the SoCalREN team implementing the Public Agency Program (scores from 9.2 to 9.6 on a 0–10 scale where 10 is completely knowledgeable.”<sup>52</sup> In addition, Opinion Dynamics found that “Public Agency Program participants were pleased with the services provided by the implementer; 86% said that staff met or exceeded their expectations, and 71% said that staff always met their needs.

A very high proportion of Public Agency Program participants indicated having received beneficial support from the SoCalREN program. The satisfaction levels and proportion of beneficial support are very high and indicative of an effective program that is meeting the needs of its participants.”<sup>53</sup>

The evaluation concluded:

- “Public agency program participants were pleased with the services provided by SoCalREN.”
- “86% of the enrolled public agencies said the program staff met or exceeded their expectations.”
- “A very high proportion of participants indicated having received beneficial support from the SoCalREN public agency program.”
- “The satisfaction levels and proportion of beneficial support are very high and indicative of an effective program that is meeting the need of its participants.”
- “Program participants said that the SoCalREN helps with building capacity among their staff by increasing their staff’s ability to improve EE within municipal buildings.”

Opinion Dynamics recommended that the next phase of EM&V studies evaluate how well the SoCalREN leverages local government resources and what level of local government capacity

<sup>51</sup> Regional Energy Networks Value and Effectiveness Study, Volume I, Opinion Dynamics Corporation, 2013-2014, p.x

<sup>52</sup> Regional Energy Networks Value and Effectiveness Study, Volume I, Opinion Dynamics Corporation, 2013-2014, p.ii.

<sup>53</sup> Regional Energy Networks Value and Effectiveness Study, Volume I, Opinion Dynamics Corporation, 2013-2014, p. 51.

is the result of SoCalREN activities; identify what influence these programs have had on intentions and/or on adoptions made outside of IOU programs; and confirm that more projects are moving into IOU resource programs because of the non-resource activities by RENS.<sup>54</sup>

Going forward, the SoCalREN recommends that future evaluations:

- Continue to include customer satisfaction surveys and ratings
- Ascertain how effective the program is in prompting energy efficiency actions by public agencies and in driving public agencies to participate in IOU incentive programs
- Measure how the program is leading to adoption of model codes, standards and policies supporting EE and ZNE by local governments
- Assess the extent to which program actions are assisting local governments in mobilizing and supporting EE and ZNE actions by their constituents.

---

<sup>54</sup> PY 2013–2014 Regional Energy Networks Value and Effectiveness Study, Opinion Dynamics Corporation, January 5, 2016, p. 79-80

## Appendix A: Stakeholder Feedback – Public Sector

	Topic	Issue	Reference Page #/Notes
90	Market Assessment & Gaps Analysis Issue	SCE owns over 80% of the streetlights in the WRCOG subregion. My question is simply this “How will the business plan reflect an energy savings potential of an opportunity (retrofit of streetlight, for example) that local jurisdictions do not have any control over.	Question should be addressed to SCE because it refers to LS1 streetlights owned by them.
91	Market Assessment & Gaps Analysis Issue	The Rural Hard to Reach working group (RHTR) drafted recommendations for the Public Sector Business Plan (PSBP) is to provide Program Administrators (PA) specific feedback on barriers and drivers observed while serving rural. The recommendations identify three key barriers in delivering energy efficiency services to the public sector in rural areas. The PSBP must capture program design elements that support improved program delivery that addresses the key attributes of the public sector while limiting the creation of new barriers. In the short term, RHTR agrees the proposed barriers and associated drivers are applicable to the represented territories. RHTR has identified three key barriers in delivering energy efficiency services to the public sector in rural areas. The PSBP must capture program design elements that support improved program delivery that addresses the key attributes of the public sector while limiting the creation of new barriers.	SoCalREN agrees that new barriers should not be created and as designed its program accordingly.
101	Intervention Strategies & Metrics	K-12 Public Schools often lack the resources and expertise needed to execute efficiency projects. Schools are currently being “touched” and approached by many entities (utilities, third party programs, government partnerships, solar	SoCalREN’s public sector Intervention Strategies 1 and 2 directly

		<p>companies, ESCO's, construction management companies, etc.) with overlapping or competing offerings creating confusion for school districts to know which path to take to improve facilities and spend Prop 39 funds. This leads to slower uptake of projects and slower disbursement of Prop 39 funds, and in some cases lost opportunities.</p> <p>PA's should be considering a more streamlined approach with fewer overlapping and competing offerings and incentives to help schools navigate this complex landscape. Some of the offerings that schools will be approached with by outside entities (solar companies, ESCO's, construction management companies) will not be something the PA's can control, but streamlining PA offerings including partnership and third party programs will help.</p> <p>Even with streamlined programs the range of projects options available to schools will still be complex and varied. Supporting schools' energy project planning can accelerate program participation by prioritizing efforts and ensuring budget and resources are available. Strategic Energy Management (SEM) is one type of approach that can address this need, by offering consultant support to assess current operations and set goals, determine the full range of potential improvements, and support the development and implementation of a multi-year energy plan. The energy plan would be comprehensive (all measure types) enabling the school district to create a long-term plan with short-term milestones. The SEM umbrella might also help in addressing the differing energy savings estimation approaches between the various programs. This strategy would strongly benefit from longer program cycles to ensure long term program success and help support longer lead time projects with small installation windows. Finally, an SEM approach over a longer term would help ensure that the value and benefits that have accrued to schools through the Prop 39 mandate are sustained beyond</p>	<p>address this comment. SoCalREN's one-stop, integrated solution addresses the unique needs of for K-12 schools to complete energy efficiency projects build the platform for ZNE.</p>
--	--	--	---

		the end of the funding provisions and life of the Prop 39 initiative.	
102	Intervention Strategies & Metrics	<p>With respect to retrocommissioning programs targeting the public sector (including analytic software-enabled programs), project results have been very encouraging but overall market penetration is still very low and project throughput is often slow. In addition there is evidence that savings are being stranded by the current program/regulatory approach.</p> <ol style="list-style-type: none"> <li>1. Intervention strategy #1: Provide holistic support for public sector energy management &amp; project planning.</li> <li>2. Intervention Strategy #2: Collaborate with public sector and other agencies such as the Energy Commission to establish funding (such as a revolving loan fund) to support public sector equipment repairs that are ineligible for utility program funding.</li> <li>3. Intervention Strategy #3: Workforce development initiative to train HVAC contractors to deliver operational savings to small public buildings in rural areas.</li> <li>4. Intervention Strategy #4: Provide incentives for meter installation on master-metered campuses and/or allow meter costs to be included in customers' project costs for comprehensive projects (such as RCx).</li> </ol>	SoCalREN incorporates retro-commissioning support for public agencies as part of its Public Sector Intervention Strategy 1.
110	Intervention Strategies & Metrics	<p>A) Moving Targets. Continuous rule, practice, and incentive revisions impairs the ability of Public Sector customers like UC and CSU to create strong financial proposals to successfully compete for limited funding to implement energy efficiency projects.</p> <p>B) Decreasing Incentive Levels. Eligible incentive dollars per project cost dollars spent have been decreasing over the last five years for higher education customers, which has decreased the volume of energy efficiency accomplishments at a</p>	SoCalREN does not serve the higher education market. This is a statewide program led by SCE.

		<p>time when statute requires a doubling of energy efficiency goals. These reductions have effectively forced the Universities to make their energy efficiency programs less comprehensive.</p> <p>C) Self-generation. Public Sector customers with significant self-generation (primarily cogeneration, an ARB recognized carbon reducing technology) have become ineligible for program resources due to administrative revisions to eligibility tests (annual vs. hourly). This exclusion has stranded UC and CSU campuses with large cogeneration systems from full program participation.</p> <p>A) Moving Targets. UC and CSU recommend that during a program cycle, the base policy rules and incentive eligibility determinations remain stable for Public Sector customers once a project application is approved. In addition, to the extent any work papers are applicable, specific EUL, IMC and energy savings values should be established for Public Sector customers.</p> <p>B) Decreasing Incentive Levels. In compliance with AB 802 and SB 350, programs would transition to meter-based savings from existing conditions with incentives that are not impacted by uncertain administrative mid-stream adjustments. In addition, UC and CSU recommend that a public sector factor should be developed and applied to any remaining deemed energy savings measures implemented in the public sector to account for the higher costs of implementing construction projects in the Public Sector.</p> <p>C) Self-generation. In compliance with AB 802 and SB 350, programs would measure savings at the meter, which would provide real savings to the customer with a more straightforward accounting methodology, as opposed to limiting eligibility before a project begins based on a static baseline projection, and excluding carbon reducing and valuable preferred resources to the grid mix.</p>	
115	Intervention	To address the rural communities, could there be	SoCalREN does

	Strategies & Metrics	“rural adders” where companies get an added bump when they serve that community? Also need contractors who are certified to do the work well. How can we address this?	not provide incentives nor does it certify contractors.
128	Market Assessment & Gaps Analysis Issue	In response to statements by the Coalition that there are major unmet needs for EE in the MUSH market, the PAs asked for data to support the statements. There do not appear to be Commission-sanctioned potential studies that address the PAs’ precise questions, because the recent potential studies have used the Title 24 and Industrial Standard Practice baselines, and so identify only a fraction of the available EE resource. Also please note that my goal in presenting this data is not to disparage or challenge the work of the PAs, whose program portfolios have been restricted within the confines imposed by Title 24. But I think we need to take a step back from those confines to see the true market potential that has been made available by AB 802.	SoCalREN agrees there is significant unmet potential.
165	Market Assessment & Gaps Analysis Issue	There are major unmet needs for EE and EE funding in key MUSH market subsectors. See document PS0259 on CAEECC website for details on large gaps between various MUSH sector EE funding requirements versus funding available from PA programs, historically.	SoCalREN agrees.
182	Business Plan Topic	Comment confirming that it would be extremely helpful for PAs to identify specific market barriers in documents that get filed with BPs with respect to challenges with MUSH markets. It is recommended that PAs make persuasive arguments to CPUC supporting continuance of certain market transforming programs even if they are not non-costs effective programs. In addition to identifying barriers, PAs should provide alternative mechanisms to remove barriers.	SoCalREN agrees.
210	Business Plan Topic	Public Sector: Business plans should articulate a vision to have this sector lead by example in every possible way. Data-driven ME&O is needed to demonstrate the benefits of efficiency to institutional	SoCalREN’s business plan articulates a vision in which

		<p>decision makers. There is great opportunity to use college students and community workforce development participants in WE&amp;T activities such as customer recruitment, project implementation, and data analysis and data infrastructure development. Local and regional organizations could also play a new role as aggregators for community and institutional energy savings bid into IDSM/EE P4P auctions. Creative financing options could be piloted first with the public sector. The CEC is piloting an effort with Sonoma County to provide much better energy savings estimates for the built environment within Sonoma County's climate action planning efforts. The CEC would like to see other local governments leverage the open source data and energy reduction estimation techniques developed in this pilot. The PA business plans should include high level strategies that communicate this important connection to local government GHG reduction mandates.</p>	<p>the public sector plays an active leadership role in shaping ZNE communities that are safe, secure, resilient, affordable and sustainable. SoCalREN's public sector Intervention Strategies 1 through 4 articulate how this is accomplished by public agencies leading by example and engaging their communities. Intervention 3 specifically addresses the need to leverage open source data and shared databases, along with regional energy master planning.</p>
<p>230</p>	<p>Business Plan Topic</p>	<p>For all IOU PAs, (see Input Document [PS0295] for more information)</p> <p>Observations</p> <ul style="list-style-type: none"> <li>• All IOU PAs were effective at identifying unique barriers in the Public Sector</li> <li>• PG&amp;E provided detailed strategies at the sub-segment level (i.e. Higher Education), which is most effective based on the significantly different customer needs by sub-segment</li> <li>• No mention of statewide consistency across IOU</li> </ul>	<p>This comment only refers to IOU PAs.</p>

		<p>PA approaches for the same customer or sub-segment</p> <p>Recommended Action</p> <ul style="list-style-type: none"> <li>• IOU PAs should coordinate strategies based on PG&amp;E's sub-segment approach to address varying customer needs and statewide consistency</li> </ul>	
239	Intervention Strategies & Metrics	<p>Give every local government or local government partnership an EE expert or pool together resources to get someone for each region.</p>	<p>SoCalREN's public sector Intervention Strategy 1 specifically addresses this by creating shared access to expertise, tools, project management and other resources that enable agencies to complete energy projects in half the time.</p>
240	Intervention Strategies & Metrics	<p>There were many mentions of strategies to use data for improved and informed decision-making, but these strategies should be outlined in the business plans. BP should highlight the strategies that address or reduce the issues of program timing, uncertainty of funding and long approval processes.</p>	<p>SoCalREN's public sector Intervention Strategy #3 describes the proposed approach to develop regional strategies for improved data and informed decision-making</p>
249	CA Regulator or Policy barrier	<p>Re SDG&amp;E Public Sector &amp; Statewide Public Sector. See SANDAG-1 [PS0302]</p> <p>Request for a Statewide Study on The Influence of Local Climate Action Plans on Energy Efficiency Program Participation. This should look at long-</p>	<p>This applies only to the SDG&amp;E Business Plan.</p>

		<p>term influence – 5, 10, 20 years.</p> <ul style="list-style-type: none"> <li>• Within a service territory, the local CAP implementation measures related to energy should be considered during energy efficiency program design, marketing, implementation, and performance monitoring. Specifically, energy efficiency programs should clearly demonstrate how they reduce GHGs and thereby help local governments and others in meeting CAP targets.</li> </ul> <p>*Clear direction from the CPUC to the PAs on data-sharing at the jurisdiction/ town code level is needed.</p> <p>GHG reductions should receive equal weighting with energy savings. Energy programs now fall under implementation of state climate goals and laws but treatment of GHG reductions has not been integrated into the way energy programs are decided on at the utilities and CPUC.</p> <ul style="list-style-type: none"> <li>• Suggestion for both the State and Utility: Progress should be made on integrating distributed energy resources with energy efficiency. Energy efficiency could be further defined as the first measure of DER. Through energy efficiency, additional onsite measures could be sized more economically (e.g., needing fewer solar panels or inverters with reduced energy usage).</li> <li>• Programs should either be designed to include the suite of distributed energy options under one program, or have programs from energy efficiency and DER designed in tandem and become complimentary to each-other (e.g., an energy efficiency program and SGIP).</li> <li>• Suggested Statewide Study: Impacts and Benefits of Expanding the Energy Efficiency Component of the PPP to address a Customer-Side Preferred Loading Order: Integrating Energy Efficiency and Distributed Energy Resource Programs under the PPP.</li> </ul> <p>*Request for a Statewide Study: Energy Usage in Older Buildings by Service Territory. See SANDAG-4 in [PS0302]</p>	
--	--	---	--

250	CA Regulator or Policy barrier	<p>This feedback relates more to Statewide suggestions for the Business Plans and Rolling Portfolio Cycle than to a specific piece of the SDG&amp;E Public Sector Chapter. See [PS0303]</p> <p>Suggest that the Commission should allow PPP funds to be used for the top 3 measures in the Preferred Loading Order. PPP could be applied to a “preferred loading order for the customer- side of the meter.” Measures could be prioritized or mandated in order of efficiency to DER. Here again the treatment of GHG reductions along with energy savings plays a role.</p> <ol style="list-style-type: none"> <li>1. Energy Efficiency (including performance controls),</li> <li>2. Demand Response (including performance controls),</li> <li>3. Distributed Energy Resources (including performance controls).</li> </ol> <p>Suggest that the Commission should consider integration of energy efficiency and DER funding in terms of Codes and Standards also. In 2020, the first ZNE code becomes effective. Traditionally the PPP energy efficiency dollars have been used for code compliance, code training, and code development.</p> <ul style="list-style-type: none"> <li>• When ZNE is code, will the PUC only allow PPP to fund the energy efficiency code component?</li> <li>• What will be the source of funding for the rest of the energy code?</li> </ul> <p>See [PS0303] page 3 for three possible solutions to cost effectiveness of Transformational Programs.</p> <ul style="list-style-type: none"> <li>• Would legislation need to be passed for the Commission to be able to direct PAs to use their PPP energy efficiency funds for energy efficiency, DR, and DER?</li> <li>• It seems that energy policy is coming up to a big merge rather than a fork in the road and</li> <li>• The Commission has the opportunity to break down some silos between</li> </ul>	SoCaIREN agrees that EE program activities need to be integrated with DER activities. Such integration is critical to achieve a ZNE future.
-----	--------------------------------	---	---

		<p>proceedings and subsequent silos across PA departments.</p> <ul style="list-style-type: none"> <li>The Public Sector is an essential tool for driving market transformation as PAs, Implementers and users of energy efficiency programs. For a greater uptake in program participation by the public sector, the value proposition introduced to public agencies must:             <ol style="list-style-type: none"> <li>1) Speak the language of that customer and</li> <li>2) Address or connect to that customer class' highest priorities.</li> </ol> </li> </ul> <p>SDG&amp;E and other PAs should look at the value proposition for public sector while they are designing programs, and structure the programs around that.</p>	
252	Intervention Strategies & Metrics	<p>Re All PAs' Public Sector chapters. See RTHR-1 in [PS0305] PAs should work with stakeholders to develop a statewide framework that allows for program consistency and transparency throughout the state while allowing for localized autonomy for the PA and stakeholders.</p>	<p>The CPUC has not designated public sector programs as statewide.</p>
253	CA Regulator or Policy barrier	<p>RHTR 2 in [PS0305]</p> <p>Use the Societal Cost Test or the California Energy Commissions Savings to Investment (SIR) ratio as incremental steps in the right direction while exploring more robust cost-effectiveness tests that internalizes, for example, the following:</p> <ul style="list-style-type: none"> <li>o GHG reductions</li> <li>o Human health and safety gains</li> <li>o Reduced environmental impacts</li> <li>o Localized economic multipliers</li> </ul>	<p>SoCalREN does not have any authority over cost-effectiveness methodology or tests.</p>
254	Intervention Strategies & Metrics	<p>RE SCE Public Sector Stage 2 doc, RHTR 3 of [PS03045 Observations</p>	<p>Not relevant to SoCalREN.</p>

		<ul style="list-style-type: none"> <li>• PA states increased number of reach codes as a metric for Problem Statement One.</li> </ul> <p>Recommended Action</p> <ul style="list-style-type: none"> <li>• PA should reconsider using increased number of reach codes as a metric.</li> <li>• Consideration improvement over baseline AND number of reach codes adopted would be more equitable.</li> </ul>	
255	Intervention Strategies & Metrics	<p>Re SoCalREN page 4 and PG&amp;E pg. 13, RHTR 5 see [PS0305]</p> <p>Observations</p> <ul style="list-style-type: none"> <li>• PA presents staff education and training for CEM and Strategic Energy Management (SEM) to address Lack of Capacity problem statement</li> <li>• PA presents expanded training as a solution to lack of capacity.</li> </ul> <p>Recommended Action</p> <ul style="list-style-type: none"> <li>• We recommend other PAs consider this localized approach to building capacity.</li> </ul>	SoCalREN agrees.
256	Intervention Strategies & Metrics	<p>Re PG&amp;E Stage 2 Public Sector Document, RHTR6 in [PS0305] Observations</p> <ul style="list-style-type: none"> <li>• PA recommends the integration of behavioral programs as a solution to Increase the Relevancy of PG&amp;E Portfolio</li> </ul> <p>Recommended Action</p> <ul style="list-style-type: none"> <li>• We caution the PA in using behavior programs as a strategy under the current evaluation model.</li> </ul>	This comment pertains to PG&E.
269	Chapter Drafts (Voluntary)	<p>Include \$1 million annual funding for a new partnership with Administrative Office of Courts (AOC). CA Department of General Services is not involved in ownership, operation or contracting for the AOC facilities. Include additional funding for in depth audits.</p>	SoCalREN does not services state agencies.
270	Statewide Admin	<p>Create a long-term sustainable program to help the California Administrative Office of Courts (AOC)</p>	SoCalREN does not services

	Discussion	substantially reduce its energy use. The AOC Statewide Partnership Program (AOC Partnership) would fund a team of energy professionals through the energy efficiency public purpose program to assist the AOC to plan, evaluate, and implement projects to reduce facilities' energy use. The proposed budget for the program is approximately \$1 million per year (approximately five professionals at an average fully loaded cost of \$200,000 per person). The IOUs will select the team through a competitive process and contract with it to assist the AOC in the following services:	state agencies.
290	Chapter Drafts (Voluntary)	#1 - The state is interested in more creatively exploring other options for project execution and is strongly reaching out to IOUs and other program administrators to be a partner with us in finding creative solutions. Adapting OBF to include upfront construction costs would help to enable the state to leverage this financing approach. Most of the projects in large state buildings exceed the current \$1M limit for financing via OBF. Increasing this limit would address another barrier.	SoCalIREN does not service state agencies.
291	Chapter Drafts (Voluntary)	#2 - There is a need to more strategically identify the retrofit opportunities with the highest and most comprehensive savings potential long term. Implementing investment grade audits for all buildings would be cost prohibitive. The state is seeking support from IOUs and PAs to provide this strategic targeting support.	SoCalIREN does not services state agencies.
292	Chapter Drafts (Voluntary)	#3 - It is critical that the state utilizes a fair, appropriate, transparent, competitive process in soliciting work. Given those parameters, the state is seeking support in executing retrofit projects that comply with these requirements while offering more time saving and efficient approaches.  --The state is exploring alternative models for engaging with ESCOS more effectively, at lower costs and more timely execution. The Federal Government has effectively modeled an energy services relationship with the IOUs that may be	SoCalIREN does not services state agencies.

		<p>modified to work with State entities. We encourage the Partnership to work with us to develop alternative ways of delivering efficiency projects to state customers</p> <p>--The state is open to piloting metered based savings approaches with incentives tied to measured savings</p> <p>--Extending the current direct install program to small/medium state facilities statewide would help to save time and resources. Further expanding the direct install program to include HVAC measures and control measures would capture a larger portion of the current needs.</p>	
301	Chapter Drafts (Voluntary)	NRDC-1 - (throughout) There seems to be a lot of extra prose. The definitions are extremely helpful, but seems that it could be an Appendix instead of as part of the actual BP.	SoCalREN agrees and has modified its business plan accordingly.
302	Chapter Drafts (Voluntary)	NRDC-2 - (re beginning of document) Very little market characterization. It's unclear what the main end uses are, where the highest need is, etc. It is understandable that there isn't sufficient "public" data but there were examples in the Phase 1 presentations (e.g., SDG&E's is a good model). See data recommendations in "NRDC Feedback for All PAs" (Input Source Document).	SoCalREN's business plan will include market characterization data to the extent that is available from the IOUs.
303	Chapter Drafts (Voluntary)	NRDC-3 - (page 28-29 as an example of throughout) It's a bit challenging to clearly see the link between barrier/strategy/etc. With so many pages of text to be read by ED and stakeholders, the PAs should strive to make the information as easily digestible and succinct as possible. See "NRDC Feedback for All PAs" for helpful table formats	SoCalREN agrees and has modified its business plan accordingly.
304	Chapter Drafts (Voluntary)	NRDC-4 - (re Throughout and p.34 as an example) It's unclear what exactly SCE proposes to do with the various intervention strategies. In table 6, there	This refers to SCE.

		<p>is a list of generic intervention strategies.</p> <p>However, this doesn't inform the reader of what approaches are being considered to solve the barrier or reach the desired sector outcome. NRDC urges SCE to look at the other chapters and comments to add appropriate level of detail.</p>	
305	Chapter Drafts (Voluntary)	<p>NRDC-5 -</p> <p>P.34 – missing “baseline” as a column. The “metric source” seems to be what the baseline should be.</p> <p>P.36 – NRDC is “natural” not “national”</p> <p>P.45 – is EAP intended to be ESAP (Energy Savings Assistance Program) or a more general term?</p>	This refers to the SCE business plan.
327	Chapter Drafts (Voluntary)	#2 - (re page 3) Sector profile should be simplified and made more useful by relying less on mentions of recent legislation. Section should come after a useful disclosure that catalogues all actors, sub-sectors, and primary EE funding categories.	SoCalREN agrees and has modified its business plan accordingly.
328	Chapter Drafts (Voluntary)	#3 (Re page 5-6) Section should be edited for brevity and should follow a new section that would include a useful disclosure that catalogues all actors, sub-sectors, and primary EE funding categories. Digressions such as a scale issue could go into an appendix. Table 2 would work better as a Venn Diagram since UC/CSU are state agencies and K-12 is a local govt animal.	This applies to the SCE business plan.
329	Chapter Drafts (Voluntary)	#4 (re page 10) Sector should be edited to focus on Strategic Plan framework and renamed. Remainder could go into an appendix. Should follow a new section that would include a useful disclosure that catalogues all actors, sub-sectors, and primary EE funding categories.	This applies to the SCE business plan.
330	Chapter Drafts (Voluntary)	#5 (re page 14) Move LGP description to a new opening section that fully describes actors and agencies SCE is targeting in public sector. Change “promote three categories” to “advance six goals”. Add capacity building and constant improvement;	This applies to the SCE business plan.

		peer to peer knowledge transfer; and informing the CPUC, CEC, and other state agencies of on-the-ground conditions.	
331	Chapter Drafts (Voluntary)	#6 (re page 12) Market Trends. This section is useful but in places speaks to and generalizes LGPs rather than the public sector as a whole. (E.g. The statement “The main market drivers for public sector EE adoption are greenhouse gas (GHG) reduction and climate action plans.” Holds true for LGPs but not for K-12, etc.	This applies to the SCE business plan.
332	Chapter Drafts (Voluntary)	#7 (re page 14) EM&V section should disclose that the IOUs have no plans and framework in place to evaluate state institutional partnerships (SIPs) or K-12. This includes no active PCG to address these segments. EM&V section should address long-term goals of IOUs LGP EM&V, including a plan to assign IOU staff with LGP knowledge, PM capability, and ample bandwidth to oversee consultant studies. This section should concentrate on the way things are, deficiencies in EMV, and what SCE intends to do to address. Much of the narrative here could go to the beginning in a new Overview chapter that profiles the public sector.	This applies to the SCE business plan.
333	Chapter Drafts (Voluntary)	#8 - (re page 16-20) Market Barriers. Good info but needs to be refocused. Please move the PACE info from Market Trends to fit with the financing narrative here. Bullets on pp. 17-20 are needlessly repeated. Convert into a table for simplicity and transparency.	This applies to the SCE business plan.
334	Chapter Drafts (Voluntary)	#9 - (re page 21) Omit the definitions here to consolidate and add a table to the overall BP filing – many of these definitions will be applicable for various BP chapters.	This applies to the SCE business plan.
335	Chapter Drafts (Voluntary)	#10 (re page 22) “For example, local government customers require community data for climate action plans and GHG inventories, but access to this data is limited by CPUC Decision D.14-05-016.” This statement is a pretty general disclaimer. Did SCE support this rule as proposed? Is it working	This applies to the SCE business plan.

		out? Has there been any demonstrated benefit? Have parties complained? Does SCE support a second look at this rule? Please explain how SCE intends to navigate this rule or improve matters going forward.	
336	Chapter Drafts (Voluntary)	#11 (re page 22) "While this business plan will not be able to overcome all of the data barriers facing this sector, SCE will continue to be mindful of these challenges when developing programs, policies, and procedures." SCE should provide at least one proposed solution to the LG data sharing impasse.	This applies to the SCE business plan.
337	Chapter Drafts (Voluntary)	# (NA) (re page 23) "Southern California Edison's vision for the public sector is to increase customer adoption of EE improvements, enhance customers' abilities to self-serve, increase customer satisfaction, and make program participation easier for customers." SCE should specify who the customer is in this case. SCE statement is rather generic and seemingly could be substituted for other sectors.	This applies to the SCE business plan.
338	Chapter Drafts (Voluntary)	#12 (re page 23) Savings goals should be broken down by LGP, SIP, and K-12.	This applies to the SCE business plan.
339	Chapter Drafts (Voluntary)	#13 (re page 23) "The public sector is a newly defined sector, which will require conducting a number of M&V studies and performance analyses as outlined below." ED staff doesn't gauge why a newly defined sector would require a special study. In any case, if SCE believes that EMV is an urgent priority for the public sector, it's advised to heed ED direction for EM&V (p.27) and retain qualified IOU staff to oversee and monitor.	This applies to the SCE business plan.
340	Chapter Drafts (Voluntary)	#14 (re page 23) Sector Vision. First two paragraphs add nothing new and should be deleted. SCE offers an interesting idea of weening LGs off of EE ratepayer funds but offers no plan to get there and no argument that this is the correct course of action. "In 10 years, SCE would like the public	This applies to the SCE business plan.

		sector to be leaders in energy efficiency adoption and promotion. With the exception of complex or novel projects, public sector customers should no longer be reliant on utility incentives to develop and implement energy efficiency projects, and should be able to finance their own EE projects and/or leverage utility finance programs.”	
341	Chapter Drafts (Voluntary)	#15 (re page 24) Revise for clarity “Public sector customers should continue to leverage their community respect and authority to continue to promote higher EE standards,” substituting “To further drive EE in their communities, public agencies should continue to apply their unique position as trusted and authoritative entities.”	This applies to the SCE business plan.
342	Chapter Drafts (Voluntary)	#16 (re page 25) This sentence is confusing and appears to pardon SCE of fully describing what is in the public sector. Please delete and add more detail about the public sector entities. “The flagship public sector offerings are local government and institutional EE partnerships”	This applies to the SCE business plan.
343	Chapter Drafts (Voluntary)	#17 (re page 25) SCE refers to “four statewide Institutional Partnerships (IPs)” which is incorrect in that these are not statewide programs. Please reference throughout as State Institutional Partnerships (SIPs). Narrative that describes the LGPs and other programs should be moved to into Overview chapter.	This applies to the SCE business plan.
344	Chapter Drafts (Voluntary)	#18 (re page 25) Screen entire chapter for repeated narrative. This sentence appears here for at least the third time “One of the major challenges for public sector customers is the ability to finance EE measures”	This applies to the SCE business plan.
345	Chapter Drafts (Voluntary)	#19 (re page 25) 1. Existing Products and Services. This information should be moved to the front of the chapter.	This applies to the SCE business plan.
346	Chapter Drafts	#20 (re page 28, 48) Please add to the following statement to explain how the proposed SCE budget	This applies to the SCE

	(Voluntary)	will allow for sufficient generation of new innovative project ideas by LGPs. Also please reconcile the SCE budget line item LGP Strategic Plan pilots with the absence of a mention here. Is SCE pursuing new LGP Strategic Plan pilots? Why or why not and why is this justified? “In addition, LGPs have completed less complex Strategic Plan tasks through their partnership budgets. Lessons learned from the work accomplished to date have helped develop a new Strategic Plan process. In this new process, SCE has worked with Energy Division staff to develop a framework for innovative Strategic Plan activities to be proposed by local governments.”	business plan.
347	Chapter Drafts (Voluntary)	#21 (re page 29) Everything presented here appears to be repeated elsewhere in chapter. Revise for brevity.	This applies to the SCE business plan.
348	Chapter Drafts (Voluntary)	#22 (re page 32, 40, 48) Suggest changing decision makers to “gatekeepers”. Decision makers are elected or appointed officials not city staff, typically. If decision makers is used, come up with a definition to and use appropriately.	This applies to the SCE business plan.
349	Chapter Drafts (Voluntary)	#23 (re page 39) First mention of RENs should be much closer to beginning of chapter. CCA coordination and response also needs to be addressed.	This applies to the SCE business plan.
350	Chapter Drafts (Voluntary)	#24 (re page 38-47) These pages don’t offer a whole lot of useful new substance should be shortened to fit in a single page.	This applies to the SCE business plan.
351	Chapter Drafts (Voluntary)	#25 (page 47) Language is repeated verbatim from p. 27. Revise per request above and consolidate EMV discussion into one section within chapter. “The public sector is a newly defined sector, which will require conducting a number of M&V studies and performance analyses as outlined below.” ED staff doesn’t gauge why a newly defined sector would require a special study. In any case, if SCE believes that EMV is an urgent priority for the public	This applies to the SCE business plan.

		sector, it's advised to heed ED direction for EM&V (p.27) and retain qualified IOU staff to oversee and monitor.	
352	Chapter Drafts (Voluntary)	CPUC/CLN-1 - (re page 7) Please be clear about extent to which health care belongs in a profile of public buildings, vs. (private) commercial, or both.	This applies to the SCE business plan.
353	Chapter Drafts (Voluntary)	CPUC/CLN-2 - (re page 13, top) Refers to public sector climate action plans. Many of these target municipal buildings. Text does not discuss how these plans would impact public building sector, incl. e.g. meeting Energy Star or LEED building standards, applying benchmarking to help prioritize buildings for improvement.	This applies to the SCE business plan.
354	Chapter Drafts (Voluntary)	CPUC/CLN-3 (re page 13) Some of the text here not relevant to public buildings, e.g. re: PACE and reach codes, streamlined permitting... Remove or improve applicability to public buildings.	This applies to the SCE business plan.
355	Chapter Drafts (Voluntary)	CPUC/CLN-4 See 2004 attempt to characterize size of "public" buildings in California. Dated, but may be better than nothing if there is not more recent update.	This applies to the SCE business plan.
356	Chapter Drafts (Voluntary)	CPUC/CLN-5 (re page 14) Profile data for Public Sector is lacking and text gives a weak excuse for not finding the data. Does not take a Navigant potential study to have data. Public sector buildings have LOTS of publicly-documented info on the kinds of EE measures they identify, take, save, and spend. See for example CEC data on Prop 39 K-12 schools, Community colleges data for Prop 39, UC and CSU partnerships, DGS State facilities partnerships, Corrections, CEC's long-standing public building loan program and technical assistance. I also believe AB 758 attempted to characterize the public sector building stock. Moreover, LBNL for years has been tracking the ESCO industry (largely with public building clients) and the Federal Energy management Program (FEMP) that targets federal facilities, a good portion	This applies to the SCE business plan.

		of which are in Calif. Also could query the CPUC EM&V data base for program participants with NAICS codes for public buildings, or some equivalent codes.	
357	Chapter Drafts (Voluntary)	CPUC/CLN-6 (re page 16-22) You need to set priorities for the current laundry lists of barriers; pretty surprising that a 1996 source is your reference, given how much progress the public sector has made with EE and climate goals.	This applies to the SCE business plan.
358	Chapter Drafts (Voluntary)	CPUC/CLN-7 (re page 23, 32) Budgets shown do not seem to reflect the 50-65% increase in savings goals, at least in the near term until strategies for financing manage to offset the need for incentives. What is the trajectory to get to the point of not needing incentives?	This applies to the SCE business plan.
359	Chapter Drafts (Voluntary)	CPUC/CLN-8 (re page 25) Missing any discussion of lessons learned from SoCalREN's local government facility technical assistance and turn-key implementation services.	SoCalREN agrees with this comment. SoCalREN's public sector Intervention Strategy 1 has successfully assisted public agencies to complete energy efficiency projects, complementing and supplementing IOU programs.
360	Chapter Drafts (Voluntary)	CPUC/CLN-9 (re page 25-32) More laundry lists of current products and services and (newer?) intervention strategies in long lists. This is lacking in a clear sense of which strategies will be deployed to overcome which barriers in which market segments or overall sector. P. 29 continues to prominently feature variety of incentives. How does this mesh	This applies to the SCE business plan.

		with our p. 23 vision to move away from incentives?	
361	Chapter Drafts (Voluntary)	CPUC/CLN-10 (re page 25 , 32) In the “budget and Metrics” opening text, SCE punts at coming up with budget estimates for its strategies, relative to savings goals it sets on p. 25. Seems SCE should be able to estimate market uptake given the strategies and incentives it imagines offering and their costs. In fact, the PA estimates may be INPUTS to the CEC’s targeting efforts, rather than the other way around.	This applies to the SCE business plan.
362	Chapter Drafts (Voluntary)	CPUC/CLN-11 (re page 34) Metric #1 for financing and procurement, where the desired outcome is to “encourage greater customer investment in EE”, would be better to set the outcome metric as a \$ investment level.	This applies to the SCE business plan.
363	Chapter Drafts (Voluntary)	CPUC/CLN-12 (page 36 under “Coordination with Partners) Lists current local government partnerships. Will all these continue? Will they all or partially include activities that targets public buildings?	This applies to the SCE business plan.
364	Chapter Drafts (Voluntary)	CPUC/CLN-13 (re page 39) Codes & Standards program discussion is very general. Hard to discern the value of intended strategies, expected outcomes, and relevant performance metrics.	This applies to the SCE business plan.
365	Chapter Drafts (Voluntary)	CPUC? CLN-14 (re page 42) ETP discussion is general and not informative. Also seems backward in referring to a set of “traditional measures”, rather than viewing ET as the way to push the envelope on new(er) technologies, making the case for their application and performance, and learning how to disseminate and get uptake through appropriate market channels.	This applies to the SCE business plan.
366	Chapter Drafts (Voluntary)	CPUC/CLN-15 (re page 42) Refers to the “education of decision makers” as WE&T? Is that a conventional definition? I would think that any persuasion targeting decision-makers would be more about marketing, not “WE&T”.	This applies to the SCE business plan.

367	Chapter Drafts (Voluntary)	CPUC/CLN-16 (re page 49) Features ZNE Schools through Prop 39 funding. But I believe Prop 309 funding was only authorized for 5 years, likely to end around 2017 or 2018, is largely committed via plans filed with CEC, and applies primarily to retrofit situations. If retained, supply evidence of how ZNE schools will have 5-10-year future traction – with what impetus, what funding, what target segments?	This applies to the SCE business plan.
368	Chapter Drafts (Voluntary)	CPUC/CLN-17 (re page 49) Proposing picking ONE school district to “develop a roadmap to cost-effectively achieve ZNE”. I would doubt that a single road map, can be that useful given the huge variety of climates, economic situations, facility ages ... across the SCE territory. Refers to collaboration with Doe and NREL. This probably needs additional coordination with relevant school facility and business professionals in So. Calif.	This applies to the SCE business plan.
369	Chapter Drafts (Voluntary)	<p>Highlights of Memorandum include:</p> <ul style="list-style-type: none"> <li>* ED suggests that SCE revise the document to reduce it by half the length (25 pp. max), with a new Overview chapter at the top that describes the LGPs, State Institutional Partnerships, K-12, and any other programs related programs such as SEEC. Budgets, savings goals, gaps, solutions, transition plans, etc. should be specified for each and then rolled up into an overall tally</li> <li>* SCE fails to demonstrate that SCE is complying with CPUC request to demonstrate that IOUs are moving the LGPs in the direction of greater statewide consistency.</li> <li>* SCE also fails to account for notable changes since 2012, notably the new PA actors operating in the local government space — RENs and CCAs.</li> <li>* For the ten years to come, SCE should explain how its LGPs will stay relevant alongside RENs and CCAs, and whether it supports market segmentation or competition.</li> <li>* Similarly, SCE should define what constitutes a partner and a partnership, minimal LGP member</li> </ul>	This applies to the SCE business plan.

		<p>expectations and rewards, and whether some higher minimal threshold for LGP performance is warranted.</p> <p>*SCE chapter should specify proposed strategies to link qualifying local agencies with an effective LGP implementer; how such an implementer would be allowed to make decisions on behalf of its members to motivate and reward them and carry out a coordinated regional vision; and how the implementer would (or would not) serve as conduit for IOU communication and directives.</p> <p>*SCE and the other three IOUs have a tool of enormous potential for elevating the capacity of the LGPs, but whose potential has not been captured fully due to constant staff turnover. The tool is SEEC and the best practices coordinator. SCE should provide a plan for stabilizing and growing SEEC so that, among other things, local agencies have an impartial source of expertise for matters that would include the CAECC, responding to regulatory filings, questions about the service list, filing a protest, becoming a party, and so on.</p>	
<p>391</p>	<p>chapter Drafts (Voluntary)</p>	<p>CSE-1 In talking about the public sector and its sub-segments (i.e., local governments, schools, hospitals); CSE recommends grouping the same sub-segment challenges and solutions into the same sections throughout the paper (as opposed to referring to the public sector at large throughout the chapter). CSE encourages SCE to reexamine some of its claims about the public sector (again, if broken out by sub-segment, certain characteristics may be easier to assign). CSE hypothesizes that in addition to reducing energy consumption, many public buildings choose to invest in energy efficiency because it saves money. CSE recommends that SCE use citations for the above claims (highlighted) in the final draft. While the chapter refers multiple times to the fact that no studies have been done for the public sector and energy efficiency market potential, CSE requests more specificity in the claim, i.e. no studies done for California? (Please see input source document for</p>	<p>This applies to the SCE business plan.</p>

		important additional details). CSE recommends moving the sections “SCE’s Approach to Achieving Sector Goals” and “Sector Vision” to the beginning of the chapter; these sections provide a detailed and concise overview of SCE’s goals and vision for the public sector.	
392	chapter Drafts (Voluntary)	<p>CSE-2 The description of AB 802 on Pg. 11 fails to include the benchmarking and data access components of the bill (Pg.11). While the description of AB 758 calls out proposed EE Services, the draft chapter does not align its proposed activities to what is prioritized in the AB 758 roadmap (Pg. 11).</p> <p>CSE recommends that SCE use aspects of the AB 758 Action Plan to frame strategy and prioritize activities for the public sector. While the chapter briefly references whole- building data access on Pg. 32 (Building Energy Benchmarking Data Access), it cites the lack of adequate data on Pg. 21. With the roll-out of AB 802, building owners (of both public and private buildings) will be able to access whole-building data (in addition to Green Button DMD and CMD) for the first time (particularly significant for separately-metered buildings). In building a benchmarking portal and offering automatic upload to Portfolio Manager, SCE will be able to retrieve building-level data for all buildings using the portal. Access to this building-level information will allow for new, and previously unknown insights, into buildings. SCE could also propose how they could prioritize outreach to buildings based on their Energy Star score (lower scores as a proxy for buildings in need of more technical assistance and rebates).</p>	This applies to the SCE business plan.
393	chapter Drafts (Voluntary)	<p>CSE-3 *While it’s true that lenders have not historically known how to value high-performing buildings, this particular shortcoming is changing.</p> <p>*Given the availability of OBF in the SCE territory, it would be helpful for the chapter to include insights</p>	This applies to the SCE business plan.

		<p>on public sector participation and as to whether OBF is alleviating any of the aforementioned barriers to capital for EE improvements.</p> <p>*CSE requests more detail on the proposed EE revolving funds (Pg. 28)</p>	
418	chapter Drafts (Voluntary)	<p>TURN-1 (re page Incomplete pp. 9, 32, 16- 22, 25-32, 35- 49, Table 6 p. 34)</p> <p>Overall: SCE's public sector BP chapter lacks quantitative information on estimated efficiency potential (p. 9), which when available should be linked to the proposed savings goals (p. 25), and proposed budget (p. 32).</p> <p>The BP reads more as a regulatory compliance document, appearing long in somewhat generalized discussions on market barriers (pp. 16 – 22), existing products and services (pp. 25 – 32), and coordination with key partners and associated proceedings (p. 35-49). This is particularly evident in reviewing the one page matrix of “Public Sector Problem Statements, Desired Sector Outcome, Intervention Strategies, and Metrics”, in which the chapter is generally captured (Table 6, p. 34).</p> <p>TURN recommends that SCE streamline the sections cited.</p>	This applies to the SCE business plan.
419	chapter Drafts (Voluntary)	<p>TURN-2 (re pages 35-49) The BP contains no discussion of gas usage in the public sector, or partnering with SoCalGas. This is particularly disconcerting given the lengthy Section D. “Coordination with Key Partners and Associated Proceedings”. Efficiency savings and cost-effectiveness are significantly compromised by this bifurcated approach. TURN was equally confused by the fact that SCE and SCG each proposed stand-alone public sector HOPPs instead of a coordinated effort.</p> <p>TURN recommends that SCE incorporate information and data on gas efficiency into all</p>	This applies to the SCE business plan.

		customer sector BPs, and develop seamless customer offerings.	
420	chapter Drafts (Voluntary)	<p>TURN-3 (re page 4 )</p> <p>SCE concludes that Industry Standard Practice (ISP) should rarely apply to the public sector: “Additionally, there is a scale issue. A public building’s kitchen or computer server system is usually considerably smaller than it would be in a commercial building. SCE concluded that Industry Standard Practice (ISP) should rarely apply to the public sector because the community the public sector serves and the scale of public sector energy systems do not compare to those of the commercial sector. Public sector investments are based on public good and on providing essential services at a minimal cost. But minimizing costs often leaves more advanced EE work for the public sector unrealized because it is expensive, while the commercial sector is not bound by the same spending restrictions.” (Emphasis added). TURN believes that it is inappropriate for SCE to unilaterally decide that ISP should not apply to the public sector. Such a generalized statement claiming that alleged differences in the “scale” of public sector and commercial energy using equipment and systems is not a reasonable basis for exempting the public sector from ISP considerations.</p> <p>SCE should proceed with the identified M&amp;V market characterization study identified as needed “as soon as possible in order to: Document industry standard practices specific to the public sector, particularly in operations, maintenance, and early replacement or “indefinite repair” practices, which may differ in different segments within the sector.” (p. 41)</p>	This applies to the SCE business plan.
421	chapter Drafts (Voluntary)	<p>TURN-4 (re page 13) SCE explains, “The declining cost and increased adoption of solar and battery storage is making a great impact on the EE marketplace.” This is a critically important matter,</p>	This applies to the SCE business plan.

		<p>and TURN commends SCE for flagging it.</p> <p>SCE should address the impact of solar and battery storage in its discussion of overarching market trends for each BP chapter.</p>	
422	chapter Drafts (Voluntary)	<p>TURN-5 (re page 28) SCE summarizes the first of the public sector problem statements in Table 6 as “Financing and procurement hurdles challenge adoption”. With financing and public sector procurement being such significant hurdles to efficiency adoption, TURN believes it would be very helpful to expand the discussion of some of the ways SCE is working to tailor financing programs to this sector and to create EE revolving funds.</p> <p>TURN recommends that SCE provide more detail on the ways SCE is working to tailor financing programs to this sector and to create EE revolving funds. TURN recommends that SCE consider PG&amp;E’s proposed expansion of OBF and OBR and new financing partnerships to address problems around capital availability for first costs, with a specific focus on project co-pay over the \$100,000 ceiling for OBF. PG&amp;E states that it will explore extending OBF repayment periods beyond the current standard of five years—up to ten— to provide near-term relief for customers requiring greater flexibility for large capex investments. And, explore new, lower risk financing structures for the sector as they become available, beyond simply supplementing existing OBF (up to the current \$20,000 cap) with OBR (which carries variable risk depending on how third-party loans are structured) for greater liquidity.</p>	This applies to the SCE business plan.
423	chapter Drafts (Voluntary)	<p>TURN-6 (re page 48) SCE’s discussion of its Public Sector HOPPs is limited to a standalone paragraph in the next to the last page of the BP.</p> <p>It would be very helpful for SCE to incorporate the discussion of its Public Sector HOPPs into more of</p>	This applies to the SCE business plan.

		<p>the core of the BP chapter, and address how NMEC could possibly assist in overcoming market barriers, including capital market investment.</p> <p>Beyond this, TURN recommends that SCE explore using AMI data and innovative meter-measured performance strategies for site-specific whole building programs to stimulate broader market interest in NMEC-based pay-for-performance programs. Such an approach could be used to attempt to spur private sector innovation and capital markets investment, thus building a market for efficiency, creating transparent and real time accounting for savings using smart meter data, increasing quality installations by making contractors accountable to measured performance, and ultimately reducing program administration and evaluation costs by making the industry (and not just the program) responsible for performance risk.</p>	
424	chapter Drafts (Voluntary)	<p>TURN-7 (General Comment) Customer sector goals and program savings, budgets, and cost-effectiveness are forward looking. The BPs are intended to be integral to California moving the current generally flat or stagnant needle on energy efficiency. Some quantitative context to the current portfolios and programs would be very helpful.</p> <p>We recommend that all data on projected customer sector goals and program savings, budgets, and cost-effectiveness be given some context relative to ongoing customer sector activities and accomplishments. There needs to be some demonstration as to how the BP will advance savings and improve cost-effectiveness.</p>	SoCalREN agrees. Refer to SoCalREN Business Plan, Section N.
425	chapter Drafts (Voluntary)	TURN-8 (General Comment) It is not clear whether projected savings are gross annual. In D.16-08-019 (atp.21), the Commission directed a return to net goals and the development of cumulative goals for application in 2018 to support the State's SB 350 efforts.	This applies to the SCE business plan.

		If not already included, we recommend that SCE provide projected customer sector goals and program savings in net annual and net cumulative form, with the basis for net provided, and cumulative specified by the estimated average EUL by customer sector and key programs. Indicate the basis (i.e. end use, measures) for the estimated average EUL(s).	
440	chapter Drafts (Voluntary)	UC/CSU-1 (re page 38) At the top of page 38 under section b) Statewide Program Coordination, there are several key topics that have only been addressed with placeholders, including "How lead PA will operate", "IOU/PA lead coordination" and "Solicitation strategy for implementation". Based on the intent of the decision to create statewide consistency and efficiencies, these items must be addressed in a way that effectively supports these goals. There needs to be very clear language on how all IOUs will work together to provide consistent offerings (i.e. identical program processes and project eligibility) for customers in statewide partnerships. The lead PA can leverage the authority provided in the decision to standardize all program processes and project eligibility across all IOUs as needed	SoCalREN does not serve higher education which is a statewide program, led by SCE.
441	chapter Drafts (Voluntary)	UC/CSU-2 (re page 38) SCE appears to suggest that the public sector will be transitioned to third party programs. The language in the decision does not specifically make this requirement, and UC would like to understand in more detail what this could mean for our statewide partnership, as currently we utilize almost no third party programs. From a high level, transitioning the UC/CSU partnership to a third party program would create new inefficiencies and cost by inserting a management layer between the customer and the utility that does not exist today, while creating no added value to the customer or cost savings. Provide justification and more detail on the requirement/plan to transition statewide institutional partnerships to third party programs.	SoCalREN does not serve higher education which is a statewide program, led by SCE.

442	chapter Drafts (Voluntary)	UC/CSU-3 (re page 38) The timing of an [Public Sector] RFP being released prior to Business Plans being finalized could be problematic in that the solicitation would not incorporate input from public sector stakeholders. The role and requirements of Statewide Program Implementers is not defined, and depending on how this is developed in the Business Plans, it may make sense for a public sector customer to pursue this role. Provide clarification and more detail on what this RFP will include and how it will accommodate the potential for public sector customers to pursue the Statewide Program Implementer role.	SoCalREN does not serve higher education which is a statewide program, led by SCE.
444	chapter Drafts (Voluntary)	NAESCO - We suggest that the IOUs use the information described below to create a common template for all their business plans. A common template will greatly facilitate stakeholder review and the Commission's analysis which is necessary for approval of Business Plans. [see source input document PS0360 for several page description of the outline]	N/A.
445	chapter Drafts (Voluntary)	<p>NAESCO believes that the Commission's requirements for statewide administration and third party implementation are very clear. In their October 19 presentations, SCE and the other utilities should describe overall bidding plans, including programs not specifically identified in the decision, for 2017, 2018, 2019 and 2020. Those plans should include bidding timelines from issuance of RFPs to contract signing for every program to be bid out.</p> <p>For each year, the utilities should list the programs implemented in their service territories, broken out by utility-implemented and third party implemented programs.</p> <p>In order to meet the Commission's requirement of filing a plan that demonstrates their achieving the Commission's minimum of 60 percent third party program spending as a percent of the total portfolio spending, each utility's Business Plan filing should include annual budgets for the years 2017 through 2020 broken out by major category: administration;</p>	This applies to IOU PAs.

		Implementation (further broken out into utility-implemented programs versus third party programs); marketing (also broken out by utility program-related versus third party program-related) and EM&V.	
446	chapter Drafts (Voluntary)	<p>NAESCO</p> <p>Prior to any utility program implementation, the utilities, working with the CAEECC and other stakeholders, should (1) establish an objective framework with clear criteria that must be applied in determining that a utility must deliver a program, and (2) show how those criteria are met in the case of utility implementation of a particular program. The utilities Business Plans should describe this process and how outcomes were achieved.</p>	This applies to IOU PAs.
447	chapter Drafts (Voluntary)	<p>NAESCO - The public sector and the residential sector are two markets that are served by a large, sophisticated community of implementers. The end use technologies used in these sectors have seen significant technological improvements in recent years (advanced lighting, energy management systems, smart thermostats, heat pumps, etc.). For both the MUSH and residential markets, SCE and the other utility administrators should establish meaningful budgets for truly open solicitations that allow third parties to propose new, innovative program designs.</p>	This applies to IOU PAs.
496	chapter Drafts (Voluntary)	<p>ORA-1 (re page 23/32) Budgets do not align with 10-year vision for the sector</p> <ul style="list-style-type: none"> <li>• SCE states on p.23 that “with the exception of complex or novel projects, public sector customers should no longer be reliant on incentive to develop and implement EE projects.”</li> <li>• However, the budget table on p.32 shows stable budgets through 2027, which is inconsistent with incentives declining to near zero.</li> <li>• The long-term goal is either not credible or the budget in out-years should decline</li> </ul>	This comment applies to SCE.

		substantially	
497	chapter Drafts (Voluntary)	<p>ORA-2 (re page 34) Metrics do not align with the 10-year vision for the sector</p> <ul style="list-style-type: none"> <li>• SCE's success metrics are all based on participation levels; however, the 10-year vision is that customers will no longer be participating in incentive programs.</li> <li>• Fundamental disconnect between a metric of "number of projects that receive on incentive" increasing through year 10 and a vision of declining incentives to zero by year 10.</li> </ul>	This comment applies to SCE.
498	chapter Drafts (Voluntary)	<p>ORA-3 - Metrics do not align with the problem statement or intervention strategy</p> <ul style="list-style-type: none"> <li>• Problem statement of lack of visibility for building performance data and intervention strategies around increasing customer access to data do not match a sector outcome metric of the number of projects receiving an incentive</li> <li>• Metric must measure something meaningful that represents success/failure of the intervention strategy</li> </ul>	This comment applies to SCE.
499	chapter Drafts (Voluntary)	<p>ORA-4 (re page 33) Metrics must be credible and stable in order for BPs to represent a plan whose success/failure can be accurately assessed</p> <ul style="list-style-type: none"> <li>• BPs cannot be approved with caveats such as that on p.33 that "SCE plans to refine [the metrics] once more analyses are completed....if historical data on these sectors does not exist or is too sparse, then SCE will update these metrics targets after sector-specific evaluations have been completed."</li> <li>• If metrics are constantly moving targets, then the accountability mechanism is destroyed and there is no marker to judge whether or not progress is being made, whether strategies are producing results, and whether the administrator is</li> </ul>	This comment applies to SCE.

		succeeding.	
500	chapter Drafts (Voluntary)	<p>ORA-5 - Fails to address sector-specific market opportunities/advantages in addition to market barriers</p> <ul style="list-style-type: none"> <li>Many public buildings are have stable, long-term ownership and can have longer time horizons for capital investment</li> </ul>	This comment applies to SCE.
501	chapter Drafts (Voluntary)	<p>ORA-6 (page 28-29) Intervention strategies should address specific market barriers and focus on the most important barriers first</p> <ul style="list-style-type: none"> <li>Example: SCE intervention strategies (on pp.28-29) are just a list of current programs. “Core program” is not an intervention strategy, it is an administrative category.</li> </ul>	This comment applies to SCE.
502	chapter Drafts (Voluntary)	<p>ORA-7 (re page 16-22) Contains lengthy sections that do not ‘push the narrative forward’ (</p> <ul style="list-style-type: none"> <li>Items included in the early sections should set up the actual intervention strategies, rather than a catalogue that is largely unused in the actual planning sections</li> <li>Example: MT discussion on pp.16-22 develops a laundry list of possible market barriers, but only three are included in the actual intervention plan discussion and these are vague/high level and do not actually use the insights in the preceding discussion</li> </ul>	This comment applies to SCE.
503	chapter Drafts (Voluntary)	<p>ORA-8 (re page 4, 12) Assertions of fact or policy need to be fully supported by evidence and citation, not simply opinion</p> <ul style="list-style-type: none"> <li>Example: assertion on p.4 that Industry Standard Practice should rarely apply to the public sector has no citation or evidence to support</li> <li>Example: assertion on p.12 that the vast majority of low-hanging fruit has been captured “as seen in recent impact evaluations and CPUC dispositions” fails to cite a single study</li> </ul>	This comment applies to SCE.

		<ul style="list-style-type: none"> <li>• Example: assertion on p.12 that spillover is not quantified ignores an ED evaluation study in progress that aims to quantify spillover</li> <li>• Example: assertion on p.12 that public sector GHG or sustainability mandates reduce PA attribution for program influence fails to cite any evidence that this is current practice.</li> </ul>	
504	chapter Drafts (Voluntary)	<p>ORA-9 (re page 15-22) Studies that are referenced should be cited accurately and use best available recent information</p> <ul style="list-style-type: none"> <li>• Example :reference to Navigant IP study on p.15 says the study had “very few recommendations for areas under SCE control” is factually inaccurate; the study had many recommendations that are pertinent to SCE territory</li> <li>• Example: in discussion of market transformation on pp.16-22, SCE cites a 1996 paper on market transformation produced under an entirely different regulatory structure but fails to cite and discuss the 2013 ED MT white paper written by some of the same authors.</li> </ul>	This comment applies to SCE.
541	Statewide Admin Discussion	Notes page 8 - Currently, we don't have a program implementer for our [UC] partnership. I see no value in introducing a program implementer. I'd like to know more about the process for introducing program implementer for our partnership.	This comment applies to SCE.
556	Chapter Drafts (Voluntary)	Notes page 21 - Comment (from ED): Primary focuses on downstream strategies and tactics. The Decision identifies that Statewide programs should be designed to achieve market transformation. SDG&E is tentatively assigned Statewide administrators for non-residential and residential HVVAC. Where will Statewide strategies appear in this BP?	This comment applies to SCE.
557	Chapter Drafts	Notes page 22 - With regard to bundling, we want to make sure PAs make room for smaller	This comment

	(Voluntary)	implementers. Hopefully smaller contractors will also have a voice.	applies to SCE.
558	Chapter Drafts (Voluntary)	<p>Notes page 22 -</p> <ul style="list-style-type: none"> <li>• The draft chapter can be made shorter. What is the pitch? Why should ratepayer dollars be used toward public sector?</li> <li>• Regarding goals (p. 24): you need to have specific goals that are relatively concrete so we can see if you are achieving them.</li> <li>• Budgets don't appear to align with 10 year plan for sector (p. 23). Budgets are stable but should be declining. There is a disconnect between increasing programs and budgets.</li> <li>• Assertions need to be fully supported – not just simply stated (example, p. 4).</li> </ul>	This comment applies to SCE.
559	Chapter Drafts (Voluntary)	<p>Notes page 22 - I also agree there was some content in the draft chapter that was unnecessary. You could skim through definitions.</p> <ul style="list-style-type: none"> <li>• Goals are not totally clear.</li> <li>• Maybe forgot column on baseline on table (at p. 34?). I can't really tell what you are doing here.</li> <li>• This raises the issue of what is the right level of information necessary to relay what PA is doing and where it is going?</li> </ul>	This comment applies to SCE.
560	Chapter Drafts (Voluntary)	<p>Notes page 23 - One of ORA's expectations will be a bottom up budget including detailed description of continuing programs as they are, internal staff and administration and overhead. Program budgets need to get built from bottom up every once in a while. Annual advice letters will address incremental changes based on what has transpired from bottom up budget. Bottom up budgets will follow for BP sector chapters. It has been a really long time since utilities provided accounting for what makes \$1 billion/year. Annual advice letters are not enough.</p>	This comment applies to SCE.
561	Chapter Drafts	Notes page 23 - I'd like to second comments of CPUC that BPs should start with market estimate	This comment

	(Voluntary)	from available data. First, always start with an estimate of what the market is. There are other evaluations besides Navigant studies. Second, PAs need to set up what the target market is. Third, PAs need to make an overarching statement about what kind of investment is required to capture the target market and what the benefits will be. If you go through this process, you will see that Southern California Edison public sector program is off by 1-2 orders of magnitude. We very much support comments of the Coalition for Energy Efficiency about draft chapter lacking mandates and specifics about what is required to be included.	applies to SCE.
562	Chapter Drafts (Voluntary)	Notes page 23 - I have three high level comments: <ul style="list-style-type: none"> <li>• I didn't see comments about gas usage. There needs to be a partnership between the electric and gas company in the public sector.</li> <li>• Page 4: commercial sector is not bound – needs factual basis to support assertions</li> <li>• p. 25: for all BPs, when you make your projections of savings, need to clarify if gross or net, annual or cumulative.</li> </ul>	This comment applies to SCE.
563	Chapter Drafts (Voluntary)	Notes Page 24 - see extensive list of recommendations from the state of California on this page of the notes.	This comment applies to SCE.
564	Chapter Drafts (Voluntary)	Notes page 24 - p. 37 includes a large list of to dos. IOU/PA coordination should be customer driven partnerships, not market driven programs. <ul style="list-style-type: none"> <li>• When you have institutional partnership, Statewide process is more difficult. I would like to know why institutional partnerships were included in Statewide. This doesn't work with institutional partnerships.</li> </ul>	This comment applies to SCE.
565	Chapter Drafts (Voluntary)	Draft page 25 - ZNE energy goals for state buildings has not been acknowledged at all in this draft chapter. That should be added. There should be coordination with C&S in advancing that goal. It is problematic to leave this issue out of draft chapter.	This comment applies to SCE.

566	Chapter Drafts (Voluntary)	Notes page 25 - Curiously missing from SCE's draft chapter is any reference to lessons learned from SoCalREN experience on buildings	This comment applies to SCE.
-----	----------------------------	--	------------------------------

## Appendix B: Compliance Checklist

Reference Section/Page # in SoCalREN BP	Business Plan Element	SoCalREN Notes
	<b>Sector Chapter: Public Sector</b>	
	<b>Summary tables</b>	
Sections C & D	<i>Table with CE, TRC, PAC, emissions, savings, budget</i>	
Section N	<i>Metrics for sector</i>	
	<b>Market characterization (overview and market/gap and other analysis)</b>	
Section E.4	<i>Electricity/NG</i>	
Section J.	<i>State goals include acknowledgement of goals set by Strategic Plan, SB 350, AB758, guidance as appropriate)</i>	
Section E.6	<i>EE potential and goals</i>	
Section E.1, E.2 and E.5	<i>Customer landscape (e.g., segments/subsegments, major end uses, participation rates, etc.)</i>	

Section F.1	<i>Major future trends that are key for the PA and its customers</i>	
Section F.2	<i>Barriers to EE and other challenges to heightened EE (e.g., regulatory, market, data)</i>	
	<b>Description of overarching approach to the sector</b>	
Section A.2 and Section G.	<i>Goals/strategies/approaches</i>	
Section J.	<i>How portfolio meets Commission guidance</i>	
Section F.2 and Section G.	<i>Description of how this chapter addresses the performance challenges/barriers</i>	
	<b>Intervention strategies (detailed)</b>	
Section G.	<i>What specific strategies are being pursued (e.g., near, mid, long AND existing, modified, new)</i>	
Section G.	<i>Why specific strategies were chosen (e.g., ID current weaknesses, best practices, or other rationale to support choice)</i>	
Section G, p. x and Section J, p.x	<i>How approaches advance goals discussed above</i>	
Sections B, p. xx and Section O, p. xx	<i>How strategies use lessons learned from past cycles and EM&amp;V</i>	

Sections F, p. x and Section G, p x.	<i>How will interventions support/augment current approaches or solve challenges</i>	
Section J, p.x	<i>Explanation for how these strategies address legislative mandates from AB 802, SB350, and AB 793, as well as other Commission directives for this sector, including strategic plan.</i>	
Section N, p. x	<i>Future expectations for intervention strategies</i>	
Section G.3, p.x	<i>Description of pilots</i>	
Section K, p.x	<i>Key Partners</i>	
	<b>Compare/contrast to past cycles</b>	
Section C, p.x	<i>Budget changes as appropriate</i>	
Section B., p. x	<i>Modification to sector strategies</i>	
	<b>Cross-cutting (sector chapters and ME&amp;O)</b>	
Section H.3, p.x	<i>Program Administrator marketing and integration with SW MEO as applicable</i>	
Section H.2, p.x	<i>Workforce, education, and training</i>	
N/A	<i>Emerging Technologies</i>	
Section H.4, p.x	<i>Codes &amp; Standards</i>	
	<b>Cross PA and Offering Coordination</b>	

Section K.1.d, p.x	<i>How strategies are coordination among regional PAs</i>	
N/A	<i>Proposal of statewide program administrator/approaches for this sector</i>	
N/A	<i>How the sector strategies are coordinated with statewide program activities</i>	
Section J. p.x.	<i>How are strategies coordinated with other state agencies and initiatives (e.g., AB 758)</i>	
	<b>EM&amp;V Considerations (statement of needs)</b>	
Section O, p.x	<i>Data collection needs</i>	
Section O, p.x	<i>Anticipated study needs</i>	
	<b>Demand Response</b>	
N/A	<i>How EE measures use up-to-date DR enabling technologies to be "DR ready"</i>	
N/A	<i>How duplication of costs for ME&amp;O, site visits, etc. is avoided for dual-purpose technologies</i>	
N/A	<i>How strategies facilitate customer understanding of peak load, cost, and opportunities to reduce</i>	
	<b>Residential Rate Reform</b>	
N/A	<i>How BPs will help reduce load during TOU periods</i>	

N/A	<i>How BP will diminish barriers to load reduction during TOU periods</i>	
N/A	<i>How strategies will provide info to customers and/or provide a tool to show how program may impact customer energy usage during different TOU periods</i>	
N/A	<i>How strategies will analyze whether a customer may experience greater savings by switching to a different, opt-in TOU rate</i>	
	<i>ME&amp;O re: rate reform</i>	
Section I.1 p.x	<b>Integrated Demand Side Resources</b>	
Section 1.,p x	<b>Zero-Emission Vehicles(EVs)</b>	
N/A	<b>Energy Savings Assistance (Multi-family Focused)</b>	
Section Q. p.x	<b>Appendices</b>	
N/A	<i>Additional Customer Data</i>	
Section Q. p.x	<i>Cited research</i>	
Section Q. p.x	<i>CAEECC stakeholder input resolution</i>	