

BOARD OF PUBLIC WORKS
MEMBERS

Vacant
PRESIDENT

AURA GARCIA
VICE PRESIDENT

DR. MICHAEL R. DAVIS
PRESIDENT PRO TEMPORE

JESSICA M. CALOZA
COMMISSIONER

M. TERESA VILLEGAS
COMMISSIONER

DR. FERNANDO CAMPOS
EXECUTIVE OFFICER

CITY OF LOS ANGELES

CALIFORNIA



ERIC GARCETTI
MAYOR

DEPARTMENT OF
PUBLIC WORKS

BUREAU OF
ENGINEERING

GARY LEE MOORE, PE, ENV SP
CITY ENGINEER

1149 S. BROADWAY, SUITE 700
LOS ANGELES, CA 90015-2213

<http://eng.lacity.org>

February 11, 2022

The Honorable Mitch O'Farrell, Chair
The Honorable Paul Koretz, Vice Chair
The Honorable Gilbert Cedillo, Member
The Honorable Kevin de Leon, Member
The Honorable Paul Krekorian, Member
Energy, Climate Change, Environmental Justice and River Committee
Los Angeles City Council

c/o Eric Villanueva
Office of the City Clerk
Room 395, City Hall
Los Angeles, CA 90012

COUNCIL FILE NO. 21-1039: Relative to developing a Building Decarbonization Work Plan for the City's existing building stock and identifying City facilities for near-term installation of distributed energy generation systems.

Recommendation: Receive and file this report.

In reference to the CF 21-1039, the City Council approved the report from the Energy, Climate Change, Environmental Justice and River Committee which included the following request of the Bureau of Engineering (BOE):

DIRECT the BOE to work closely with GSD, LADWP, CAO, CLA, RAP, and other City departments, and create a Building Decarbonization Work Plan assessing the renewable solar energy generation potential of existing municipal facilities, in order to prioritize projects for net-energy metering systems, resiliency generation systems, or grid-connected systems. The Work Plan should identify up to 25 facilities that are strong candidates for near-term pilot distributed energy generation systems that offer a high degree of solar energy generation efficiency, high community value, and project "shovel-readiness," giving special priority to buildings in disadvantaged communities in Los Angeles. The Work Plan should leverage the existing GSD asset database, existing energy audits and physical needs assessments, existing energy use data, and pursue more comprehensive projects where feasible. The Work Plan should address



opportunities for cost efficiency and time efficiency through strategies such as bundling of projects and should include a funding plan for expeditiously spending the FY 21-22 funds. BOE with the assistance of the other City departments should report in 90 days on progress towards this goal.

Background:

The science and understanding of climate change and the impacts of human activity have advanced considerably in recent decades. In terms of the built environment, which is widely acknowledged to be a large contributor to greenhouse gas emissions, the City of Los Angeles (City) has been addressing these issues over the last twenty years with the adoption of green building practices, which has included the City Council mandated use of the United States Green Building Council's (USGBC) LEED (Leadership in Energy and Environmental Design) rating system for City funded new construction projects over 7,500 square feet, by mandating green building codes for all construction in the City, and through the 2019 "Los Angeles Green New Deal Sustainable City pLAN: Environment, Economy, and Equity". Efforts in the construction industry have also gone through a transformation with the adoption of new construction methods and new building technologies. All of these activities in the built environment contribute to a goal of a net-zero carbon future.

To date, BOE has successfully certified approximately 1.9 million square feet of City facilities using the LEED rating system. Additionally, BOE is piloting net-zero energy certification in multiple projects and has recently adopted the Buy Clean California Act to address embodied carbon emissions in certain construction materials.

The City Council passed multiple motions in 2021 that address different aspects of building decarbonization in City facilities. These related motions are: CF 21-1039, the Motion addressed in this report; CF 21-0683; CF 21-0432; CF 21-0352; CF 21-1042; CF 21-1249. These motions direct City Departments to prioritize building decarbonization and related efforts which include building electrification, net-zero energy, solar photovoltaic installations, battery storage, electric vehicle charging, electric grid renewable energy generation, and related objectives.

Discussion:

Building Decarbonization Workplan

Following extensive discussions between City Department and Council staff, it was agreed that a master plan was needed to address the goal of net-zero energy and decarbonization of existing City buildings. The City currently has approximately 590+ existing municipal buildings that are under City Council control and are managed and maintained by the City's General Services Department (GSD). Facility uses vary and include police stations, fire stations, libraries, animal shelters, recreational facilities, emergency operation centers, individual and shared maintenance and service yard

facilities operated by various departments throughout the City, and more. These City facilities are vital to the City's daily operations to provide services to constituents, and to provide critical infrastructure for the operating Departments.

These 590+ buildings are unique in their use, size, age, location, building maintenance history, solar access, electrification, and resiliency needs. On one hand, the City has highly energy-efficient LEED Platinum certified buildings that will need minimal effort to decarbonize by eliminating the use of fossil fuel burning equipment. On the other hand, the City has 30+ year-old facilities with poor building envelopes and inefficient building systems. The majority of the 590+ existing buildings are also not all electric facilities.

In order to meet the direction put forth in this Council Motion 21-1039, and to meet the net-zero energy and carbon neutral goals for all existing municipal facilities, the BOE, in coordination with other City departments, will lead the development of a Building Decarbonization Workplan (Workplan). The BOE will conduct a thorough evaluation of all existing facility conditions for building electrification opportunities, required building energy upgrades, on-site solar energy generation viability, and battery storage needs. The Workplan development will build on existing data sets using GSD's asset management software, so that the prioritization can be an ongoing process. Additionally, the Workplan will provide an analysis of potential impacts on jobs from transforming buildings to all electric and mitigations for those jobs that may be lost from full electrification.

Near-Term Pilot Distributed Energy Generation Systems

The BOE is currently working with other City departments to identify 25 City facilities for near-term installation of distributed solar energy generation systems, full building electrification, and possible on-site backup electric power battery storage systems. These projects will be selected based on a high degree of solar energy generation efficiency, high community value, and giving special priority to buildings in disadvantaged communities in Los Angeles. BOE will utilize a combination of the three solar project agreement types under consideration which are: Net-Energy Metered (NEM); Resiliency Generation Systems (RGS); and Grid Connected Systems (GCS). These proposed solar project agreement types with LADWP are identified in the draft Memorandum of Understanding (MOU) under development between the GSD and LADWP.

GSD-LADWP Draft MOU

The following is the update on the draft GSD-LADWP MOU. To ensure GSD and LADWP are able to achieve the aforementioned environmental and resiliency goals in this Motion, GSD and LADWP staff are developing a long-term MOU between GSD and LADWP for the installation of Distributed Energy Resources (DERs), to provide a framework under which a variety of site-specific installations can be designed, approved and installed. The draft MOU covers site-specific projects for both solar installations and

for electric vehicle (EV) charging systems. The project terms for individual DER projects as described in the current draft MOU will be detailed in individual Letters of Agreement for each project.

The draft MOU sets forth terms and conditions governing the agreement between LADWP and GSD for LADWP to install at their cost, maintain, own and operate Resiliency Generation Systems (RGS) and Grid-Connected Systems (GCS) on certain City facilities, and maintain them over a term of 30 years. The draft MOU also offers the option for the City to install net-energy metered (NEM) systems on City facilities where a GCS or a RGS will also be installed. The City would own the NEM system and be responsible for ongoing maintenance.

GSD provides building maintenance services to a portfolio of over 590 facilities including police and fire stations and libraries. The systems contemplated under the draft MOU could provide a source of energy for City facilities during power outages, provide opportunities for education on renewable energy resources, and increase the use and availability of EV chargers at City properties, which could also increase accessibility and enhance the long-term viability of GSD's EV fleet. It could also provide financial benefits to City facilities by offsetting electrical costs through the use of NEM systems, provide secure lighting and shading improvements through carport structures, and provide financial incentives benefitting operations from the installation of GCS systems.

Through the draft MOU, GSD will work with LADWP, BOE and user departments to facilitate the installation of a combination of all three systems. GSD's staff, primarily electrical trades, will facilitate site visits with LADWP staff, review electrical load capacity and electrical panel issues, interact with BOE on engineering and construction plans, and work with stakeholders at each facility to evaluate and manage space needs for the project equipment and lay down space for construction. For NEM systems, GSD will be required to establish a maintenance team to provide ongoing maintenance.

The draft MOU also provides opportunities to install EV chargers at City facilities. GSD will work with LADWP on separately-metered EV charger installations of Level 2 and Level 3 chargers. The draft MOU could also allow for Make-Ready EV installations that include the electrical infrastructure necessary to support future installation of EV chargers. GSD is requesting resources and staff to avail themselves of the opportunities provided in the draft MOU, accelerate the installation of EV chargers, and expand GSD's EV Charger Infrastructure Program to meet the City's electrification goals. Requests were submitted in GSD's proposed 2022-23 budget. GSD also submitted a report to Council requesting that funds be set aside in the Unappropriated Balance for solar, energy storage, and EV chargers (Council File 21-1249).

To develop criteria and recommendations for prioritizing sites in the City's facility portfolio, GSD and affected departments will work collaboratively with BOE to create a Decarbonization Workplan that can be utilized over the next five to ten years to outline which technologies and grid connections are best suited for which site, and request funds through the budget process for NEM systems.

To date GSD and LADWP have completed review of the terms and conditions for both the solar and EV components of the draft MOU. It has undergone analysis by both departments' legal counsels, and a meeting to discuss questions and remaining deal points is set for this month. Depending on the outcome of that meeting, both parties are striving to execute the agreement within the next 30 days.

For questions, please contact Deborah Weintraub of my staff at (213) 923-6359 or at Deborah.weintraub@lacity.org.

Respectfully submitted,



Gary Lee Moore, PE, ENV SP
City Engineer



Tony M. Royster
General Services Department

GLM/DW:ab

Q:\GLM\City Engineer\GLM Signed Documents\2022 Documents\Council Report on CF 21-0139.pdf

cc: Lauren Faber O'Connor, Mayor's Office
Michael Samulon, Mayor's Office
Jennifer McDowell, Mayor's Office
David Giron, Council District 13
Aaron Ordower, Council District 2
Jessica Caloza, Board of Public Works
Martin L. Adams, Los Angeles Department of Water and Power
Melody McCormick, General Services Department
Valerie Melloff, General Services Department
Deborah Weintraub, Bureau of Engineering
Steven Fierce, Bureau of Engineering
Zohra Akhter, Bureau of Engineering