



Finance and Administration Committee Agenda Item 4f

April 19, 2016

Item Name: Annual Operational Sustainability Report

Program: Operations Support Services Division

Item Type: Information Consent

Executive Summary

CalPERS continues to be a leader in sustainable business operations, reducing its environmental footprint by striving to meet and exceed environmental targets pertaining to green building practices, energy consumption, and water conservation.

Strategic Plan

While not a specific objective or initiative outlined in the 2012-17 Strategic Plan, this item supports Goal B – Cultivate a high performing, risk intelligent, and innovative organization while also supporting the CalPERS Core Values of Accountability and Integrity. This item is part of the regular and ongoing workload of the Operations Support Services Division (OSSD).

Background

CalPERS is committed to helping preserve our state's natural resources. Even before Governor Brown issued Executive Orders B-16-12 and B-18-12, CalPERS practiced many of the standards outlined in these Orders including: first generation electric vehicle charging stations, indoor environmental quality, reduction in water by 6 percent from the 2010 baseline year, environmentally preferable purchasing, and tracking grid based energy and water usage.

As the topic of green buildings continues to grow, CalPERS embraces best practices and innovative ideas that broadened the approach to sustainable operations. We are committed to sustainable principles that result in long-term benefits to the environment. As new sustainable business laws and industry best practices emerge we will continue to broaden our approach to sustainable operations.

Analysis

The activities outlined below provide highlights and accomplishments CalPERS has achieved since the April 2015 Annual Operational Sustainability agenda item.

The Road Map to Achieving Executive Orders B-18-12, B-16-12, & B-29-15

DGS requests that state agencies submit a Road Map which details objectives, targets, and timelines related to achieving the Governor's Executive Orders. In December 2015, CalPERS provided DGS with a detailed document outlining the status and steps to achievement in the areas of Greenhouse Gas Emissions, Energy, LEED Existing Buildings, Indoor Environmental Quality, Water Efficiency, Electric Vehicle Charging Stations, Environmental Preferable Purchasing, and Zero-Emission Fleet Vehicles.

Greenhouse Gas Emissions Reduction

- CalPERS has reported and verified its enterprise wide greenhouse gas (GHG) emissions to the Climate Registry since 2006. CalPERS goes above and beyond the reporting requirements by having a third party verify the inventory to an accuracy of 5%. There are only a handful of other state agencies that are committed to performing third party verification at this time.
- Executive Order B-18-12 requires a 10% reduction of GHG emissions by 2015 and a 20% reduction by 2020 based on a 2010 baseline. In 2015, a net reduction of 79% GHG emissions, or 5,131 metric tons of CO₂e, was achieved based on the 2010 baseline. The target reduction of 20% by 2020 was met in 2012, 8 years ahead of schedule.
- Since 2009, CalPERS has purchased renewable energy certificates to offset the carbon associated with electrical energy provided by SMUD. On January 1, 2016, CalPERS began participating in the SMUD Greenergy Program, which offers customers access to a diverse mix of renewable resources at a cost-effective, competitive rate. Through the Greenergy program, CalPERS receives a mix of Green-e certified wind and solar generation from the State of California to offset 100% of our energy consumption for the headquarters facilities. At year end, this allows CalPERS to claim that the headquarters facilities had zero emissions from electrical energy provided by SMUD.

Energy Conservation and Initiatives

- CalPERS continues to strive for compliance with Management Memo 14-09 (MM 14-09), which directs state agencies to achieve specified energy efficiencies in data centers and server rooms, known as power use effectiveness (PUE). Data centers consume a significant amount of energy in a building; approximately one-third of the energy use in Lincoln Plaza East/West is consumed by the data center.
- In 2015, CalPERS performed major data center efficiency projects, including hot aisle containment at Lincoln Plaza West, and cold aisle containment at the Emergency Operation Center. CalPERS has performed a current environmental study which found that all of our data centers and intermediate distribution frame (IDF) closets were in compliance with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) standards as set forth by MM14-09.
- Executive Order B-18-12 mandates a 20% grid-based energy reduction by 2018. DGS has directed 2003 as the baseline energy comparison year for all departments. CalPERS is on target to meet this goal. While the Lincoln Plaza Headquarters building square footage has increased by 62% since 2003 (Lincoln Plaza East and West were not built yet), the total energy use per square foot has decreased by 33%. From 2014 to 2015, headquarters reduced the total grid-based energy consumption by 7%.
- CalPERS headquarters reports the grid-based energy use to the Energy Star Portfolio Manager monthly through automated energy data transfers from the utilities.

Leadership in Energy and Environmental Design (LEED®)

- The LEED® Green Building Certification Program, administered through the United States Green Building Council (USGBC) and Green Building Certification Institute (GBCI), is the nationally accepted benchmark for green buildings. There are four levels



of LEED® certification: Certified, Silver, Gold, and Platinum. Lincoln Plaza North was certified Gold and Lincoln Plaza East/West was certified Platinum in 2014.

- In October 2015, Lincoln Plaza South was certified for the first time as LEED® Gold Existing Buildings Operations and Maintenance. In order to achieve Gold status, the heating, ventilating, and air conditioning (HVAC) units were upgraded to more efficient models, restroom fixtures were replaced with low-flow fixtures, additional lighting controls were implemented to reduce energy, landscaping irrigation was converted to drip, and additional sub-metering to monitor energy and water usage were installed.

Water Conservation and Initiatives

- The Drought State of Emergency Declaration issued by Governor Brown in 2014 has been extended through October 2016. The Governor ordered state agencies to take action and prepare for emergency conditions by reducing water use by 25% compared to the 2013 baseline.
- In 2015, CalPERS water consumption was reduced by 44% (14,340,000 gallons) over the 2013 baseline, exceeding the target reduction by almost 20%.
- Landscaping projects have been completed on the 3rd floor terrace of Lincoln Plaza North and along R Street south of Lincoln Plaza East/West. These projects converted turf/lawn to landscaping that will eventually consist of native and drought tolerant plants. Once the moratorium on planting is lifted and the plants are added, the reduction of irrigation water use in these specific areas will be 75%, resulting in a savings of 950,000 gallons of water per year.
- The cooling tower water recapture project was completed in the fall of 2015. This innovative system captures accumulated water from the cooling towers, which would normally go to the combined sewer/storm drain system, and uses that water for landscape irrigation purposes. This project has been very successful in recycling water, and CalPERS was awarded a DGS grant to determine additional applications for this recaptured water.
- On a monthly basis all water efficiency projects are reported to DGS via the Drought Actions Matrix. CalPERS headquarters water consumption is also reported to Energy Star Portfolio Manager monthly.

Electric Vehicle Charging Stations

- In 2012, Executive Order B-16-12 was put into effect to accommodate zero-emission vehicle charging infrastructure, and to increase the number of zero-emission vehicles in state fleets through the normal course of replacement.
- In May 2015, 13 Level II Electric Vehicle (EV) charging stations were installed in Lincoln Plaza North and Lincoln Plaza East/West garages. Lincoln Plaza South garage has an additional seven EV charging stations. The EV infrastructure supports the current staff and will meet increasing staff and fleet demand.

Environmental Preferable Purchasing

- The State Agency Buy Recycled Campaign (SABRC) is a joint effort between CalRecycle and DGS. In addition to purchasing products containing recycled content, state agencies



are required to track their purchases and submit an annual report on total expenses for each product category, with the goal of 50% post-consumer recycled content for each.

- For fiscal year 2014-15, CalPERS' total expenses for recycled content products (all of which met the minimum requirement) were as follows: 100% of metal products, 84% of plastic products, 81% of paper products, and 52% of printing and writing paper.

Building and Grounds Maintenance and Operations

- In October 15, 2015, Management Memo 15-06 (MM 15-06) was passed to provide practices and procedures that will help towards achieving operational efficiencies and resource conservation measures for integrated pest management, landscaping practices and maintenance of building exteriors, roofs, hardscapes, and exterior painting. Prior to the release of MM 15-06, CalPERS already had these performance measures in place and was already compliant in these areas.

Waste Management and Organic Waste Diversion

- CalPERS is in compliance with Assembly Bill (AB) 1826. This bill mandates that by April 1, 2016, businesses that generate eight cubic yards or more of organic waste per week shall arrange for recycling services specifically for organic waste.
- CalPERS headquarters creates 4.45 cubic yards per week which is recycled through Atlas Disposal and Carson Landscaping. These diversion services have been in place since before the inception of AB 1826.
- Through this diversion program, the Café, Subway, Chocolate Fish & Montessori in the City collect their organic waste for disposal into a special Atlas trash bin. The food waste is then diverted to a digester that produces an alternative fuel product which is used by the City of Sacramento and Atlas to fuel their fleet vehicles. In 2015, CalPERS diverted 18.49 tons of food waste from landfills.

Café Vendor

- Compass Group USA continues to be highly committed to sustainability in support of CalPERS' green initiatives. Compass has extended their partnership with San Francisco Specialty Produce to purchase imperfectly organic produce: "The Imperfectly Delicious" program utilizes fruits and vegetables that have slight cosmetic imperfections. This produce is typically left un-harvested in the field or discarded, but is perfectly suitable for consumption. In addition, it is estimated that for every pound of produce saved, 20 gallons of water is also saved. To date, the Café at CalPERS has rescued over 5,645 pounds of produce, saving an estimated 112,900 gallons of water.
- In January 2015, Compass began a partnership with Hampton Creek which focuses on finding new high quality plant-based ingredients and is known for solving intensive agricultural issues and making products that are more sustainable. Currently, Compass features Hampton Creek's "Just Cookies" and "Just Mayo" products in the Café.
- Compass has continued to partner with Monterey Bay Aquarium's Sustainable Seafood Watch program. This program makes recommendations about which seafood to buy or avoid, helping to select items that are fished or farmed in ways that have a reduced impact on the environment. Additionally, Compass uses cage-free eggs and poultry free of antibiotics or hormones.

Industry Outreach and Sustainability Meetings

- CalPERS continues to participate in the Building Health Initiative Owners & Managers Working Group, which is comprised of approximately 45 companies and institutions throughout California. All members are committed to revolutionizing building health and fostering sustainable communities. Recent working meetings have focused on the topic of removing chemicals used in office furniture. The BHI group members will work together to specify products with less chemicals and use the groups collective buying power to create a market transformation.
- CalPERS manages its implementation of green initiatives by attending monthly Sustainable Building Working Group meetings led jointly by the Department of General Services and the Governor's office. These working groups are tasked with clarifying and developing guidelines for the execution of the standards set forth in the Executive Orders. Recent discussions were about Organic Waste Recycling, status updates on benchmarking for the Energy Star Portfolio Manager (ESPM), and a presentation on MM 15-06 State Buildings and Grounds Maintenance and Operations.
- The Green Club continues to be a valuable part of the Sustainable Operations Program. Meetings are held monthly and staff actively engage in discussions and share ideas on ways to save energy, reduce our carbon footprint, and other green initiatives. In April the Green Club will participate in the annual Earth Month activities and continuing education about alternative commuting, energy efficiency, recycling, and waste reduction.

Budget and Fiscal Impacts

The majority of funding for the sustainability projects identified above spanned the course of two fiscal years and was included within existing budgetary resources. Savings in the areas of energy and water reduction, as well as the discontinuance of window washing, allowed CalPERS to implement the following: cooling tower water recapture project, drought tolerant landscape design, artificial turf and erosion control, new drip irrigation, and new EV charging stations.

In summary, CalPERS continues to be a leader in sustainability and is committed to help preserve our state's natural resources. CalPERS is committed to aligning business practices with sustainable principles that result in long-term benefits to the environment. We operate in an environmentally responsible manner by reducing and recycling waste, purchasing environmentally preferable products, and conducting green building operations to help reduce the negative environmental impact.

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