MEETING NOTICE AND AGENDA

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

Thursday, May 25, 2017
11:30 a.m. to 1 p.m.

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

Please take the elevator to the 8th floor to access the meeting room.

Staff Contact: Anna Lowe
(619) 595-5603
anna.lowe@sandag.org

AGENDA HIGHLIGHTS

- UNIVERSITY OF SAN DIEGO CLIMATE ACTION PLAN
- SAN DIEGO COUNTY WATER AUTHORITY ENERGY PROJECTS

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Welcome to SANDAG. Members of the public may speak to the Working Group on any item at the time the Working Group is considering the item. Please complete a Speaker’s Slip, and then present the slip to the Clerk of the Working Group. Members of the public may address the Working Group on any issue under the agenda item entitled Public Comments/Communications/Member Comments. Public speakers are limited to three minutes or less per person unless otherwise directed by the Chair. The Working Group may take action on any item appearing on the agenda.

Public comments regarding the agenda can be sent to SANDAG via comment@sandag.org. Please include the agenda item, your name, and your organization. Email comments should be received no later than 12 noon, two working days prior to the meeting. **Any handouts, presentations, or other materials from the public intended for distribution at the meeting should be received by the Clerk of the Working Group no later than 12 noon, two working days prior to the meeting.**

In order to keep the public informed in an efficient manner and facilitate public participation, SANDAG also provides access to all agenda and meeting materials online at sandag.org/meetings. Additionally, interested persons can sign up for e-notifications via our e-distribution list at either the SANDAG website or by sending an email request to webmaster@sandag.org.

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<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>RECOMMENDATION</th>
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<tbody>
<tr>
<td>1.</td>
<td>WELCOME AND INTRODUCTIONS</td>
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<tr>
<td>+2.</td>
<td>APPROVAL OF MEETING MINUTES</td>
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<td>The Regional Energy Working Group (EWG) is asked to review and approve the minutes from its February 23, 2017, meeting.</td>
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<td>3.</td>
<td>PUBLIC COMMENTS/COMMUNICATIONS/MEMBER COMMENTS</td>
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<td></td>
<td>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 EWG members. Public speakers are limited to three minutes or fewer per person. EWG members also may provide information and announcements under this agenda item.</td>
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<tr>
<td>+4.</td>
<td>SAN DIEGO REGIONAL ELECTRIC VEHICLE STATISTICS</td>
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<td>The electric vehicle market in the San Diego region is rapidly growing. SANDAG has committed to provide the EWG with monthly updates on regional Clean Vehicle Rebate Project statistics.</td>
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<td>5.</td>
<td>UNIVERSITY OF SAN DIEGO CLIMATE ACTION PLAN</td>
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<td>(Michael Catanzaro, University of San Diego)</td>
<td>Michael Catanzaro, University of San Diego (USD) Director of Sustainability, will present an overview of the Climate Action Plan (CAP) that was adopted by USD in November 2016. The USD CAP is a framework to reduce USD’s greenhouse gas emissions. More information on the CAP is available at sandiego.edu/climate-action-plan.</td>
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<td>6.</td>
<td>SAN DIEGO COUNTY WATER AUTHORITY ENERGY PROJECTS</td>
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<td>(Kelly Rodgers, San Diego County Water Authority)</td>
<td>Kelly Rodgers, San Diego County Water Authority (Water Authority) Energy Program Manager, will present on projects and programs the Water Authority is working on to help them better anticipate and adapt to the impacts of climate change. The Water Authority has been promoting energy and water conservation, developing renewable energy sources, and reducing the environmental impact of Water Authority operations for many years.</td>
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</table>
STATE ACTIVITIES ON ENERGY AND CLIMATE CHANGE  
(Allison Wood)

Staff will provide an update on state activities as well as legislative bills that have been of interest to the EWG. Members are asked to review the bills and share legislation that would support implementation of the Regional Energy Strategy.

UPCOMING MEETINGS

The next meeting of the EWG is scheduled for Thursday, June 22, 2017, at 11:30 a.m.

+ next to an item indicates an attachment
May 25, 2017

AGENDA ITEM NO.: 2

Action Requested: APPROVE

FEBRUARY 23, 2017, MEETING MINUTES File Number 3200300

1. WELCOME AND INTRODUCTIONS

The Regional Energy Working Group (EWG) meeting was called to order by Chair Chris Orlando, City of San Marcos, at 11:34 a.m.

2. APPROVAL OF MEETING MINUTES (APPROVE)

Action: Upon a motion by Councilmember Carrie Downey (City of Coronado) and a second by Cameron Durckel (San Diego Gas & Electric), the EWG approved the January 26, 2017, meeting minutes. Yes — Chair Orlando, Vice Chair Scott Anders (Energy Policy Initiatives Center, University of San Diego School of Law), Councilmember Downey, Brendan Reed (San Diego County Regional Airport Authority), Mr. Durckel, Lisa Kay (San Diego Regional Chamber of Commerce), Renée Yarmy (San Diego Unified Port District), Dave Weil (University of California, San Diego), Debra Kelley (San Diego Regional Clean Cities Coalition), and Dave Grubb (Sierra Club). No — None. Abstain — None. Absent — East County Subregion, North Coastal Subregion, City of San Diego, Metropolitan Transit System, Environmental Health Coalition, North County Economic Development Council, and Center for Sustainable Energy.

3. PUBLIC COMMENTS/COMMUNICATIONS/MEMBER COMMENTS

John Wotzka, member of the public, submitted written comments and spoke about energy-related news, which included nuclear power generation and associated issues, renewable energy, traditional fossil fuel and power plant issues, alternative fuels and shale gas, climate change impacts and greenhouse gas (GHG) emissions, the regional energy strategy, and renewable and energy financial matters.

REPORTS

4. SAN DIEGO REGIONAL ELECTRIC VEHICLE STATISTICS (INFORMATION)

The electric vehicle market in the San Diego region is rapidly growing. Updates from the Clean Vehicle Rebate Project on regional vehicle growth were attached.

Action: This item was presented for information.
5. **SANDAG 2017 LEGISLATIVE PRIORITIES (INFORMATION)**

Anna Lowe, Associate Regional Energy/Climate Planner, presented the item.

The Board of Directors approves agency legislative priorities every year. Staff briefly discussed the 2017 Legislative Priorities.

**Action:** This item was presented for information.

6. **CITY OF SAN DIEGO CLIMATE ACTION PLAN UPDATE (INFORMATION)**

Cody Hooven, City of San Diego, presented the item.

The City of San Diego adopted their Climate Action Plan (CAP) in December of 2015. Since then, they have been working diligently to implement it. Last year, the city released the CAP Consistency Checklist for development projects and the 2016 Annual Report, which describes progress toward reaching the city's GHG emissions reductions targets and how they plan to continue implementing the CAP moving forward. The city's Annual Report can be viewed at [sandiego.gov/sustainability](http://sandiego.gov/sustainability). Ms. Hooven provided the EWG with an update on the city's CAP efforts.

**Action:** This item was presented for information.

7. **HELIX WATER DISTRICT CLIMATE PLANNING EFFORTS (INFORMATION)**

Joe Garuba, Helix Water District, presented the item.

Many of the local jurisdictions and public agencies in the San Diego region have adopted, are currently preparing, or are considering the development of a CAP or sustainability plan. Mr. Garuba presented on some of the climate planning efforts underway at Helix Water District.

**Action:** This item was presented for information.

8. **PLUG-IN SAN DIEGO PROGRAM EXTENSION (INFORMATION)**

Ms. Lowe and Jeff Hoyos, Regional Energy/Climate Planner, presented the item.

SANDAG has been awarded a two-year, $300,000 grant from the California Energy Commission to continue and expand upon the existing Plug-in San Diego Program. Staff provided an update on the current program and described how it will expand with the new award.

**Action:** This item was presented for information.

9. **UPCOMING MEETINGS (INFORMATION)**

The next meeting of the EWG is scheduled for Thursday, March 23, 2017, at 11:30 a.m.

Chair Orlando adjourned the meeting at 1 p.m.
### REGIONAL ENERGY WORKING GROUP
#### MEETING ATTENDANCE FOR FEBRUARY 23, 2017

<table>
<thead>
<tr>
<th>REPRESENTATION</th>
<th>JURISDICTION/ORGANIZATION</th>
<th>NAME</th>
<th>MEMBER/ALTERNATE</th>
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<tr>
<td>North County Inland Subregion</td>
<td>City of San Marcos</td>
<td>Hon. Chris Orlando, Chair</td>
<td>Member</td>
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<td>City of Vista</td>
<td>Hon. Amanda Rigby</td>
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<td>Energy Non-Profits</td>
<td>Energy Policy Initiatives Center, University of San Diego School of Law</td>
<td>Scott Anders, Vice Chair</td>
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<td>Nilmimi Silva-Send</td>
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<td>Center for Sustainable Energy</td>
<td>Len Hering</td>
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<td>Hanna Grene</td>
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<td>San Diego Regional Chamber of Commerce</td>
<td>Mike Evans</td>
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<td>Lisa Kay</td>
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<td>Charles Marchesano</td>
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<td>Susan Freed</td>
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<td>Cleantech San Diego</td>
<td>Jason Anderson</td>
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<td>Alyssa Gutner-Davis</td>
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<td>San Diego Gas &amp; Electric</td>
<td>Kendall Helm</td>
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<td>Cameron Durckel</td>
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<td>Environment/Social Justice</td>
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<td>Sierra Club</td>
<td>Paul Webb</td>
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<td>Dave Grubb</td>
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<td>Other Public Agencies</td>
<td>San Diego County Regional Airport Authority</td>
<td>Brendan Reed</td>
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<td>Brett Caldwell</td>
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<td>San Diego Unified Port District</td>
<td>Renée Yarmy</td>
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<td>Rachel Stern</td>
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<td>Public Transit Operators</td>
<td>Metropolitan Transit System</td>
<td>Sharon Cooney</td>
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<td>South County Subregion</td>
<td>City of Coronado</td>
<td>Hon. Carrie Downey</td>
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<td>Transportation Fuels</td>
<td>San Diego Regional Clean Cities Coalition</td>
<td>Debra Kelley</td>
<td>Member</td>
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<td>Jennifer Case</td>
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<td>Universities</td>
<td>San Diego State University</td>
<td>Dr. Heather Honea</td>
<td>Alternate</td>
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<td>University of California, San Diego</td>
<td>Dave Weil</td>
<td>Member</td>
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<td>Mike Grim, City of Carlsbad</td>
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<td>Katie Hentrich</td>
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<td>Coleen Wisniewski, City of Chula Vista</td>
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<td>Jeff Hoyos</td>
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<td>Jeff Wyner, City of Escondido</td>
<td>Jeff Wyner, City of Escondido</td>
<td>Anna Lowe</td>
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<td>Mo Lahsaie, City of Oceanside</td>
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<td>Lorie Cosio-Azar, City of San Diego</td>
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<td>Jack Hogan, Clean Energy</td>
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<td>Joe Garuba, Helix Water District</td>
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<td>John G. Wotzka, member of the public</td>
<td>John G. Wotzka, member of the public</td>
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<td>Cesar Rios, Rio Solutions</td>
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SANDAG STAFF MEMBERS LISTED BELOW

Keith Greer
Katie Hentrich
Jeff Hoyos
Anna Lowe
Rob Rundle
Number of Rebates

Income criteria *
Criteria modified *

Data is updated monthly. Last updated: May 01, 2017

* Please select the *Notes tab of this dashboard for additional details and links to related information.

STATE ACTIVITIES ON ENERGY AND CLIMATE CHANGE  

Introduction

This report summarizes activities taking place at the state level related to energy and climate change, including regulatory proceedings, planning efforts, implementation of past legislation, and pending legislation. The Regional Energy Working Group (EWG) members are asked to provide input on topics of interest for future EWG meetings and discuss additional state activities and/or new legislation that help to implement the Regional Energy Strategy (RES) goals.

2017 State Legislation

The bill introduction deadline for 2017 bills was February 17, 2017. The deadline for fiscal bills to pass out of a fiscal committee is May 26, 2017. Attachment 1 summarizes bills related to energy and climate change.

Energy and Climate Change Activities

While not an exhaustive list, the following sections summarize activities underway across several state agencies related to greenhouse gas (GHG) reduction, energy efficiency, renewable energy, alternative fuels and zero-emission vehicles (ZEVs), and climate adaptation. Staff monitor and/or participate in these activities as they relate to implementation of the RES. SANDAG also is a member of groups that are active in statewide energy and climate change efforts, including the San Diego Regional Climate Collaborative, Local Government Sustainable Energy Coalition, Alliance of Regional Collaboratives for Climate Adaptation (ARCCA), and San Diego Regional Clean Cities Coalition.

Greenhouse Gas Reduction

2017 Climate Change Scoping Plan Update

Governor Jerry Brown’s Executive Order B-30-15 directed the California Air Resources Board (ARB) to update the Assembly Bill (AB) 32 (Nunez, 2006) Scoping Plan to reflect a new mid-term GHG reduction target of 40 percent below 1990 levels by 2030. In 2016, the legislature passed Senate Bill (SB) 32 (Pavley, 2016), which codifies the 2030 GHG emissions reduction target. With SB 32, the legislature passed companion legislation AB 197 (Eduardo Garcia, 2016), which provides additional direction for developing the Scoping Plan. ARB is moving forward with a second update to the Scoping Plan to reflect the 2030 target.
The Proposed Scoping Plan was released in January 2017; below is a summary of the major elements of the framework to reach the 2030 GHG reduction target:

1. SB 350 (De León, 2015)
   - Achieve 50 percent Renewables Portfolio Standard by 2030
   - Double energy efficiency savings by 2030
2. Low Carbon Fuel Standard
   - Increased stringency (reducing carbon intensity 18% by 2030, up from 10% in 2020)
3. Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
   - Maintain existing GHG standards for light- and heavy-duty vehicles
   - Put 4.2 million ZEVs on the roads
   - Increase ZEV buses, delivery, and other trucks
4. Sustainable Freight Action Plan
   - Improve freight system efficiency
   - Maximize use of near-zero-emission vehicles and equipment powered by renewable energy
   - Deploy over 100,000 zero-emission trucks and equipment by 2030
5. Short-Lived Climate Pollutant Reduction Strategy
   - Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030
   - Reduce emissions of black carbon 50 percent below 2013 levels by 2030
6. SB 375 (Steinberg, 2008) Sustainable Communities Strategies
   - Increased stringency of 2035 targets
7. Post-2020 Cap-and-Trade Program
   - Declining caps, continued linkage with Québec, and linkage to Ontario, Canada
   - ARB will look for opportunities to strengthen the program to support more air quality
     - served benefits, including specific program design elements; in Fall 2016, ARB staff described
     - potential future amendments including reducing the offset usage limit, redesigning the
     - allocation strategy to reduce free allocation to support increased technology and energy
     - investment at covered entities, and reducing allocation if the covered entity increases
     - criteria or toxics emissions over some baseline
8. 20 percent reduction in GHG emissions from the refinery sector
    base as a net carbon sink

ARB accepted comments on the Proposed Scoping Plan and plans to consider the Final Proposed Scoping Plan at a Board meeting in June. More information is available at arb.ca.gov/cc/scopingplan/scopingplan.htm.

Cap-and-Trade Programs

As part of the FY 2016-17 budget process, $900 million was appropriated to GHG reducing programs, including $650 million for transportation and sustainable communities programs, $90 million for clean energy and energy efficiency programs, and $160 million for natural resources and waste diversion programs. In March, ARB submitted the 2017 Annual Report to the legislature on the status of projects funded from the Greenhouse Gas Reduction Fund (GGRF). The Annual Report includes summary statistics on program outcomes and fiscal data as well as project profiles.
The Annual Report is accompanied by the interactive GGRF Project Map. The Budget Appropriations, Annual Report, Project Map, and information on programs funded by GGRF are available at arb.ca.gov/auctionproceeds.

**Energy Efficiency**

**California Energy Efficiency Coordinating Committee**

The California Energy Efficiency Coordinating Committee (CAEECC) and its subcommittees were authorized by California Public Utilities Commission (CPUC) Decision 15-10-028 to serve as a venue by which stakeholders could provide early input into the development of the Program Administrators’ five-year energy efficiency business plans and their associated implementation plans. Program Administrators submitted their business plans to the CPUC in January of this year. Since that time, all business plan proceedings were consolidated into one, and the scope and schedule of the ratesetting proceeding has been defined (A.17-01-013). There is minimal CAEECC activity at this time in the proceeding. Online resources and a calendar of events for the CAEECC activities are available at caeecc.org. The Scoping Memo is available on the CPUC website at docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M183/K956/183956504.pdf.

**Building Energy Use Benchmarking and Public Disclosure Program**

AB 802 (Williams, 2015) mandates the establishment of a new statewide building energy use benchmarking and public disclosure program and requires utilities to provide energy consumption data for covered buildings to the building owners upon request. On July 22, 2016, California Energy Commission (CEC) staff held the first workshop regarding proposed draft regulations. After an open comment period, the CEC posted new draft regulations on February 23, 2017, and had an open comment period through April 10, 2017. Currently, CEC is reviewing this second round of public comment submissions and is preparing the final regulations. Once the CEC adopts the regulations, anticipated later this year, there is a three-month waiting period before the regulations would go into effect. More information is available at energy.ca.gov/benchmarking.

**Renewable Energy**

**Consumer and Retail Choice, the Role of the Utility, and an Evolving Regulatory Framework**

On May 8, 2017, the CPUC and CEC published a staff white paper assessing how the impact of technology-driven consumer electricity choices are changing California's retail electric market. The white paper is a precursor to the CPUC and CEC’s May 19, 2017, En Banc on Consumer and Retail Energy Choice. The CPUC and CEC are exploring the unprecedented changes to California’s electric sector as estimates show that by later this year, up to 25 percent of investor-owned utility (IOU) retail load will be effectively unbundled and served by a non-IOU source or provider, such as rooftop solar, Community Choice Aggregator (CCA), or direct-access provider. The CPUC intends to open a Rulemaking and coordinate closely with the CEC and California Independent System Operator to further examine the impact of these changes on the current structure of the retail electric market and the three large IOUs. The staff white paper and information on the En Banc are available at cpuc.ca.gov/retailchoiceenbanc.
San Diego Gas & Electric Independent Marketing Division

On April 6, 2017, the CPUC approved the San Diego Gas & Electric (SDG&E) Advice Letter (AL 3035-E) requesting approval of SDG&E’s required Compliance Plan pursuant to Decision 12-12-036 (established the Code of Conduct) and Resolution E-4874. The Compliance Plan is to ensure that Independent Marketing Divisions (IMD) established to market or lobby on CCA issues do not violate the Code of Conduct.

SDG&E originally filed its Compliance Plan in AL 2822-E. On August 18, 2016, the CPUC issued Resolution E-4874, requiring SDG&E to resubmit their Compliance Plan. The CPUC approved the IMD, known as Sempra Services Corporation, with the stipulation that additional reporting requirements were necessary concerning the implementation of SDG&E’s examination of job functions of shared services. SDG&E is the first California utility approved to establish an IMD.

Zero-Emission Vehicles and Alternative Fuels

California Sustainable Freight Action Plan

The California Sustainable Freight Action Plan (Action Plan) aims to improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of the state’s freight system. ARB, in coordination with several other state agencies, submitted the Action Plan to the Governor’s office in July 2016. Now, a series of workshops are planned to discuss implementation of the Action Plan; a San Diego workshop is scheduled for Wednesday, May 31, 2017. More information is available at casustainablefreight.org.

Senate Bill 350 Transportation Electrification

The CPUC is collaborating with ARB and the CEC to implement requirements from SB 350, which orders the CPUC to direct the six IOUs to file applications for programs that accelerate widespread transportation electrification. In January 2017, the three large IOUs filed applications containing proposed transportation electrification projects totaling an investment of $1 billion. SDG&E’s application includes a proposed investment of $18 million across six priority review projects: Airport Ground Support Equipment, Electrify Local Highways, Medium Duty/Heavy Duty and Forklift Port Electrification, Fleet Delivery Services, Green Taxi/Shuttle/Rideshare, and Dealership Incentives; and $225 million for a standard review project that would install 90,000 residential Level 2 electric vehicle charging stations. The proposed priority review projects of the IOUs will be discussed at a workshop on May 17, 2017. The CPUC anticipates a decision on the priority review projects in October 2017. More information is available at cpuc.ca.gov/sb350te.

Climate Adaptation and Resiliency

In response to Governor Jerry Brown’s Executive Order B-30-15, as well as legislation passed in 2015, several state efforts are underway to address climate adaptation and resiliency. The Executive Order directs state agencies to consider climate adaptation in their decision-making, including planning, grants, infrastructure, permitting, and local assistance. The Governor’s Office of Planning and Research (OPR) has formed a Technical Advisory Group to inform the development of guidance to state agencies.
SB 246 (Wieckowski, 2015) directs OPR to establish the Integrated Climate Adaptation and Resiliency Program (ICARP) to coordinate state, regional, and local activities. Staff monitors and participates in these efforts via the San Diego Regional Climate Collaborative and coordinates with other regions across the state as part of ARCCA. ICARP is responsible for coordinating and maintaining the State Adaptation Clearinghouse, which serves as a centralized source of information for climate-adaptation-related resources (e.g., case studies, policy and guidance, science and projections). These resources can assist in guiding decision makers at the state, regional, and local levels when planning for and implementing climate adaptation projects. More information is available at opr.ca.gov/s_icarpclearinghouse.php.

Rising Seas in California: An Update on Sea Level Rise Science

The California Ocean Protection Council (OPC) and the California Natural Resources Agency (CNRA), in collaboration with OPR, the CEC, and the California Ocean Science Trust are updating statewide guidance to reflect recent advances in ice loss science and projections of sea level rise. The updated guidance will focus on the needs of state agencies and local governments and will help cities and counties as they comply with a new law that requires them to incorporate climate change into their planning efforts. The updated guidance also will assist state agencies as they prepare for and adapt to climate change, as directed by Executive Order B-30-15. OPC will hold a series of public meetings to share the findings of a recent science report and solicit feedback on a draft policy guidance framework. A San Diego workshop is scheduled for Monday, June 12, 2017. More information is available at opc.ca.gov/climate-change/updating-californias-sea-level-rise-guidance.

Safeguarding California Plan: 2017 Update

AB 1482 (Gordon, 2015) directs the CNRA to update Safeguarding California, California’s Climate Adaptation Strategy, by July 2017 and every three years thereafter. CNRA is currently seeking public comment on a draft of the Safeguarding California Plan: 2017 Update. The 2017 update builds on eight years of action by various state departments and shows progress since the release of the first California Climate Adaptation Strategy in 2009. This 2017 update provides recommendations and next steps to advance adaptation in ten sectors that include water, agriculture, public health, and biodiversity. CNRA will hold a series of public meetings to gather input. A San Diego workshop is scheduled for Monday, June 12. The Draft Plan and more information on the upcoming workshops are available at resources.ca.gov/climate/safeguarding.

Next Steps

Staff will continue to provide updates to the EWG on relevant state legislation and activities.

Attachment:  1. California State Legislature: Energy Legislation as of May 18, 2017

Key Staff Contact: Allison Wood, (619) 699-1973, allison.wood@sandag.org
**AB 33** (Quirk D) **Transportation electrification: electric vehicle service equipment: electrical corporations: rates**

**Status:** 5/17/2017-In committee: Set, first hearing. Referred to Appropriations (APPR.) suspense file.

**Summary:** Would require the California Public Utilities Commission (CPUC), by March 30, 2018, in consultation with the State Air Resources Board (ARB) and the Energy Commission, to authorize electrical corporations to offer programs and investments in electric vehicle service equipment, as defined, installed in residential garages of customers who purchase a used electric vehicle. The bill would require that the programs and investments be designed to accelerate widespread transportation electrification, achieve ratepayer benefits, reduce dependence on petroleum, meet air quality standards, and reduce emissions of greenhouse gases.

**AB 79** (Levine D) **Electrical generation: hourly greenhouse gas emissions: electricity from unspecified sources**

**Status:** 5/10/2017-In committee: Set, first hearing. Referred to APPR. suspense file.

**Summary:** Would require, by January 1, 2019, ARB, in consultation with the Independent System Operator (ISO), to update its methodology for the calculation of emissions of greenhouse gases associated with electricity from unspecified sources, a term defined in existing law but revised for this purpose, purchased within California balancing authority areas, as defined, and distinctly, associated with electricity from unspecified sources imported into California from different subregions of the Western Electricity Coordinating Council.

**AB 151** (Burke D) **California Global Warming Solutions Act of 2006: market-based compliance mechanisms: scoping plan: report**

**Status:** 5/17/2017-In committee: Set, first hearing. Referred to APPR. suspense file.

**Summary:** Would require ARB to report to the appropriate policy and fiscal committees of the Legislature to receive input, guidance, and assistance before adopting guidelines and regulations implementing the scoping plan and a regulation ensuring statewide greenhouse gas emissions are reduced to at least 40% below the 1990 level by 2030. This bill contains other related provisions and other existing laws.

**AB 419** (Salas D) **Zero net energy residential buildings: report**

**Status:** 5/11/2017-Read third time. Passed. Ordered to the Senate. In Senate. Read first time. To Committee on Rules for assignment.

**Summary:** Current law requires the Energy Commission to develop and implement a comprehensive program to achieve greater energy savings in current residential and nonresidential building stock. This bill would require the commission, no later than July 1, 2019, to report to the appropriate fiscal and policy committees of the Legislature on the commission’s progress in implementing the New Residential Zero Net Energy Action Plan 2015–2020, as specified.

**AB 523** (Reyes D) **Electric Program Investment Charge: allocation**

**Status:** 4/27/2017-Read second time. Ordered to third reading.

**Summary:** Would require the Energy Commission to allocate at least 25% of the moneys in the Electric Program Investment Charge Fund for technology demonstration and deployment at sites located in, or benefiting, disadvantaged communities, as defined. The bill would require the Energy Commission to allocate at least 10% of the moneys in the fund for technology demonstration and deployment at sites located in, or benefiting, low-income communities, as defined. The bill would require the Energy Commission to give preference for funding to clean energy projects under the EPIC program that benefit residents of low-income or disadvantaged communities. This bill contains other existing laws.
<table>
<thead>
<tr>
<th>Bill Number</th>
<th>Summary</th>
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<tbody>
<tr>
<td><strong>AB 546 (Chiu D)</strong> Land use: local ordinances: energy systems</td>
<td></td>
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<td>Status: 5/3/2017-In committee: Set, first hearing. Referred to APPR. suspense file.</td>
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<tr>
<td>Summary: Would, on or before September 30, 2018, for a city, county, or city and county with a population of 200,000 or more residents, or January 31, 2019, for a city, county, or city and county with a population of less than 200,000 residents, require the city, county, or city and county to make all documentation and forms associated with the permitting of advanced energy storage, as defined, available on a publicly accessible Internet Web site, as specified.</td>
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</tbody>
</table>

| **AB 630 (Cooper D)** Vehicles: retirement and replacement |
| Status: 4/26/2017-In committee: Set, first hearing. Referred to suspense file. |
| Summary: Would establish the Plus Up Program to be administered by ARB to focus on achieving reductions in the emissions of greenhouse gases, improvements in air quality, and benefits to low-income state residents through the replacement of high.polluting motor vehicles, as specified. The bill also would require the state board, no later than July 1, 2018, to update the guidelines for the enhanced fleet modernization program, as specified. |

| **AB 797 (Irwin D)** Solar thermal systems |
| Summary: The Solar Water Heating and Efficiency Act of 2007, until August 1, 2018, requires the CPUC, if it determines that a solar water heating program is cost effective for ratepayers and in the public interest, to implement a program to promote the installation of 200,000 solar water heating systems. This bill would revise the program to, among other things, promote the installation of solar thermal systems throughout the state, reserve 50% of the total program budget for the installation of solar thermal systems in low-income residential housing or in buildings in disadvantaged communities, require an assessment of the cost-effectiveness of the entire program through July 31, 2019, to be completed by December 31, 2019, and extend operation of the program through July 31, 2020. |

| **AB 1082 (Burke D)** Transportation electrification: electric vehicle charging infrastructure: schools |
| Status: 5/17/2017-In committee: Set, first hearing. Referred to APPR. suspense file. |
| Summary: Would require a large electrical corporation, defined as an electrical corporation with 100,000 or more service connections in California, to file with the CPUC, by July 30, 2018, a program proposal for the installation of vehicle charging stations at school facilities, giving priority to schools located in disadvantaged communities, as defined. The bill would require the PUC to review and approve, or modify and approve, the program proposal filed by the large electrical corporation by December 31, 2018. |

| **AB 1083 (Burke D)** Transportation electrification: electric vehicle charging infrastructure: state parks and beaches |
| Status: 5/17/2017-In committee: Set, first hearing. Referred to APPR. suspense file. |
| Summary: Would require each large electrical corporation, defined as an electrical corporation with 100,000 or more service connections in California, in consultation with the CPUC, Energy Commission, and ARB, to develop a plan to create a robust charging network at all state parks and beaches within its service territory by July 31, 2018. The bill would require a large electrical corporation to file with the PUC, by September 30, 2018, a program proposal for the installation of electric vehicle charging stations at state parks and beaches. |
AB 1088 (Eggman D) Multifamily residential housing: energy programs
Status: 5/17/2017-In committee: Set, first hearing. Referred to APPR. suspense file.
Summary: Would require the Energy Commission, by January 1, 2020, and in consultation with relevant state agencies and the public, to establish nonbinding statewide goals for reducing energy consumption and emissions of greenhouse gases from multifamily residential properties by January 1, 2030, taking into consideration the state’s requirements for reducing emissions of greenhouse gases and the climate equity, doubling of energy efficiency, and increased use of renewable energy resources requirements set forth in the Clean Energy and Pollution Reduction Act of 2015.

AB 1239 (Holden D) Building standards: electric vehicle charging infrastructure
Status: 5/17/2017-In committee: Set, first hearing. Referred to APPR. suspense file.
Summary: The California Building Standards Law requires the Department of Housing and Community Development to propose mandatory building standards for the installation of future electric vehicle charging infrastructure for parking spaces in multifamily dwellings. That law also requires the department and the California Building Standards Commission to use specified provisions of the California Green Building Standards Code as a starting point for those mandatory building standards. This bill would require the department and the commission to research, propose, and adopt mandatory building standards regarding electric vehicle capable parking spaces for multifamily housing, commercial, and parking structure construction and renovation, as specified.

AB 1405 (Mullin D) Electricity: net-load peak
Status: 5/17/2017-In committee: Set, first hearing. Referred to APPR. suspense file.
Summary: Would require the CPUC and the governing boards of local publicly owned electric utilities, as a part of the integrated resource plan process, to establish policies and procedures to ensure that each load-serving entity or local publicly owned electric utility, as applicable, meets net-load peak energy needs and reliability needs while reducing the need for new electricity generation in achieving the state’s energy goals at the least cost to ratepayers. Because this bill would impose additional duties on local publicly owned electric utilities, this bill would impose a state-mandated local program.

AB 1431 (Arambula D) Energy efficiency: renewable energy resources: energy affordability
Status: 5/17/2017-In committee: Set, first hearing. Referred to APPR. suspense file.
Summary: This bill, on or before January 1, 2019, would require the Energy Commission to organize a working group with the CPUC, the Department of Community Services and Development, the State Department of Social Services, energy utilities, as defined, 3rd-party administrators, as defined, and representatives of community-based organizations or other entities involved in outreach for, or implementation of, the various state and state-supervised programs that are targeted toward low-income consumers and disadvantaged communities, including programs to promote energy efficiency, including weatherization, programs to promote utilization of renewable energy resources, and rate assistance programs.

AB 1452 (Muratsuchi D) Parking: exclusive electric charging and parking on public streets
Status: 5/10/2017-Referred to Committee on Transportation and Housing.
Summary: Would authorize a local authority, by ordinance or resolution, to designate stalls or spaces on a public street within its jurisdiction for the exclusive purpose of charging and parking a vehicle that is connected for electric charging purposes. The bill would also authorize the removal of a vehicle from a designated stall or space on a public street if the vehicle is not connected for electric charging purposes, under specified conditions. By expanding the scope of a crime, the bill would impose a state-mandated local program.
<table>
<thead>
<tr>
<th>Bill Number</th>
<th>Sponsor</th>
<th>Bill Title</th>
<th>Status</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB 71</td>
<td>Wiener D</td>
<td>Electricity: solar energy systems</td>
<td>5/16/2017-Read second time and amended. Re-referred to Committee on APPR.</td>
<td>Regulations on building standards adopted by the Energy Commission require certain residential and nonresidential buildings to have a solar zone, as defined, on the roof of the building that is designated and reserved for solar electric or solar thermal systems and that meets certain specifications relating to minimum area, orientation, and shading, among other things. This bill would require the Energy Commission to consider requiring, and would authorize the Energy Commission to update the building efficiency standards to require, a rooftop solar energy generation system, appropriately sized to be cost effective, to be installed in the solar zone of those buildings, during the construction of those buildings, by January 1, 2020, for residential buildings and by January 1, 2023, for nonresidential buildings.</td>
</tr>
<tr>
<td>SB 242</td>
<td>Skinner D</td>
<td>Property Assessed Clean Energy (PACE) program: program administrator</td>
<td>5/8/2017-Read second time. Ordered to third reading.</td>
<td>Would require a program administrator that administers a PACE program on behalf of a public agency to comply with certain requirements when approving an assessment contract for the installation of an eligible measure, as well as the administration of that contract, including requiring the contract to comply with specified criteria and requirements. The bill would require a program administrator to obtain a sworn declaration of income containing specified financial information from each property owner, and would provide that a declarant who willfully states as true a material fact on that declaration that he or she knows to be false be subject to a civil penalty of a specified amount.</td>
</tr>
<tr>
<td>SB 338</td>
<td>Skinner D</td>
<td>Net-load peak energy</td>
<td>5/15/2017-May 15 hearing: Placed on APPR. suspense file.</td>
<td>Current law requires the CPUC to adopt a process for each load-serving entity to file an integrated resource plan and a schedule for periodic updates to the plan to ensure that the load-serving entity meets, among other things, the state’s greenhouse gas emissions reduction targets and the requirement to procure at least 50% of its electricity from eligible renewable resources by December 31, 2030. This bill would require the commission and the governing boards of local publicly owned electric utilities to consider, as a part of the integrated resource plan process, establishing policies and procedures to ensure that each load-serving entity or local publicly owned electric utility, as applicable, meets net-load peak energy needs and reliability needs while reducing the need for new electricity generation and new transmission in achieving the state’s energy goals at the least cost to ratepayers.</td>
</tr>
<tr>
<td>SB 366</td>
<td>Leyva D</td>
<td>Electrical corporations: Green Tariff Shared Renewables Program</td>
<td>5/15/2017-May 15 hearing: Placed on APPR. suspense file.</td>
<td>The Green Tariff Shared Renewables Program requires an electrical corporation with 100,000 or more customers in California to file with the CPUC an application requesting approval of a tariff to implement a program enabling ratepayers to participate directly in offsite electrical generation facilities that use eligible renewable energy resources, consistent with certain legislative findings and statements of intent. This bill would authorize the PUC to increase the 600-megawatt statewide limitation up to 800 megawatts, to the extent necessary to accommodate participation by low-income customers and projects located in disadvantaged communities, as specified.</td>
</tr>
<tr>
<td>SB 498</td>
<td>Skinner D</td>
<td>Vehicle fleets: zero-emission vehicles</td>
<td>5/1/2017-May 1 hearing: Placed on APPR. suspense file.</td>
<td>Would require ARB, in consultation with stakeholders, to review all programs affecting the adoption of zero-emission vehicles in the state and report to the Legislature no later than January 1, 2019, policy recommendations for increasing the use of zero-emission vehicles in the state, as specified. This bill contains other related provisions and other existing laws.</td>
</tr>
</tbody>
</table>
Office of Sustainability Values

- Expand campus awareness and commitment to sustainability.
- Foster integration among academics and sustainability.
- Build campus infrastructure that promotes sustainability.
- Cultivate the capacity of individuals to promote sustainability.
- Serve as a sustainability resource for the San Diego community.
- Engage internal and external partnerships that promote sustainability.
Process
CAP PLANNING PROCESS

- Conduct Emissions Inventory
- Set Reduction Targets
- Select and Quantify Reduction Measures
- Develop and Adopt a Climate Action Plan
- Develop Implementation Plan
- Implement Measures
- Monitor and Report Progress

Climate Planning Cycle

Completed May 2016
Complete Fall 2016

Plan Details
USD Greenhouse Gas (GHG) EMISSIONS 2010
30,301 MtCO₂e

- Natural Gas
- Electricity
- Faculty/Staff Commute & Student Commute
- Air: Study Abroad & Other
- Waste
- Fleet Fuel
- Waste Water/Water

Projection in USD CAP

- From 2010 to 2035
- Based on 2010 emissions rate
- Student population growth consistent with Master Plan
TARGETS IN USD CAP

Same as City of San Diego CAP Targets

PROJECTED EMISSIONS AND TARGETS
ADDRESSING GHG EMISSIONS AT USD

MR. ODO

**Measure**

**Reduce & Optimize**

**Decarbonize**

**Offset**

### CAP STRATEGIES

<table>
<thead>
<tr>
<th>STRATEGY 1</th>
<th>STRATEGY 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase Energy Efficiency and use of Cleaner and Renewable Energy Sources</td>
<td>Increase Use of Cleaner and Alternative Modes of Transportation (USD Fleet)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STRATEGY 2</th>
<th>STRATEGY 5</th>
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<tbody>
<tr>
<td>Increase Use of Cleaner and Alternative Modes of Transportation (Commuting)</td>
<td>Achieve Zero Waste in USD Operations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STRATEGY 3</th>
<th>STRATEGY 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce Air Travel and Offset Associated Emissions</td>
<td>Reduce Water Use on Campus</td>
</tr>
</tbody>
</table>
**ENERGY**
**ELECTRICITY** 🌟
**NATURAL GAS** 🌞
**RENEWABLES** 🌿

55% of 2010 baseline emissions came from energy consumption.

<table>
<thead>
<tr>
<th>Category</th>
<th>Emissions (MT CO₂e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions from Energy Consumption (Electricity &amp; Natural Gas)</td>
<td>16,525 MT CO₂e</td>
</tr>
<tr>
<td>Student &amp; Employee Commuting</td>
<td>8,100 MT CO₂e</td>
</tr>
<tr>
<td>Air Travel</td>
<td>4,018 MT CO₂e</td>
</tr>
<tr>
<td>Solid Waste Generation</td>
<td>696 MT CO₂e</td>
</tr>
<tr>
<td>Campus Fleet Fuel Combustion</td>
<td>532 MT CO₂e</td>
</tr>
<tr>
<td>Water Consumption</td>
<td>360 MT CO₂e</td>
</tr>
<tr>
<td>Wastewater Generation</td>
<td>70 MT CO₂e</td>
</tr>
</tbody>
</table>

Emissions from Energy Consumption (Electricity & Natural Gas) 55%
GOALS

1. Reduce projected electricity use by 25% by 2020 and 35% by 2035.

2. Reduce natural gas consumption by 30% by 2020 and 35% by 2035.

3. Increase use of renewable and clean sources by 6.5% by 2020 and 15% by 2035.

MR.ODO ENERGY

MEASURE
- Measure energy use at building level

REDUCE & OPTIMIZE
- Engage in active energy management to reduce consumption
- Conduct technical audits to determine additional efficiency projects
- Implement projects and programs that achieve savings
- Create a sustainable funding mechanism for projects

DECARBONIZE
- Adopt policy/procedure for renewable energy procurement
- Increase procurement of renewable electricity
- Investigate investment in on-site renewable energy generation

OFFSET
- Offset electricity consumption
- Purchase renewable energy credits
Reduce projected electricity use by 25% by 2020 and 35% by 2035.

Electricity Consumption

![Graph showing electricity consumption with targets for 2020, 2030, and 2035. The graph compares actual kWh consumption to a 'business as usual' scenario.](image-url)
Increase use of renewable and clean sources by 6.5% by 2020 and 15% by 2035.
27% of 2010 baseline emissions came from student & employee commuting.
GOAL

Reduce projected miles driven for commuters by 2% by 2020 and 12% by 2035.

2020 2%

2035 12%

MR. ODO COMMUTING

MEASURE
- Annual assessment
- Collect relevant data during registration

REDUCE & OPTIMIZE
- Develop Transit Demand Management System
- Develop standard for alternative modes including walking, biking, mass transit, car/vanpool, ridesharing and other
- Increase linkages to public transit
- Develop other programs (bike sharing, etc)

DECARBONIZE
- Expand electric vehicle charging stations on campus

OFFSET
- Off the remaining footprint

Reduce projected miles driven for commuters by 2% by 2020 and 12% by 2035.
13% of 2010 baseline emissions came from air travel.
Offset 100% of USD-related business and educational travel by 2020 and continue to offset air travel through 2035.

MR.ODO AIR TRAVEL

MEASURE
- Refine data collection for insertional travel

REDUCE & OPTIMIZE
- Explore possibility of virtual travel including video conference and etc.

DECARBONIZE

OFFSET
- Investigate offset programs to offset air travel miles
- Determine criteria for selecting offset program

Offset 100% of USD-related business and educational travel by 2020 and continue to offset air travel through 2035.
2% of 2010 baseline emissions came from waste generation.

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<td>Wastewater Generation</td>
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</table>

Solid Waste Generation 2%
Increase projected solid waste diversion to 60% by 2020 and 75% by 2035.
2% OF 2010 BASELINE EMISSIONS CAME FROM FLEET FUEL CONSUMPTION

<table>
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</table>

Campus Fleet Fuel Combustion: 2%

GOALS

1. Reduce projected fossil fuel consumption of USD fleet by 5% by 2020 and 15% by 2035 through optimized use.

2. Reduce projected fossil fuel consumption of USD fleet by 5% by 2020 and 20% by 2035 by increased clean-fuel vehicle use.
**MR. ODO FLEET**

**MEASURE**
- Update data collection process for fleet vehicles

**REDUCE & OPTIMIZE**
- Reduce miles driven by USD fleet by utilizing bikes, encouraging walking, and optimizing tram schedules
- Create more efficiency guidelines
- Centralize fleet purchasing

**DECARBONIZE**
- Develop hierarchy for vehicles
- Develop priorities to switch to electric vehicles

**OFFSET**
- Offset remaining fleet fuel consumption

---

1. Reduce projected fossil fuel consumption of USD fleet by 5% by 2020 and 15% by 2035 through optimized use.
2. Reduce projected fossil fuel consumption of USD fleet by 5% by 2025 and 20% by 2035 by increased clean-fuel vehicle use.

**2020**
- Reduction from Fleet Strategy: 1%
- Reduction from Statewide Policy: 31%
- Reduction from other USD CAP Strategies: 74%

**2035**
- Reduction from Fleet Strategy: 1%
- Reduction from Statewide Policy: 38%
- Reduction from other USD CAP Strategies: 61%
GOAL

Reduce projected water use by 20% in 2020 and 30% in 2035.

MR. ODO WATER

MEASURE
- Measure water use at building level

REDUCE & OPTIMIZE
- Measure water use at building level
- Conduct audits to identify projects
- Replace water intensive landscape with drought tolerant/native plants

DECARBONIZE
- N/A

OFFSET
- Offset remaining water usage

Reduce projected water use by 20% in 2020 and 30% in 2035.
HIGHLIGHTS SO FAR

STUDENT PARTICIPATION

• Marketing Class team looking at reaching USD student audience

• Integrated into Environmental Issues course

• Thesis research on CAP Implications
<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>DESCRIPTION</th>
<th>GOALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENERGY</td>
<td>Electricity, Natural Gas, &amp; Renewables</td>
<td>• Reduce projected electricity use by 25% by 2020 and 35% by 2035&lt;br&gt;• Reduce projected natural gas by 30% by 2020 and 35% by 2035&lt;br&gt;• Increase use of renewable and clean sources by 7.5% by 2020 and 40% by 2035</td>
</tr>
<tr>
<td>COMMUTING</td>
<td>Student &amp; Employee</td>
<td>• Reduce projected miles driven for commuters by 2% by 2020 and 12% by 2035</td>
</tr>
<tr>
<td>AIR TRAVEL</td>
<td>Educational &amp; Business</td>
<td>• Offset 100% of USD-related business and educational travel by 2020 and continue to offset air travel through 2035</td>
</tr>
<tr>
<td>ZERO WASTE</td>
<td>Diversion</td>
<td>• Increase projected solid waste diversion to 60% by 2020 and 75% by 2035</td>
</tr>
<tr>
<td>FLEET</td>
<td>Fuel</td>
<td>• Reduce projected fossil fuel consumption of USD fleet by 5% by 2020 and 15% by 2035 through optimized use&lt;br&gt;• Reduce projected fossil fuel consumption of USD fleet by 5% by 2020 and 15% by 2035 by increased clean-fuel vehicle use</td>
</tr>
<tr>
<td>WATER</td>
<td></td>
<td>• Reduce projected water use by 20% by 2020 and 30% by 2035</td>
</tr>
</tbody>
</table>

**CROSS CUTTING CONSIDERATIONS**

- Data Collection and Management
- Education and Culture
- Financing
- Authority and Responsibility
- Research and Academic Integration
WHAT’S NEXT

Sustainability Strategic Plan

THANK YOU
San Diego County Water Authority Energy Program

SANDAG Regional Energy Working Group
May 25, 2017

Kelly Rodgers, Ph.D., P.E.
Energy Program Manager

San Diego County Water Authority

Wholesale water agency created by state legislature in 1944

- Serve 3.3 million people and region’s $222 billion economy
- 24 member agencies (retailers)

Provides 80-90% of water used in San Diego County

- Builds, owns, operates and maintains large-scale regional water infrastructure
- Largest ag-to-urban water conservation & transfer in U.S.
- Invested more than $2 billion in facilities (desalination, pipelines, treatment and reservoirs) in the last 15 years
Challenges
Water and energy leaders face similar challenges

Regional Water Treatment and Delivery
Water – Energy Nexus

Pump Stations
Water Treatment Plants
Desalination
Potable Reuse
Water Authority’s Energy Program

- Implement Board Energy Management Policy
- Reduce power costs and maximize use of renewables
  - Critical to support local, drought-resilient supplies such as potable reuse and seawater desalination
  - Four key areas

**Existing Energy Facilities**

- 4.5 Megawatt Rancho Peñasquitos Hydroelectric Facility
- 40 MW Olivenhain-Hodges Pumped Storage Facility
- Combined 1.5 Megawatts Solar (3 Facilities)
**New Energy Initiatives**

- 6 MW Floating Solar at Olivenhain
- 1+ MW Batteries
- 2.7 MW Inline Hydro Sites
- Up to 500 MW at San Vicente
- Other Generation/Storage
- 1 MW Wind Turbine System

**Proposed San Vicente Energy Storage Facility**

- 50-50 partnership with City of San Diego
- Major opportunity to expand use of renewables and avoid curtailment
- Meet peak demands with on-call power
- Significant existing infrastructure in place
- Up to 500 megawatt capacity
- Up to 8-hours of storage
Objectives

- Maximize existing water resources/maintain reservoir uses
- Generate revenue/control costs
- Minimize impacts
- Support State climate change goals

Existing Infrastructure
Proposed Infrastructure

Power Storage
California Renewable Portfolio Standard

- Mandate that 50% of investor owned utilities energy portfolio comes from renewable energy resources, such as wind and solar by 2030
**Growing Need for Flexibility**

Typical Spring Day

Net Load 11,663 MW on May 15, 2016

Actual 3-hour ramp 10,892 MW on February 1, 2016

Source: CAISO

**Benefits of Storage**

Integrate renewables

Avoid curtailment

Reduce congestion

Reduce costs

Reduce emissions

Provide “on call” power
Energy Procurement & Transmission

Secured low-cost wholesale power from Hoover Dam

Water Authority allocation
- 1.6 MW capacity

Other opportunities to procure and deliver renewables

Regulatory Engagement

Energy Issues

Participate at
- State Level
- Federal Level

Engage with
- Member agencies
- Professional organizations
Opportunities

Collaboration

Leverage water-energy nexus to:

- Reduce costs and stabilize rates
- Enhance reliability
- Promote environmental stewardship

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State Activities on Energy and Climate Change

Regional Energy Working Group

Overview

• 2017 Legislation
• State Activities:
  – GHG Reduction
  – Energy Efficiency
  – Renewable Energy
  – Zero Emission Vehicles (ZEVs) and Alternative Fuels
  – Climate Adaptation and Resiliency
Electric Vehicle Charging Stations (EVCS)

• AB 33 (Quirk)
  – Utility programs for residential EVCS for used EVs
• AB 1082 & 1083 (Burke)
  – Utility programs for EVCS at schools & state parks and beaches
• AB 1239 (Holden)
  – EVCS building codes
• AB 1452 (Muratsuchi)
  – On-street parking for EVCS

Energy Efficiency/Energy Storage

• AB 419 (Salas)
  – Report on Residential ZNE Action Plan
• AB 546 (Chiu)
  – Energy storage permitting requirements and statewide guidebook
• AB 1088 (Eggman)
  – Statewide goals for reducing energy consumption in multi-family residential properties
Renewable Energy

- SB 100 (de León)
  - 100 percent renewable energy by 2045
- AB 1405 (Mullin)/SB 338 (Skinner)
  - Meet net-load peak energy needs and reliability needs while reducing the need for new electricity generation
- SB 71 (Wiener)
  - Building code: rooftop solar installation requirements

Other Energy/Climate

- AB 79 (Levine)
  - GHG emissions from unspecified electricity sources
- SB 242 (Skinner)
  - PACE program administrator requirements:
    - Property owner eligibility/disclosures
    - Eligible measures
    - Forbearance requests
    - Reporting to public agency
Regional and Statewide Collaborations

GHG Reduction

Figure II-2. Proposed Scoping Plan Scenario – Estimated Cumulative GHG Reductions by Measure (2021–2030)
Energy Efficiency

- California Energy Efficiency Coordinating Committee
- AB 802 (Williams, 2015) Implementation
  - Building energy use benchmarking and disclosure

Renewable Energy

- 2001-01: Energy Crisis
  - CA Energy Crisis costs 100 billion of dollars and forces PG&E into bankruptcy
- 2001-02: De-Regulation
  - Legislature orders a transition to consumer choice and orders utilities to divest their power generation to independent providers under contract
- 2002: Re-Regulation
  - Utility monopoly over retail service re-constituted post energy crisis
- 2006: CCA Law Enacted
  - CA Legislature passes AB 117 which creates initial regulations to allow formation of Community Choice Aggregators
- 2010: Marin forms CCA
  - Marin County forms first CCA
- 2014: HHZ Biomass
  - SB 813 requires the utilities to increase biomass from high fire hazard fuel sources to combat tree mortality
- 2016: CCAs serve 1,000,000
  - By the end of 2017, CCAs are on track to serve almost 1 million customers
ZEVs and Alternative Fuels

Overview of Proposed Projects

<table>
<thead>
<tr>
<th>Projects</th>
<th>Description</th>
<th>Budget</th>
<th>Lifetime GHG Reductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metro and Multi-Mode</td>
<td>Deploy 50-60 installations that include a combination of components such as EVSE, circuit, load research meter and data logger.</td>
<td>$2.6M</td>
<td>8,202 MTCO2</td>
</tr>
<tr>
<td>Electrify Local Highways</td>
<td>Install grid-integrated Level 2 and DCC EVSE at 4 Caltrans locations (8 total public charging stations), hot spot analysis on IA and new (construction).</td>
<td>$4.0M</td>
<td>3,883 MTCO2</td>
</tr>
<tr>
<td>Retailer Incentives</td>
<td>Increase retailers’ knowledge on sales and operations, 1,000 incentives will be offered ($500 to salesperson and $250 to dealerships) *</td>
<td>$1.5M</td>
<td></td>
</tr>
<tr>
<td>Fleet Delivery Services</td>
<td>Install grid-integrated charging infrastructure to support 100 delivery vehicles at approximately 6 locations.</td>
<td>$3.1M</td>
<td>14,019 MTCO2</td>
</tr>
<tr>
<td>Inter-city ZEV Shuttles</td>
<td>Install grid-integrated Level 2 and Level 3 at 5 locations (5 total public charging stations) to encourage the adoption of ZEVs in the shuttles it operates.</td>
<td>$2.5M</td>
<td>12,092 MTCO2</td>
</tr>
<tr>
<td>Airport Ground Support Equipment</td>
<td>Install 5 charging ports to support 50 vehicles. Metering and data loggers on 25 existing charging ports.</td>
<td>$3.3M</td>
<td>25,130 MTCO2</td>
</tr>
<tr>
<td>Residential Charging</td>
<td>SCHD will own, install, and maintain Level 2 EVSE at all single family homes and small multifamily dwellings. In future, the residential customer will be on a whole-house grid integrated rate.</td>
<td>$335.8M</td>
<td>1,941,800 MTCO2</td>
</tr>
</tbody>
</table>

*Leadership incentives impacts are not included due to likely overlap with other projects and programs.

Climate Adaptation and Resiliency

Rising Seas in California

AN UPDATE ON SEA-LEVEL RISE SCIENCE

April 2017

DRAFT REPORT
Safeguarding California Plan: 2017 Update

California’s Climate Adaptation Strategy

May 2017
Discussion

• Are there other bills or state activities that help to implement energy and climate goals?
• Which topics are of interest for future EWG items?