MEETING NOTICE AND AGENDA

REGIONAL ENERGY WORKING GROUP
The Regional Energy Working Group may take action on any item appearing on this agenda.

Thursday, July 26, 2012
11:30 a.m. to 1 p.m.

SANDAG 7th Floor Conference Room
401 B Street, Suite 800
San Diego, CA 92101-4231

Staff Contact:  Allison King
(619) 699-1973
Allison.King@sandag.org

AGENDA HIGHLIGHTS

• ABOUT COMMUNITY CHOICE AGGREGATION
• PROGRESS REPORT ON ENERGY ROADMAP PROGRAM

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<td>2.</td>
<td>APPROVAL OF MEETING SUMMARY</td>
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</table>

The Regional Energy Working Group (EWG) is asked to approve the June 28, 2012, meeting summary.

3. PUBLIC COMMENTS/MEMBER COMMENTS

Members of the public shall have the opportunity to address the EWG on any issue within the jurisdiction of SANDAG that is not on this agenda. Anyone desiring to speak shall reserve time by completing a “Request to Speak” form and giving it to the EWG coordinator prior to speaking. Public speakers should notify the EWG coordinator if they have a handout for distribution to working group members. Public speakers are limited to three minutes or less per person. EWG members also may provide information and announcements under this agenda item.

4. CHAIR’S REPORT

4. REPORTS ON MEETINGS AND EVENTS ATTENDED ON BEHALF OF SANDAG REGIONAL ENERGY WORKING GROUP

Regional EWG members appointed to represent the EWG outside of SANDAG will provide brief reports orally or in writing on external meetings and events attended on behalf of the working group since the last EWG meeting.

5. REPORTS (5 THROUGH 8)

5. STATE LEGISLATIVE STATUS REPORT | DISCUSSION

Energy-related state legislation is attached, in addition to draft cap-and-trade principles that the SANDAG Board may consider. Members should review the bills for discussion at the meeting. Staff will provide an update on bills related to cap-and-trade revenue and net energy metering.

6. ABOUT COMMUNITY CHOICE AGGREGATION | INFORMATION

Community choice aggregation (CCA) is a mechanism that allows local governments to offer electricity generation services to residents and businesses. Staff will provide an overview of CCA, current local government activities, and considerations for its feasibility.
7. PROGRESS REPORT ON ENERGY ROADMAP PROGRAM

The SANDAG Energy Roadmap Program provides free technical assistance to local governments to help identify ways to save energy in government operations and in the community. The program was launched in July 2010 and is a collaboration between SANDAG and San Diego Gas & Electric. An update on the program’s progress with individual member agencies and plans for next year is attached.

8. STATUS ON SAN DIEGO GAS & ELECTRIC GENERAL RATE CASE

An update and revised schedule for San Diego Gas & Electric’s General Rate Case Phase 2 is provided.

9. UPCOMING MEETINGS

The next meeting of the EWG is scheduled from 11:30 a.m. to 1 p.m. on Thursday, September 27, 2012. Please note: The August 23, 2012, EWG meeting is cancelled.

+ next to an agenda item indicates an attachment
ITEM #1: WELCOME AND INTRODUCTIONS

Chair Carrie Downey, City of Coronado, called the meeting to order at 11:38 a.m.

ITEM #2: JUNE 28, 2012 MEETING SUMMARY

Siobhan Foley, California Center for Sustainable Energy (CCSE), motioned to approve the meeting summary from June 28, 2012, and Greg Newhouse, San Diego Regional Clean Cities Coalition, seconded the motion. The motion carried without opposition.

ITEM #3: PUBLIC COMMENTS/MEMBER COMMENTS

John Wotzka, member of the public, discussed energy-related news items and provided written comments that are summarized here: the Deep Convective Clouds and Chemistry Project is studying how thunderstorms interact with the ozone layer; Japan’s Basic Energy Plan for 2013 will be released this summer and enable the country to bring its grid up-to-date; technology is being developed to recycle flue gas and concentrate carbon dioxide in a liquid form; the Sunrise Powerlink Transmission Line is now transmitting electricity, and there are three large solar projects to be connected to the line; thermal energy storage can be used with the Rankine cycle to generate electricity at night; the Federal Nuclear Regulatory Commission indicated that a defective vibration sensor was found at the San Onofre Nuclear Generating Station, and inaccurate computer models caused higher than expected steam flow velocities that led to rattling tubes within the steam generators; since the destruction of Japan’s Fukushima Daiichi nuclear power plant after the earthquake and tsunami, Bluefin tuna have been found to carry radiation from contaminated waters and prey; the U.S. Navy is testing algae-based biofuels in their jets and ships; energy mix is becoming more important to the global economy than possessing traditional energy supplies; the Dodd-Frank Act, signed into law by President Obama in 2010, requires energy companies using financial derivatives to comply with the U.S. Commodity Futures Trading Commission, a new major energy regulator.

ITEM #4: REPORTS ON MEETINGS AND EVENTS ATTENDED ON BEHALF OF SANDAG REGIONAL ENERGY WORKING GROUP

Chair Downey announced that the San Diego Gas & Electric (SDG&E) Solar Stakeholder Collaboration Group had selected Black and Veatch to conduct its study. A kick-off meeting is expected to take place in early August to gain public input on establishing a methodology. Chair Downey indicated that she will attend the kick-off meeting on behalf of the Energy Working
Group (EWG) and encouraged other members to attend, as well. More details will be announced to EWG as they are available.

ITEM #5: SANDAG LEGISLATIVE STATUS REPORT

Allison King, SANDAG, provided an overview of energy-related State legislation. She referred EWG members to the agenda report, which summarized energy-related Assembly Bills (AB) and Senate Bills (SB) that passed their house of origin and were in policy committees of the second house. Discussion for this item centered on two proposed cap-and-trade bills, AB 1532 (Perez) and SB 1572 (Pavley).

Chair Downey explained that these bills seek to allocate cap-and-trade revenues for the purposes of implementing AB 32 (Nunez, 2006). Chair Downey commented that depending on the expenditure plan for cap-and-trade revenues, SANDAG may be eligible for transportation funding to carry out transit projects and meet the objectives outlined in the 2050 Regional Transportation Plan and Sustainable Communities Strategy.

Genevieve Morelos, SANDAG, also stated that according to the California Supreme Court’s Sinclair-Paint decision, revenue from the cap-and-trade program must go towards mitigating greenhouse gas (GHG) emissions and not the state General Fund. Ms. Morelos also commented that SANDAG will continue to watch these bills, both of which are scheduled for hearings on July 2, 2012.

Mike Evans, San Diego Regional Chamber of Commerce, informed the EWG that the Chamber was opposing AB 1532. While AB 32 set up incentives for businesses to decrease GHG emissions, AB 1532 eliminates this credit back to cap-and-trade participants and taxes anyone subject to the California Air Resources Board requirements for procuring offsets.

Brendan Reed, City of Chula Vista, asked which entities are eligible to receive resources under each bill. Mr. Reed commented that the California League of Cities Environmental Quality Policy Committee found that one bill did not allow cities to be eligible for cap-and-trade revenues, only county governments.

Ms. King also brought the group’s attention to AB 2514 (Bradford), which requires the California Public Utilities Commission (CPUC) to conduct a net energy metering study by June 2013. Chair Downey added that this study will provide a beneficial look at restructuring the rate payment system and encouraging solar energy without shifting costs to others.

Kayla Race, Environmental Health Coalition (EHC), stated that EHC is supporting AB 1990 (Fong). If passed, AB 1990 would establish a small-scale renewable generation program for the state’s most impacted and disadvantaged communities.

ITEM #6: REDUCING PEAK DEMAND: ENERGY STORAGE SYSTEMS

Susan Freedman, SANDAG, explained the role energy storage systems (ESS) can play in meeting the objectives of the Regional Energy Strategy (RES) by shifting peak demand and increasing the reliability of intermittent wind and solar resources. She also described many ESS end uses and commented on barriers to ESS that must be addressed in numerous CPUC processes including resource adequacy, renewable portfolio standard, demand side management, and long-term
procurement planning. Ms. King presented an overview of large-scale ESS efforts in California and the proposed SDG&E Permanent Load Shift Program.

Mr. Evans asked if SANDAG had a current policy to focus on low-carbon emitting ESS. Ms. Freedman responded that SANDAG had not developed a policy with that level of detail, and is currently following the state loading order. Chair Downey suggested that a policy to evaluate technologies, such as ESS, based on carbon emissions be considered for inclusion in an update to the RES. Ms. Freedman added that a discussion regarding the next RES, whether to publish a monitoring report or completely update the RES, can be scheduled for consideration at a future working group meeting.

Jana Kopyciok, CCSE, provided an overview of the Self-Generation Incentive Program (SGIP). Ms. Kopyciok explained that SGIP’s primary goal is to reduce GHG emissions. As such, SGIP provides incentives for the installation of distributed generation technologies on the customer-side of the utility meter to offset the energy load directly on-site. The program provides incentives for three eligible technologies: renewables and waste energy recovery, combined heat and power, and emerging technologies such as ESS. Ms. Kopyciok noted, however, that only non-thermal electrochemical batteries are eligible as an ESS technology for SGIP incentives. She described that the most common use of the incentives for ESS technologies has been to couple residential batteries with photovoltaic systems. Ms. Kopyciok also noted that $13.7 million of 2012 incentive funds remain available for the San Diego region.

Dave Weil, University of California, San Diego (UCSD), provided an overview of energy storage efforts at UCSD. UCSD’s campus has a 40 megawatt peak load. As such, it has been important for the university to find ways to shift load and reduce the financial impact on its budget. UCSD’s thermal ESS uses a chilled water system and is tied directly to a cogeneration plant. By cooling the water at night, this system cost-effectively shifts about 14% of the university’s load to off-peak hours. As a research institution, UCSD also has piloted various battery storage systems. Mr. Weil also commented that UCSD is currently pursuing additional ESS projects, many of which are in conjunction with CCSE and SGIP.

Working group members provided several questions and comments to Ms. Kopyciok and Mr. Weil:

- Mo Lahsaie, City of Oceanside, asked if water districts are utilizing ESS. Ms. Kopyciok informed that some water districts are coupling their operations with pressure reduction turbines.
- Mr. Evans further emphasized the need to look at the carbon footprint and financial cost for these technologies. Chair Downey suggested that the group keep these issues in mind to address in a potential RES update.
- Members asked about the stability of SGIP funding. Ms. Kopyciok explained that annual funding for SGIP is secured through 2014, and unused dollars from one year carry over to the next. Additionally, there are detailed requirements for the incentives, and any single equipment manufacturer is limited to 40 percent of SGIP’s statewide budget.
ITEM #7: GREEN OPERATIONS MANUAL

Ms. King announced that SANDAG, in partnership with SDG&E, was developing a Green Operations Manual that identifies energy saving best practices for the agency. This manual would include suggested energy-saving measures for SANDAG’s internal agency operations, areas of influence, and individual employees. Ms. King noted that a key challenge to developing and implementing this manual was SANDAG’s unique position as a building tenant, rather than an owner. She referred the EWG to a draft outline included in the meeting agenda packet and solicited feedback from the working group members on other possible ideas for inclusion. Several ideas were raised:

- Mr. Reed suggested that SANDAG work with the building owner to identify green cleaning products and practices. He also stated the importance of streamlining internal purchasing policies to prioritize the use of greener, more sustainable workplace products. Additionally, Mr. Reed emphasized the need to establish a monitoring program to measure and evaluate the implementation of practices included in the Green Operations Manual.

- Ms. Race asked that SANDAG consider reimbursing meeting attendees for transit fares as an alternative to providing parking validation.

- Mr. Evans suggested that SANDAG consider utilizing webcasting capabilities for meetings. Chair Downey informed that some SANDAG meetings are already broadcasted online. Ms. Freedman also responded that, while working group and committee members need to be physically present in order to meet quorum, webcasting tools can be beneficial for engaging members of the public.

- Don Mosier, City of Del Mar, suggested that SANDAG reduce paper use for agendas. Chair Downey added that, while printed agenda materials need to be available to the public to use at meetings, perhaps it is not necessary for SANDAG to print all attachments for every meeting.

- Ms. Foley shared that CCSE encourages its employees to log trips in iCommute’s TripTracker, but provides additional incentives, including free lunches to encourage carpooling, walking, biking, and transit use.

Ms. King thanked members for their input and informed that the Green Operations Manual is expected to be completed by October of this year.

ITEM #8: STATUS ON PREVIOUS ENERGY WORKING GROUP ITEMS

Due to limited time, staff did not present this item. Members were asked to review information included in the agenda packet for this item.

ITEM #9: ADJOURNMENT AND SCHEDULING AGENDA ITEMS FOR FUTURE MEETINGS

The next scheduled meeting is on July 26, 2012, from 11:30 a.m. to 1 p.m. Chair Downey adjourned the meeting at 12:59 p.m.
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<th>REPRESENTATION</th>
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<th>ATTENDING</th>
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<td>City of Coronado</td>
<td>Hon. Carrie Downey, Chair</td>
<td>Member</td>
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<td>San Diego County Regional Airport Authority</td>
<td>Paul Manasian</td>
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<td>Brett Caldwell</td>
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<td>Ed Gowens</td>
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<td>Unified Port District of San Diego</td>
<td>Michelle White</td>
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<td>Dave Weil</td>
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<td>Matt Burkhart</td>
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<td>Claudia Valenzuela</td>
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<td>Energy Non-Profits</td>
<td>California Center for Sustainable Energy</td>
<td>Sobhan Foley</td>
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<td>Charlie Buck</td>
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<td>Energy Policy Initiatives Center,</td>
<td>Scott Anders, Vice Chair</td>
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<td></td>
<td>University of San Diego School of Law</td>
<td>Nilmini Silva-Send</td>
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<td>Greg Newhouse</td>
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<td>Kayla Race</td>
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<td>Sierra Club</td>
<td>Bill Powers</td>
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<td>Carmen Sandoval</td>
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<td>Economic Development</td>
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<td>Hon. Pamela Bensoussan</td>
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<td>North County Economic Development Council</td>
<td>David Lloyd</td>
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OTHER ATTENDEES:

Jim Bolz  
Gretchen Crowson, City of Del Mar  
Steve Ferguson, Honeywell  
Mike Grim, City of Carlsbad  
Dean Kinports, SDG&E  
Jana Kopyciok, California Center for Sustainable Energy  
Mo Lahsaie, City of Oceanside  
Tony Rafati, SDG&E  
Brendan Reed, City of Chula Vista  
Lianna Rios, SDG&E  
Kristine Schindler  
John Wotzka  
Susan Freedman, SANDAG  
Allison King, SANDAG  
Genevieve Morelos, SANDAG  
Suchitra Mukherjee, SANDAG  
Rob Rundle, SANDAG
STATE LEGISLATIVE STATUS REPORT

Introduction

Last month, the Regional Energy Working Group (EWG) discussed cap-and-trade and net energy metering bills. This report summarizes the energy-related Assembly Bills (AB) and Senate Bills (SB) that have passed their first house and their policy committees in the second house. The Legislature is on recess and will reconvene on August 6, 2012. The last day of session is August 31, 2012.

CAP-AND-TRADE

Background

In fall 2011, the California Air Resources Board (CARB) adopted regulations to establish the first cap-and-trade program in the nation. The first auction for the cap-and-trade program is scheduled for November 2012, and this year the Legislature is expected to pass legislation to determine how the proceeds from the auction would be used. In order to respond to various proposals currently under consideration by the Legislature, the SANDAG Board of Directors will consider adopting a set of guiding principles.

The report from the SANDAG Board agenda for July 27, 2012, is included as Attachment 1. The attachment provides an overview on the state cap-and-trade program, discusses pending state legislation, and includes proposed principles, which would provide a guide as cap-and-trade bills move through the state legislative process and as future administrative guidelines and regulations are developed.

The auction of allowances under a cap-and-trade program is expected to generate about $660 million to $3.3 billion in Fiscal Year (FY) 2012-13. Currently, there are two main bills moving through the legislature to address cap-and-trade and to develop an expenditure plan. The bills propose to defer the adoption of an expenditure plan and appropriation of funds until next year’s (FY 2013-14) budget. A summary of the two bills is included below.

AB 1532 (Perez) California Global Warming Solution Act of 2006: GHG Reduction Account
This bill would assign the development of a three-year expenditure plan to CARB with oversight by the following state agencies: Natural Resources; Department of Food and Agriculture; Business, Transportation, and Housing; and California Environmental Protection Agency. CARB would submit an expenditure plan to the Legislature, which could be modified before final adoption by CARB. The Legislature would be required to include appropriations for the final investment plan in its annual budget. The bill includes broad categories that are eligible for funding including alternative
transportation, complying with the Sustainable Communities Strategy, public transit, natural resources, and other categories.
Status: Pending; Senate Appropriations Committee

**SB 1572 (Pavley) California Global Warming Solution Act of 2006: AB 32 Investment Fund**
This bill would establish the GHG Reduction Account and require 50 percent of cap-and-trade auction revenues, or $250 million, whichever is less, to be available for priority projects. Funds would be allocated to the following categories of priority projects: K-12 energy projects, public university energy and climate projects, self-generation incentives for entities covered under the cap-and-trade program, residential energy efficiency, energy in agriculture projects, sustainable land use and transportation, goods movement, lower-emission school bus program, and the Clean Vehicle Rebate Project.
Status: Pending; Assembly Appropriations Committee

**NET ENERGY METERING**

**AB 2514 (Bradford) Net Energy Metering Study**
This bill would require the California Public Utilities Commission (CPUC) to complete a study by June 30, 2013, that evaluates the full costs of the net energy metering (NEM) program and consider all electricity generated by renewable electric generating systems, including electricity used onsite to reduce customers consumption of electricity that otherwise would be supplied through the electrical grid, as well as the electrical output that is being fed back to the electrical grid for which the customer receives credit or net surplus electricity consumption under NEM.
Status: Pending; Senate Appropriations Committee

**SB 1537 (Kehoe) Rates: Net Energy Metering**
This bill relates to energy rates and NEM. The bill would impose a moratorium on the CPUC from adopting any new charge, stand by charge, customer charge, minimum monthly charge, interconnection charge, or other fixed charge that applies only to NEM customers who receive net metering. SB 1537 would sunset the moratorium on January 1, 2014.
Status: Pending; Assembly Appropriations Committee

**RENEWABLE ENERGY/DISTRIBUTED GENERATION**

**AB 1990 (Fong) Renewable Energy Resources: Small-Scale Renewable Generation Program**
This bill would establish the small-scale renewable generation program with the goal of installing 375 megawatts (MW) of electrical generating capacity from small-scale renewable generation facilities, as defined, in the state's most impacted and disadvantaged communities, as defined. The bill would require the CPUC, in consultation with electrical corporations and interested stakeholders to develop program elements that are applicable to electrical corporations, and encourage the hiring of employees from the state's most impacted and disadvantaged communities.
Status: Pending; Senate Appropriations Committee

**AB 2135 (Blumenfield) Building Standards: Solar Distributed Generation**
This bill would require the State Building Standards Commission, the State Department of Housing and Community Development, and the State Fire Marshal to cooperate in developing a guidebook to assist local agencies in implementing building standards and permitting processes for solar distributed generation technology on residential and commercial property and post the guidebook on their respective Web sites. The bill would provide that a city, county, city and county, or charter
city that adopts the policies from the guidebook would receive a preference or priority related to grant funds from the California Energy Commission (CEC) or CARB.
Status: 6/19/12; Senate Transportation and Housing Committee

**SB 1122 (Leno) Renewable Biomass and Biogas Projects**

SB 1122 would provide that unless and until the CPUC adopts methodology that accounts for the benefits to ratepayers and the environment from reducing air pollution and GHG emissions by generating electricity from specified sources of biogas and biomass, the CPUC shall, by a specified date, direct electrical corporations to collectively procure a minimum number of MW of electrical generating capacity from small renewable biomass and biogas electrical generating projects.
Status: Pending; Assembly Appropriations Committee

**POLICY/RESEARCH**

**AB 2339 (Williams) Geothermal Heat Pump Policies**

This bill would require the CEC, by July 1, 2013, in consultation with the CPUC, CARB, and other stakeholders, to evaluate and recommend policies and implementation strategies to overcome barriers to the widespread deployment and use of geothermal heat pump and geothermal ground loop technologies.
Status: 8/6/12; Senate Appropriations Committee

**AB 2409 (Allen) Energy Efficiency Financing Research**

This bill would require the CEC, in collaboration with specified entities, and in consultation with other stakeholders, including investor-owned utilities, to review emerging technology financing models used in other states to finance energy efficiency technology deployments and services that maximize private sector investment in California. The bill also would authorize the CEC to establish and consult with an investment advisory group consisting of private and public investors.
Status: 8/6/12; Senate Appropriations Committee

**SB 1409 (Pavley) Memorandum of Understanding with Department of Defense**

This bill would require the State Office of Planning and Research (OPR) to, among other things, coordinate with the United States Armed Forces, where appropriate and feasible, and to the extent permitted or required by federal law, on the implementation of complementary energy, environmental, and procurement policies, including promoting the commercialization of clean energy technologies and the deployment of clean energy projects in California. The bill would require OPR to provide assistance in resolving conflicts associated with research, development, and deployment of clean energy in California by the United States Armed Forces.
Status: Pending; Assembly Appropriations Committee

**ALTERNATIVE FUEL VEHICLES**

**AB 523 (Valadao) Limitations for Ethanol Funding**

This bill relates to funding for projects under the Alternative and Renewable Fuel and Vehicle Technology Program (“AB 118 Program”). AB 523 would provide that on and after July 1, 2013, the eligibility for funding of projects for the production of ethanol is limited to projects for the production of ethanol that are not derived from corn.
Status: Pending; Assembly Concurrence
SB 1455 (Kehoe) State Alternative Fuels Goals
This bill would require the CEC and CARB, among other things, to coordinate efforts to measure the progress of alternative fuels use. The bill would require the CEC and CARB to update economic analyses, evaluate investments in alternative transportation fuels, and evaluate how the impact of federal fuel policies and existing state policies would help increase the use of alternative transportation fuels in the state. The bill would require the CEC and CARB to report in the integrated energy policy report the status of the state's alternative transportation fuels use and make specified evaluations. The bill would require CARB to include a finding on the effect of proposed regulations on state alternative transportation fuels use.
Status: Pending; Assembly Appropriations Committee

Key Staff Contact: Allison King, (619) 699-1973, Allison.King@sandag.org

PROPOSED CAP-AND-TRADE PRINCIPLES

Introduction

In fall 2011, the California Air Resources Board (CARB) adopted regulations to establish the first cap-and-trade program in the nation. The first auction for the cap-and-trade program is scheduled for November 2012, and this year the Legislature is expected to pass legislation to determine how the proceeds from the auction would be used. In order to respond to various proposals currently under consideration by the Legislature, staff has drafted proposed cap-and-trade principles. This report provides an overview on the state cap-and-trade program, discusses pending state legislation, and includes proposed principles, which would provide a guide as cap-and-trade bills move through the state legislative process and as future administrative guidelines and regulations are developed.

Discussion

Assembly Bill 32 (AB 32) (Nunez, 2006), the Global Warming Solutions Act of 2006, calls for the reduction of greenhouse gas emissions to 1990 levels by 2020. To implement AB 32, the CARB Climate Scoping Plan report outlined strategies for meeting the greenhouse gas (GHG) emission reduction targets, including direct regulations, alternative compliance mechanisms, monetary and nonmonetary incentives, voluntary actions, market-based compliance mechanisms like a cap-and-trade system, and an implementation fee to fund the program.

In 2011, CARB adopted regulations to establish a new cap-and-trade program to cap GHG emissions statewide. Producers of about 80 percent of the state’s GHG emissions are subject to the cap, which would reduce emissions by about 20 percent through 2020. Sectors subject to the cap include refineries, power plants, industrial facilities, and transportation fuels. Motor vehicle fuels will be subject to the cap starting in 2015.

As part of the regulation, CARB plans to auction 66 million allowances in FY 2012-2013, which is anticipated to generate $660 million to $3.3 billion. The first cap-and-trade auction is scheduled for November, with additional auctions scheduled for February and May 2013. The FY 2012-2013 budget authorizes at least $500 million for use in offsetting existing General Fund costs of GHG mitigation activities. It also specifies that additional expenditures related to GHG emissions reductions be made pursuant to future legislation.

Full implementation of the 2050 Regional Transportation Plan and its Sustainable Communities Strategy (2050 RTP/SCS) is dependent on stable funding sources. The 2050 RTP/SCS includes nearly $21 billion (in year of expenditure) through 2020 for investments in major corridors, transportation...
demand and system management projects and programs, active transportation projects, Safe Routes to Transit, Safe Routes to School, and Smart Growth Incentive programs. The 2050 RTP/SCS is based on current and reasonably available sources and levels of funding. It assumed continuation of existing levels of state and federal funding through the current Regional Transportation Improvement Program period (FY 2015), and some additional new revenues through FY 2020 (based on historic funding and revenue growth levels). Cap-and-trade revenues could provide a new source of state funds to assist in the implementation of the 2050 RTP/SCS.

As described in further detail below, the California Senate and Assembly have introduced legislation that would establish a cap-and-trade account and outline eligible recipients, projects, and programs for the funds. The Assembly version of the bill includes broad categories for cap-and-trade investments, and outlines a process for CARB to create three investment plans starting in 2013 until 2020 for the distribution of funds. The Senate version of the bill is more detailed; it requires projects that are funded to meet overall goals of reducing GHG emissions and includes a list of priority project categories, including a percentage for each priority project category to be funded by cap-and-trade proceeds.

Pending Legislation

AB 1532 (Perez) California Global Warming Solution Act of 2006: GHG Reduction Account

AB 1532 was introduced by Speaker John Perez (D-Los Angeles) on January 23, 2012, and was last amended June 18, 2012. This bill would establish the Greenhouse Gas Reduction Account and set goals for achieving feasible and cost-effective reductions in GHG emissions. The bill’s stated goals include:

- Maximize economic, environmental, and public health benefits to the state
- Foster job creation by promoting in-state GHG emission reduction projects
- Complement efforts to improve air quality
- Direct investment toward the most disadvantaged communities and households in the state
- Provide opportunities for small business, schools, affordable housing developers, water agencies, local governments, and other community institutions to reduce GHG emissions

The bill also would provide that funds may be used to reduce GHG emissions through investments in the following areas:

- Clean and efficient energy
- Low-carbon transportation and infrastructure
- Natural resource protection
- Research, development, and deployment of innovative technology, measures, and practices
AB 1532 would require CARB to do the following:

- Adopt guidelines regarding the allocation and allowable uses of money, including establishing criteria for receiving funding, a process to verify qualifications of recipients, and monitoring requirements

- Develop and adopt three investment plans (FY 2013-2014, FY 2015-2017, and FY 2018-2020) with each investment plan identifying the anticipated expenditures, establishing priorities for allocation of moneys, identifying specific categories of programs and projects, identifying levels of expenditures for each category, and identifying the state agencies best qualified to implement the plan

- Coordinate with Natural Resources Agency, the California Environmental Protection Agency, Department of Food and Agriculture, and Business, Transportation, and Housing Agency

- Hold at least two public hearings prior to the adoption of the investment plan

- Submit the investment plan to the legislative budget committees prior to adoption of each investment plan for review

- Provide the Governor a plan detailing proposed appropriations from the Greenhouse Gas Reduction Account

AB 1532 would require the Governor to include a proposed appropriation in his annual budget and would allow the Legislature to consider adopting the appropriation as part of the annual budget process.

**SB 1572 (Pavley) California Global Warming Solutions Act of 2006: AB 32 Investment Fund**

SB 1572 was introduced by Senator Fran Pavley (D-Agoura Hills), and was last amended on June 25, 2012. This bill would create the Greenhouse Gas Reduction Account and would require all revenues collected by CARB from the auction or sale of allowances to be deposited into the account and available, upon appropriation by the Legislature.

SB 1572 would do the following:

- Provide that no funds will be expended if the total auction revenues in the FY 2012-13 are less than $550 million

- Require that 50 percent of auction revenues collected in FY 2012-13, or $250 million, whichever is less, go to priority projects listed in the bill; the other 50 percent would remain in the account

- Require projects funded by the bill to comply with the following:
  
  - Achieve GHG reductions at a reasonable cost
  
  - Achieve budgetary savings for families, businesses, schools, universities, companies regulated under cap-and-trade program, community institutions, and state, local, and regional governments
- Protect existing jobs in the state by minimizing leakage
- Benefit the most adversely impacted and disadvantaged communities
- Provide opportunities for small businesses, schools, local governments, and other entities to participate in and benefit from statewide and regional efforts to reduce GHG emissions

- Create the following priority projects:

**Proposed SANDAG Cap-and-Trade Principles**

The SANDAG 2012 Legislative Program includes two priorities that support the overall goal of a cap-and-trade program at the state or federal level: Goal No. 3A, which supports access to resources and technical tools that will enable SANDAG to implement the 2050 RTP/SCS; and Goal No. 12B, which supports energy-related legislation consistent the Regional Energy Strategy.

In order to respond to various proposals currently under consideration by the Legislature, staff drafted proposed cap-and-trade principles for consideration. On July 13, 2012, the Executive Committee discussed the proposed principles and directed staff to include an additional principle regarding the importance of providing funding for public transit from cap-and-trade auction proceeds. The Executive Committee also asked that the proposed principles be included for Board action in July, and that a presentation by CARB on cap-and-trade proposals be scheduled for a future Board Policy meeting.

The proposed cap-and-trade principles are:

- **Dedicate the allocation revenues related to fuel to transportation investments.** Since the transportation sector contributes about 40 percent of the state’s greenhouse gas (GHG) emissions, a similar share of the allowance revenues should be dedicated to projects and programs that reduce GHG emissions from the transportation sector.

- **Ensure revenues are dedicated to public transportation.** In order to meet the state’s GHG reduction goals, public transportation should be a high priority for cap-and-trade revenues. Funding dedicated for public transportation should be used to implement the transit projects and programs included in regional plans.

- **Provide an equitable distribution of funds.** Each region’s share of allowance revenues should be allocated on a formula basis to reflect a geographically equitable distribution of funds.

- **Ensure revenues are invested consistent with regional plans and Sustainable Communities Strategies.** Eligible projects should be consistent with a CARB-approved and regionally adopted Sustainable Communities Strategy.
• Ensure project eligibility criteria are created in collaboration with Metropolitan Planning Organizations (MPOs). MPOs should collaborate with CARB to develop statewide eligibility thresholds that provides maximum flexibility for implementation at the regional level.

Next Steps

Pending approval by the Board of Directors, staff will use the proposed principles to evaluate bills as they make their way through the legislative process and as future administrative guidelines and regulations are developed. Staff also will work with CARB to schedule a presentation at the September 14, 2012, Board Policy meeting, focusing on a more comprehensive discussion of cap-and-trade issues at the state level.

GARY L. GALLEGOS
Executive Director

Key Staff Contact: Genevieve Morelos, (619) 699-1994, Genevieve.Morelos@sandag.org
Introduction

Community Choice Aggregation (CCA) is a mechanism that allows local governments to procure electricity for residents and businesses within their community. The CCA is responsible for contracting for the electricity generation while the investor owned utility (IOU) continues to deliver the electricity through the existing transmission and distribution network. A comparison of three electricity provider models; IOU, CCA, and municipal utility; is included as Attachment 1.

Some local governments are considering CCA as a means to acquire more renewable energy for powering the homes and businesses in their communities. The Marin Energy Authority (MEA) is a joint powers authority (JPA) that operates Marin Clean Energy (MCE), the first CCA in California, and provides generation for approximately 8,000 customers. Currently, the City of Richmond is considering joining MEA, and the City and County of San Francisco are taking steps to establish a CCA that would provide 100 percent renewable generation. Energy Working Group (EWG) Chair Carrie Downey, City of Coronado Councilmember, and staff will provide an overview of CCA including its intent and function, current local government activities, and important considerations for its feasibility.

Discussion

Regional Energy Strategy

The Regional Energy Strategy (RES) set goals for increasing the amount of electricity generated from renewable resources at the utility scale and for distributed generation.

- Support the development of renewable energy resources to meet or exceed a 33 percent renewable portfolio standard (RPS) by 2020 and a 45 percent RPS by 2030.
- Increase the total amount of clean distributed generation (renewable and non-renewable) to reduce peak demand and diversify electricity resources in the San Diego region.

CCA could potentially meet RES goals earlier than utility mandated procurement dates. The CCA would likely charge higher rates to its customers to do so. The County of San Diego undertook a feasibility study in 2005 that concluded at the time that there would be little benefit to constituents by implementing CCA. The City of Chula Vista considered CCA from 2003 to 2006, before deciding against moving forward. The municipal energy options considered by Chula Vista are described in
Attachment 2. Now that Marin has had a CCA operating for two years, there is new interest in CCA among some California communities.

CCA Background

Assembly Bill 117 (2002) enabled the formation of CCAs in California and also set guidelines for coordination between CCA entities and local IOUs. The legislation enabling CCA formation also requires the IOUs to cooperate with local governments forming CCAs by providing electricity delivery over its existing distribution system. IOUs would continue to provide support to CCA customers through metering, billing, collection, and call-centers. A CCA customer would receive a bill with generation charges from the CCA entity and distribution and other charges from the IOU. A CCA is an “opt-out” program, meaning all customers in the jurisdiction would automatically become a CCA customer, unless they choose to stay with their current provider.

Considerations in forming CCA

Based on feasibility studies undertaken for other California communities, staff has identified several barriers to establishing a CCA in this region. First is the higher customer cost that each CCA has or is expected to have at least in the near term. Monthly bills for MEA participants are $2 to $6 a month higher than nonparticipants. San Francisco is moving forward with CCA despite the move costing local constituents an estimated 11¢/kWh compared to Pacific Gas & Electric’s (PG&E) 6.4¢/kWh.

It is unclear at what point CCA would cost participants the same or less than electricity purchased from the local utility. In addition to customer costs, local governments would need to find funding to establish the JPA, including the hiring of appropriate staff and launch a public education effort.

Forming a CCA involves both risks and potential benefits to a local government and its constituents. Many of the risks associated with CCA formation are due to the uncertainty of future electricity costs and load. The potential benefits to the community may include increased local job creation and greater levels of power supply from renewable energy sources.

The following risks have been identified by local governments considering forming a CCA or joining an existing CCA:

- Procurement: the ability to procure power at reasonable costs, avoid under- or over-procurement, and retain power supply agreements.
- Customer cost: the ability to offer rates less than those of the IOU and uncertainty in non-generation fees from IOU.
- Regulatory: ongoing proceedings continue to define CCA structure and requirements.

The following potential benefits have been identified by operational CCAs:

- Local economy: local purchase preferences could lead to local economic development and influx of green businesses.
- Renewable energy: CCAs could supply energy with higher renewable percentage than IOU
- Incentives: CCAs could offer net energy metering and feed-in-tariffs with greater pay-out to small renewable generators than IOU.
CCA Programs in California

Marin Clean Energy

The only CCA program currently operating in California is MCE, which is managed by MEA, a JPA of eleven municipalities and the County of Marin. MCE began operating in May 2010 with approximately 8,000 customers, and plans to expand to over 100,000 customers in 2013. Electric service customers choose to buy their electricity from either MCE or Pacific Gas & Electric (PG&E). MCE offers electricity with 50 percent renewable or 100 percent renewable generation sources. In comparison to PG&E, an average residential customer would pay about $2 extra per month for the 50 percent renewable option and $6 more for the 100 percent renewable option. MCE has a goal to provide 100 percent renewable energy to all customers by 2020, at rates competitive with PG&E. At the June 19, 2012, City Council meeting, Richmond City Council elected to join the Marin Energy Authority (MEA) and participate in the MCE CCA program. MCE is expected to become available to customers in Richmond in spring 2013.

CleanPowerSF

The City of San Francisco has been working since 2004 to form a CCA program called CleanPowerSF. The implementation plan for the CCA was approved by the CPUC and registered as a CCA in May 2010. The City plans to begin offering 100 percent renewable energy to customers in early 2013.

The San Francisco Local Agency Formation Committee (LAFCO) is designing a feasible CCA program for the city. Monthly updates on CleanPowerSF formation are available through LAFCO’s meeting materials at http://www.sfbos.org/meeting.aspx?page=4162.

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Attachments: 1. Electricity Provider Model Comparison
              2. Chula Vista Municipal Energy Utility Business Models
## Electricity Provider Model Comparison

<table>
<thead>
<tr>
<th>Electricity Provider Models</th>
<th>IOU <strong>Investor-Owned Utility</strong></th>
<th>CCA <strong>Community Choice Aggregator</strong></th>
<th>Public Utility <strong>Municipal</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Generation purchaser</strong></td>
<td>IOU purchases power</td>
<td>CCA purchases power</td>
<td>Muni purchases power</td>
</tr>
<tr>
<td><strong>Grid services</strong></td>
<td>IOU owns and maintains T&amp;D lines</td>
<td>IOU owns and maintains T&amp;D lines</td>
<td>Muni owns and maintains T&amp;D lines</td>
</tr>
<tr>
<td><strong>Customer service</strong></td>
<td>IOU provides</td>
<td>IOU provides</td>
<td>Muni provides</td>
</tr>
<tr>
<td><strong>Regulated by</strong></td>
<td>CPUC</td>
<td>CPUC</td>
<td>CEC</td>
</tr>
<tr>
<td><strong>Examples</strong></td>
<td>SDG&amp;E, PG&amp;E (Pacific Gas &amp; Electric), and SCE (Southern California Edison)</td>
<td>Marin Clean Energy</td>
<td>SMUD (Sacramento Municipal Utility District) and LADWP (Los Angeles Dept. of Water &amp; Power)</td>
</tr>
</tbody>
</table>

| **Number of entities**      | 3**                            | 1                               | ~45                          |
| **Est. population represented** | 11.6 million                  | 8,000 in 2012                   | 3.2 million                 |
| **% Renewable Energy**      | SDG&E: 20.8%                   | 50% or 100%                     | SMUD: 24%                   |
|                             | PG&E: 20.1%                    |                                  | LADWP: 20%                  |
|                             | SCE: 21.1%                     |                                  |                             |
| **2010 Average Retail Rates (cents/kWh)** | SDG&E: 15.7                  | 50% Renewable Energy* | SMUD: 11.5                  |
|                             | PG&E: 15.2                    | Res: 17.3                       | LADWP: 12.9                 |
|                             | SCE: 14.8                      | Non-res: 20.4                   |                             |

* Rates as of July 2012, includes PG&E fees for MCE customers.
** Also 3 small IOUs in California.
Chula Vista Municipal Energy Utility Business Models

The City of Chula Vista adopted an Energy Strategy and Action Plan in May 2001. As part of the strategy, the city analyzed the costs, benefits, and risks of forming and operating a municipal energy utility (MEU). The Municipal Energy Utility Feasibility Study (2004) outlined possible business models and are summarized below.

Community Choice Aggregation

A Community Choice Aggregation (CCA) is an entity that procures electricity for residents and businesses within a community. While Chula Vista would procure the power, it would use San Diego Gas & Electric’s (SDG&E) distribution and transmission lines. Essentially, the system would be the same as it is conventionally, and rather than a third party such as Sempra Energy generating the electricity, the CCA would procure the energy. In addition to electricity, Chula Vista could be a natural gas aggregator.

Greenfield Development

Under the Greenfield Development (GD) business model, Chula Vista could design and build distribution facilities to supply energy to undeveloped areas designated for industrial or new residential use. Traditionally, the project developer would cover the cost of distribution facilities and deed that infrastructure to SDG&E. Under the GD model, the City would receive the infrastructure.

Community Choice Aggregation/Greenfield Development Combined

Under this business model, the City would simultaneously implement and administer both a CCA and GD. This model would enhance the near term economic benefits of forming a CCA.

Municipal Distribution Utility

A Municipal Distribution Utility is a public agency that acquires existing utility infrastructure in portions or in its entirety. Chula Vista could acquire infrastructure through a negotiated purchase or through eminent domain. Upon acquiring the infrastructure, the City would be responsible for the energy distribution services; the City also could contract out responsibility to a third party while an appointed council oversaw operations. Currently, approximately 25 percent of California’s total electric load is provided by public owned utilities.

Actions Taken by Chula Vista

On October 12, 2004, the City Council agreed to enter into a Memorandum of Understanding (No. 2004-333) with SDG&E regarding its electric and natural gas franchises for an initial term of ten years and automatic extension of 20 years if SDG&E materially satisfied it obligations to the City. Chula Vista retained its rights to pursue MEU and CCA in the future.
Introduction

The San Diego Association of Governments (SANDAG) Energy Roadmap Program provides free energy assessments and energy management plans, or “energy roadmaps,” to SANDAG member agencies. An Energy Roadmap can serve as a complement to existing local government sustainability efforts by identifying energy uses and costs, and finding savings options. Energy assessments are offered for any site at which a jurisdiction pays a San Diego Gas and Electric (SDG&E) utility bill. Each Roadmap identifies ways a jurisdiction can save energy in government operations and in their communities. The program is a local government energy-efficiency partnership with SDG&E, and was originally available from July 2010 through December 2012. Contingent on California Public Utilities Commission (CPUC) approval, the program is expected to extend through December 2014. The Board of Directors, Regional Planning Committee, and Regional Energy Working Group (EWG) are to receive progress reports over the course of the program.

The concept for the Energy Roadmap Program originated at the EWG in 2005. The City of Carlsbad was the first City that SANDAG worked with in close collaboration with SDG&E and the California Center for Sustainable Energy (CCSE, then San Diego Regional Energy Office). The pilot focused on energy efficiency assessments, rebates, and incentives for existing buildings and energy saving opportunities for near-term capital projects. The EWG was a key driver behind securing funding for a second pilot with the cities of Poway and Solana Beach in 2007-2009. Based on these experiences, SANDAG applied to SDG&E for a local government energy efficiency partnership that would enable it to offer wider energy assessment services to its member agencies.

Program Status

Local Government Program Participation

As of July 2012, seven cities have completed Energy Roadmaps and four cities have Energy Roadmaps underway. The County of San Diego and cities of Chula Vista and San Diego are offered transportation-only Energy Roadmaps because those jurisdictions have their own local government partnerships with SDG&E that the Roadmap would duplicate. The three cities that participated in SANDAG pilot programs will be offered Energy Roadmap services beginning in 2013. The following table lists the Roadmap status of each local government.
<table>
<thead>
<tr>
<th>Completed Roadmaps</th>
<th>Transportation Only Roadmaps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encinitas</td>
<td>City of Chula Vista (underway)</td>
</tr>
<tr>
<td>Escondido</td>
<td>City of San Diego (2013)</td>
</tr>
<tr>
<td>Imperial Beach</td>
<td>County of San Diego (final draft)</td>
</tr>
<tr>
<td>Oceanside</td>
<td></td>
</tr>
<tr>
<td>Santee</td>
<td></td>
</tr>
<tr>
<td>San Marcos</td>
<td></td>
</tr>
<tr>
<td>Vista</td>
<td></td>
</tr>
<tr>
<td><strong>Roadmaps Underway</strong></td>
<td><strong>Roadmaps to begin</strong></td>
</tr>
<tr>
<td>Coronado</td>
<td>El Cajon (2012)</td>
</tr>
<tr>
<td>Del Mar</td>
<td>Lemon Grove (2012)</td>
</tr>
<tr>
<td>La Mesa</td>
<td>Carlsbad (2013)</td>
</tr>
<tr>
<td>National City</td>
<td>Poway (2013)</td>
</tr>
<tr>
<td></td>
<td>Solana Beach (2013)</td>
</tr>
</tbody>
</table>

### Energy Assessments of Municipal Sites

As of July 2012, the Energy Roadmap Program has conducted preliminary assessments at **167 municipal sites**, documented in “Energy Report Cards” for each city. (A sample Energy Report Card is provided as Attachment 1.) Each Report Card identifies energy use over one year, associated costs and greenhouse gas emissions, and potential energy – and/or cost-saving opportunities. When applicable, Report Cards benchmark each site based on the U.S. Environmental Protection Agency (EPA) Energy Star Portfolio Manager and the CPUC California End-User Survey (CEUS) for electricity and natural gas.

Based on the Energy Report Cards, a building’s performance is compared to similar buildings (the benchmark), and with direction from city staff, a subset of sites is identified to undergo more comprehensive assessments and/or utility rate analyses. Thus far, **66 municipal sites** have undergone the **secondary energy assessments**.

If implemented, the potential savings identified thus far include:

- $450,000 in annual bill savings from switching utility rates
- $465,000 in annual savings from energy efficiency upgrades
- 3 million kilowatt-hours (kWh) of electricity savings annually
- 1,150 metric tons CO2E (greenhouse gases) annually

### Roadmap Report Chapters

The Energy Roadmap report serves as a user-friendly energy management plan that summarizes the project findings and offers recommendations that would assist each jurisdiction with implementing energy-saving measures. Energy Roadmap sections are outlined below. Copies of completed Energy Roadmaps are available online at www.sandag.org/energy.

**Report Section I. Saving Energy in Local Government Operations**

1. Save Energy in City Buildings and Facilities
2. Demonstrate Emerging Energy Technologies
3. Green the City Vehicle Fleet
4. Develop Employee Knowledge of Energy-Efficiency
5. Promote Commuter Benefits to City Employees
Report Section II. Saving Energy in the Community

6. Leverage Planning and Development Authority
7. Market Energy Programs to Local Residents, Schools, and Businesses
8. Support Green Jobs and Workforce Training

Report Appendices:
- Municipal Energy Assessments: Phase 1 - Energy Report Cards
- Municipal Energy Assessments: Priority Site List for Phase 2 Assessments
- Municipal Energy Assessments: Phase 2 - Energy Audit Findings and Utility Rate Analyses
- Municipal Energy Assessments: Citywide Outdoor Lighting Study
- Alternative Fuel Options and Local Infrastructure Available
- Transportation Demand Management Policies and Resources
- Sample Smart Growth Policies and Resources
- Sample Energy-Saving Policies and Resources
- Sample Clean and Efficient Transportation Policies and Resources

Tasks for SANDAG

SANDAG is preparing a Green Operations Manual that will provide energy saving best practices targeting the workplace, documenting existing agency practices in this area, and establishing performance metrics to track agency energy consumption.

Lessons Learned and Looking Forward

Looking forward to 2013 and 2014, SANDAG is taking lessons learned over the first program cycle. Based on experiences and feedback from local cities, other local government partnerships, SDG&E, Roadmap staff and subcontractors; the following are planned focal areas for continued work with member agencies:

- Prepare Energy Roadmaps for the pilot cities of Carlsbad, Poway, and Solana Beach.
- Offer expanded project management assistance to undertake municipal retrofits identified in the Roadmaps.
- Provide subregional energy training and certifications useful to local government staff.
- Conduct outreach on streetlight retrofit options to cities that have not replaced municipal streetlights.

In addition, SANDAG plans to collaborate on several efforts with other local government partners such as the City of Chula Vista, City of San Diego, County of San Diego, and San Diego Unified Port District. CCSE and SDG&E also would support program implementation in the following areas:

- Introduction and expansion of a San Diego Regional Climate Collaborative.
- Support to Energy Upgrade California home retrofit programs including workforce training and local government outreach to their communities.

Key Staff Contact: Susan Freedman, (619) 699-7387, Susan.Freedman@sandag.org

Attachment: 1. City of Escondido City Hall Energy Report Card
City of Escondido Energy Report Card
City Hall
201 N BROADWAY
ESCONDIDO, CA 92025-2709
Billing Analysis and Benchmarking
6/6/2011

BILLING DATA

Site Data
Facility Square Footage 128,000 sq ft
Electrical Meter No. 1467585
Electrical Rate/Tariff G706CP2
Gas Meter No. 766883
Gas Rate/Tariff GIN3

12-Month Consumption Summary
Annual Electrical Consumption 956,712 kWh/yr
Max Demand 157.6 kW
Annual Gas Consumption 3,003 Therms/yr

12-Month Energy Cost Summary
Electrical Energy Cost $33,432
Electrical Demand Cost $45,056
Natural Gas Cost $2,265
Taxes and Fees $758
Other Costs $5,912
Total $135,444

* Additional Meter Numbers are listed on the back side of the Energy Report Card

BASELINE

Energy Star Benchmarking (Energy Use Intensity)
National Average Source EUI 365.9 kWh/sq ft
City Source EUI 205.7 kWh/sq ft
Difference 37.2%

California End-User Survey (CEUS) Energy Density Data
Building Type: Large Office
Electrical Energy Density 9.0 kWh/sq ft/yr
Electrical Energy Density Standard 29.2 kWh/sq ft/yr
Gas Energy Density 0.03 Therms/sq ft/yr
Gas Energy Density Standard 1.33 Therms/sq ft/yr

12-Month GHG Emissions
Direct GHG Emissions 16.0 (tCO2e)
Indirect GHG Emissions 315.4 (tCO2e)
Total GHG Emissions 331.5 (tCO2e)

BUILDING ENERGY USE BY SYSTEM

Electrical Energy Use Itemization

<table>
<thead>
<tr>
<th>Description</th>
<th>System Category</th>
<th>kWh/yr</th>
<th>Percent of Total Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior Lighting</td>
<td>Outdoor Lighting</td>
<td>37,100</td>
<td>3.0%</td>
</tr>
<tr>
<td>Interior Lighting</td>
<td>Indoor Lighting</td>
<td>212,000</td>
<td>22.3%</td>
</tr>
<tr>
<td>Misc</td>
<td>Equipment</td>
<td>107,660</td>
<td>11.3%</td>
</tr>
<tr>
<td>Motors Elevators</td>
<td>Equipment</td>
<td>117,660</td>
<td>12.2%</td>
</tr>
<tr>
<td>Office Equipment</td>
<td>Equipment</td>
<td>212,000</td>
<td>22.3%</td>
</tr>
<tr>
<td>Refrigeration</td>
<td>Equipment</td>
<td>18,600</td>
<td>1.9%</td>
</tr>
<tr>
<td>Ventilation</td>
<td>HVAC</td>
<td>265,000</td>
<td>27.8%</td>
</tr>
</tbody>
</table>

Total 561,420 100.00%

Natural Gas Energy Use Itemization

<table>
<thead>
<tr>
<th>Description</th>
<th>System Category</th>
<th>Therms</th>
<th>Percent of Total Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water heating</td>
<td>DHW</td>
<td>3,000</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Total 3,000 100.0%

Prepared by EFM Solutions through SANDAG Energy Roadmap Program, 2011.
PHASE 1 AUDIT SUMMARY

Targeted Systems and Observations

The Escondido City Hall is a 106,000 sqft facility which houses city department offices, city official offices and council chambers. The building operates approximately 45 to 50 hours per week.

The following systems were included in the phase 1 audit:

- HVAC
- Indoor Lighting
- Outdoor Lighting
- Other Building Support Equipment (Backup generator, Elevators & Fountain)

HVAC - The building receives chilled and heating hot water from the central plant on Escondido Blvd. Hot/cold deck air handler units mix hot and cold air to supply the needed temperature air to the conditioned spaces. The building is controlled by a Honeywell Niagara control system.

Indoor Lighting - Conference and public spaces are lit by CFL in recessed cans on the first and second floor. Offices are lit by fluorescent hanging pendants providing indirect lighting to the occupied spaces. A skylight is located in the center of the building providing light to above the bottom of the main staircase to the second floor.

Outdoor Lighting - The parking lot is lit by 180 watt low pressure sodium (LPS) lamps and fixtures controlled by timer. Architectural park lighting with high pressure sodium (HPS) lamps light the walkway on the North side of the building and continue into Grape Day Park. Exterior wall mounted fixtures are tube shaped with a CFL lamp on the bottom and top, also controlled by timer. The covered wellway on North Broadway is lit by blue fluorescent lamps in large hanging pendants.

Other - A fountain is located in the center of the radius of the building and runs during the day. The building has two passenger elevators. Office spaces are equipped with typical office equipment. A backup generator is on site. Based on the gas usage profile there is a seasonal gas load that is not presently accounted for.

Potential Energy Conservation Measures

ECM 1: Replace the electric resistance heater on the generator engine block with a heat pump. Savings will be achieved by reducing the power required to maintain the engine block temperature.

ECM 2: Replace HPS overhead lighting with an alternative technology such as Induction, LED or T5HO

ECM 3: Install VFDs on all air conditioning systems. VFDs allow for precision control of the supply air flow rate. This will result in lower operating costs.

ECM 4: Install server and workstation software to implement computer shutdown during unoccupied hours. Software is available to implement full workstation shutdowns while allowing remote startup to complete regular updates.

ECM 5: Install remote light control in stairwells with occupancy sensors to lower light levels when the stairwells are unoccupied.

ECM 6: Consider installing VFD on elevator motor to slow the pump. This will result in a shorter elevator ride but may provide significant savings.

ECM 7: Install ultra-low flow faucets in all restrooms to reduce water use for hand washing. Possible gas savings may result from using less hot water.

ECM 8: Verify that air handlers mixing cold and hot air are not doing so excessively. Some air handlers with a cold deck and a hot deck do not properly mix cold water flow when it is not called for by the system. This can result in excessive heating hot water use.
STATUS ON SAN DIEGO GAS & ELECTRIC GENERAL RATE CASE

Introduction

The Regional Energy Working Group (EWG) discussed aspects of the original and revised San Diego Gas & Electric (SDG&E) Application (A.) 11-10-002, for Phase 2 of its General Rate Case (GRC-2) since November 2011. Public participation hearings were held in San Diego County last month. Afternoon and evening hearings occurred at venues in Chula Vista, Kearny Mesa, and Escondido. The GRC-2 is identified as A.11-11-002 by the California Public Utilities Commission (CPUC) and can be accessed online at: http://docs.cpuc.ca.gov/published/proceedings/A1110002.htm.

Proceeding Update

On July 10, 2012, CPUC Administrative Law Judge (ALJ) Yip-Kikugawa issued a ruling in response to schedule revisions proposed by SDG&E. The revision would extend the time period for parties to pursue settlement negotiations to two months. In doing so, the proceeding’s completion will be postponed until 2013. The revised schedule is below.

<table>
<thead>
<tr>
<th>EVENT</th>
<th>REVISED DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concurrent Rebuttal Testimony</td>
<td>July 17, 2012 July 10, 2012</td>
</tr>
<tr>
<td>Mandatory Settlement Conference</td>
<td>July 25, 2012 July 16, 2012 (week of)</td>
</tr>
<tr>
<td></td>
<td>(extended timeframe for 2 months)</td>
</tr>
<tr>
<td>Evidentiary Hearings</td>
<td>October 9 - October 19, 2012</td>
</tr>
<tr>
<td></td>
<td>July 23 – August 3, 2012</td>
</tr>
<tr>
<td>Opening Briefs</td>
<td>November 16, 2012 August 24, 2012</td>
</tr>
<tr>
<td>Reply Briefs</td>
<td>December 14, 2012 September 14, 2012</td>
</tr>
<tr>
<td>Proposed Decision</td>
<td>March 2013 November 2012</td>
</tr>
<tr>
<td>Final Decision</td>
<td>April 2013 December 2012</td>
</tr>
</tbody>
</table>

Key Staff Contact: Susan Freedman, (619) 699-7387, Susan.Freedman@sandag.org
About Community Choice Aggregation

Regional Energy Working Group

July 26, 2012

Overview

- What is Community Choice Aggregation?
- Regional Energy Strategy Goals
- CCA Background
- CCAs in California
- Considerations in CCA Formation
- Policy Matters
Community Choice Aggregation

• Allows local governments to procure electricity for residents and businesses
• IOU continues to deliver electricity through existing network
• Local governments are exploring CCA as a means to acquire more renewable energy
• Marin Clean Energy
  – Only CCA currently operating in California

Regional Energy Strategy

• Goals for increasing electricity generated from renewable resources
  – Support a 33 percent RPS by 2020 and 45 percent RPS by 2030
  – Increase total amount of clean distributed generation in the San Diego region
CCA Background

- Assembly Bill 117 (2002)
  - Enabled formation of CCAs and provided guidelines for CCA and IOU coordination
- IOUs still deliver electricity and provide other customer services
- Customers receive one bill from IOU
  - CCA generation charge
  - Other charges from IOU
- “Opt-out” program for customers

CCAs in California

- Marin Clean Energy (May 2010)
  - Managed by 11 cities and Marin County
  - Began with 8,000 customers, plans to expand to 100,000 in 2013
  - 50 percent or 100 percent renewable
- CleanPowerSF (expected 2013)
  - San Francisco working to establish since 2004
  - Plans to offer 100 percent renewable energy
Considerations in CCA formation

- Potential benefits
  - Local economic development
  - Higher percentage renewable generation
  - Incentives for small renewable generation

- Potential risks
  - Procurement at reasonable costs
  - Keeping customer costs below IOU
  - Ongoing regulatory proceedings

Policy Matters

- Level of renewable energy desired
  - 33 % vs. 50 % vs. 100%
  - Timeframe for achieving RPS

- Costs to customers
  - Competitive with IOU rates
  - Protection for low-income ratepayers

- DG incentives – Feed in tariff and NEM
  - Can be greater than IOU incentives
  - Impacts to non-DG customers
About Community Choice Aggregation

Allison King, Regional Energy/Climate Planner

Allison.King@sandag.org
Overview

- What is an Energy Roadmap?
- Roadmap services and reports
- Implementing the Roadmaps
- Program status and savings to cities
- Lessons learned and looking forward
Sample Energy Roadmaps

Key Points

- Build on existing efforts at each jurisdiction
  - General plans, climate plans, sustainability projects
- Leverage other regional programs
  - SANDAG iCommute, CA Center for Sustainable Energy, and SDG&E
- Technology neutral, non-biased
  - Economic and energy-saving potential
- Tools to document and track energy performance and benchmarking
- Collaboration among City, SANDAG and SDG&E
Energy Roadmap Chapters

**Saving Energy in City Operations**

1. Building retrofits
2. Technology demos
3. Greening the fleet
4. Staff training
5. Employee commutes

**Saving Energy in the Community**

6. Planning measures
7. Programs for residents & local businesses
8. Green jobs and workforce training

Energy “Report Cards” with Benchmarks
Save Energy in City Buildings and Facilities

Energy is a major operating cost for local governments. By evaluating energy usage in city government buildings and facilities ("sites") and identifying energy-saving opportunities, Santee can reduce its energy-related operating costs and use the savings for other government services. This chapter highlights:

- Free site assessments provided to the city,
- Energy-saving opportunities identified at each one, and
- Costs and payback to the city to undertake the energy-saving projects.

**Energy Conservation Measure Economics**

<table>
<thead>
<tr>
<th>Location</th>
<th>Measure</th>
<th>Gross Project Cost</th>
<th>Total SDG&amp;E Incentives</th>
<th>Net Project Cost</th>
<th>Simple Payback (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Hall</td>
<td>Indoor lighting</td>
<td>$14,734</td>
<td>$3,956</td>
<td>$10,778</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>Controls/sensor</td>
<td>$1,678</td>
<td>$310</td>
<td>$678</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td><strong>Subtotal</strong></td>
<td><strong>$16,412</strong></td>
<td><strong>$4,266</strong></td>
<td><strong>$11,146</strong></td>
<td><strong>1.5</strong></td>
</tr>
<tr>
<td>Civic Center</td>
<td>Lighting</td>
<td>$23,584</td>
<td>$3,997</td>
<td>$19,587</td>
<td>2.3</td>
</tr>
<tr>
<td>Parking Structure</td>
<td><strong>Subtotal</strong></td>
<td><strong>$23,584</strong></td>
<td><strong>$3,997</strong></td>
<td><strong>$19,587</strong></td>
<td><strong>2.3</strong></td>
</tr>
<tr>
<td>Community</td>
<td>Lighting</td>
<td>$3,600</td>
<td>$474</td>
<td>$5,126</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td><strong>Subtotal</strong></td>
<td><strong>$3,600</strong></td>
<td><strong>$474</strong></td>
<td><strong>$5,126</strong></td>
<td><strong>5.6</strong></td>
</tr>
<tr>
<td>Fire Station 1</td>
<td>Lighting</td>
<td>$6,420</td>
<td>$826</td>
<td>$5,794</td>
<td>6.4</td>
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<tr>
<td></td>
<td>Backup generator</td>
<td>$2,000</td>
<td>$259</td>
<td>$1,741</td>
<td>8.3</td>
</tr>
</tbody>
</table>

Santee could save more than $78,000 annually from energy-efficiency upgrades and rate changes identified at city sites.

Local Planning Component

**Leverage Planning and Development Authority**

Local governments have the opportunity to promote energy-efficiency in their communities by leveraging their authority over local planning and development activity. This chapter identifies the following ways in which the City of San Marcos could use its role in planning and development to promote energy savings from electricity, natural gas, and transportation fuel.

1. Integrate energy-saving measures into planning and development
2. Include transportation demand management in development review
3. Enable building energy retrofit projects

First, it is important to note that the city already uses its role in planning and
Education and Training

Market Energy Programs to Local Residents, Schools, and Businesses

This chapter provides Escondido with internet links to existing energy efficiency and fuel-saving resources that the city could include on its Go Green Escondido Website, newsletters, and E-Alerts. This would enable Escondido to serve as a conduit to its constituents on energy-saving residential, commercial, and school programs. The city could help promote messages of sustainability that foster a greater local understanding of the connection between energy/fuel use and environmental impacts. The city also could become a local government partner with national energy-saving educational campaigns like ENERGY STAR and WaterSense.

California’s Vision for Marketing, Education, and Outreach

Californians will be engaged as partners in the state’s energy-efficiency, demand-side management, and clean energy efforts by becoming fully informed of the importance of energy-efficiency and their opportunities to act.

California Long-Term Energy Efficiency Strategic Plan

Petroleum Reduction and Alt. Fuels

*Not funded through SDG&E LGP
Status of Local Government Energy Roadmaps

**Completed**
- Encinitas
- Escondido
- Imperial Beach
- Oceanside
- Santee
- San Marcos
- Vista

**Final Review**
- County*
- Coronado
- Chula Vista*
- Del Mar
- La Mesa
- National City

**Mid 2012**
- El Cajon
- Lemon Grove

**Underway**
- Coronado
- Chula Vista*
- Del Mar
- La Mesa
- National City

**Late 2012**
- Carlsbad
- Poway
- Solana Beach
- City San Diego*

*Transportation-Only Roadmap

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Energy Bill Savings Identified at Local Sports Parks so far...

<table>
<thead>
<tr>
<th>Member Agencies</th>
<th>Annual Bill Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escondido</td>
<td>$ 113,000</td>
</tr>
<tr>
<td>La Mesa</td>
<td>$ 18,800</td>
</tr>
<tr>
<td>Oceanside</td>
<td>$ 80,000</td>
</tr>
<tr>
<td>San Marcos</td>
<td>$ 122,600</td>
</tr>
<tr>
<td>Santee</td>
<td>$ 45,900</td>
</tr>
<tr>
<td>Vista</td>
<td>$ 72,300</td>
</tr>
</tbody>
</table>

*Savings derived from switch to relatively new outdoor lighting rates.*
## Estimated Savings to City from Energy Efficiency Upgrades

<table>
<thead>
<tr>
<th>Member Agencies</th>
<th>Annual Bill Savings ($/year)</th>
<th>Annual Energy Savings (kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encinitas</td>
<td>$24,600</td>
<td>206,300</td>
</tr>
<tr>
<td>Escondido</td>
<td>$40,000</td>
<td>341,800</td>
</tr>
<tr>
<td>Imperial Beach</td>
<td>$7,300</td>
<td>56,700</td>
</tr>
<tr>
<td>La Mesa</td>
<td>$35,900</td>
<td>123,600</td>
</tr>
<tr>
<td>Oceanside</td>
<td>$105,800</td>
<td>890,400</td>
</tr>
<tr>
<td>San Marcos</td>
<td>$40,500</td>
<td>335,400</td>
</tr>
<tr>
<td>Santee</td>
<td>$92,600</td>
<td>307,400</td>
</tr>
<tr>
<td>Vista</td>
<td>$51,200</td>
<td>464,700</td>
</tr>
</tbody>
</table>

*Zero-percent “on bill” loans from SDG&E can cover ALL upfront equipment and installation costs to City.

## Continuing Efforts with Local Jurisdictions

- Expanded engineering and project mgt. assistance (Implementing retrofit measures)
- Energy planning (Commercial/res finance, EUC, permit streamlining...)
- Training opportunities (T24, CEM, LEED, etc.)
- Beacon Award applications
- Funding and resource opportunities
- Performance monitoring & updates
Lessons Learned

• Gain buy-in for energy program
  - Outreach to planning directors, public works directors, city managers, Electeds, and own staff

• Flexible timelines for each city
  - Need to document/streamline more

• Ensure regular communication with City, utility and subcontractors

• Determine appropriate staffing level to meet needs of local governments

• Expand project mgt assistance