Los Angeles Department of Water & Power

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July 25, 2017

The Honorable City Council
c/o Office of the City Clerk
Room 396, City Hall
Mail Stop 160

Attention: Councilmember Nury Martinez
Chair – Energy, Climate Change, and Environmental Justice Committee

Honorable Members:

Subject: Update on Council File Nos. 15-1380-S7, 16-0768, 16-0243, 17-0115, 17-0155, 17-0189, and 17-0255

Summary
This brief report is submitted to prepare the Energy, Climate Change, and Environmental Justice (ECCEJ) Committee with an update on the following Council Files:

Aliso Reliability Action Plan - Council File Nos. 15-1380-S7 (Blumenfield-Englander- Harris Dawson) and 16-0768 (Martinez-Buscaino): The Los Angeles Department of Water and Power (LADWP) made a presentation to the Energy and Environment Committee (E&E Committee), now the ECCEJ Committee, on September 21, 2016, to discuss the Aliso Winter Reliability Action Plan and use of alternative fuel at its three in-basin generating stations. Since then, a joint Summer 2017 reliability technical assessment was conducted by the California Independent Service Operator (CAISO), California Public Utility Commission (CPUC), California Energy Commission (CEC), and LADWP. The study determined that:

- Expected demand can be met if pipeline supply is at 100 percent and storage inventory at non-Aliso Gas Company facilities is adequate to support withdrawal of 1.47 Bcfd during peak.

- If the electric system is not fully available or electric supplies outside Southern California are limited, the electric system could still be at risk even with the higher storage supply rates.

- Potential risk factors include prolonged hot weather affecting supply availability and electric import capability into Southern California.

In response to these findings, LADWP has implemented several mitigation measures and action items to ensure electric reliability to its customers during the summer. Such measures include operational changes to optimize the use of natural gas such as curtailing block energy sales during high load days, updating its gas hedging practice, modifying economic dispatch practices, and purchasing energy in advance to reduce the need to use local natural gas plants. In addition, LADWP is increasing its solar resource portfolio, accelerating its energy storage plans, re-prioritizing its energy efficiency programs, expanding its public outreach for conservation, launched its successful load shifting program, and as a last resort, maintained the option of using alternative fuel at some of its in-basin generating stations only for the purpose of avoiding widespread health and safety impacts caused by rolling blackouts.

100 Percent Renewable Energy Portfolio and Research Partnership - Council File No. 16-0243 (Bonin-Krekorian-Wesson-Koretz): LADWP submitted a report to the E&E Committee in December 2016 to discuss the areas of research to be considered and how LADWP will initiate a stakeholder engagement process. As an update, LADWP launched its 100 Percent Renewable Energy Portfolio Stakeholder Engagement kickoff meeting on June 23, 2017. The kickoff meeting was attended by local government representatives, non-profit organizations, technical experts, research partners, commercial and institutional/industrial customers, the Ratepayer Advocate, neighborhood councils, environmental advocacy groups, businesses, policy makers, and members of civil society. The stakeholder advisory committee is scheduled to meet regularly to share information, promote productive collaboration, deliberate on technical and policy issues, provide recommendations, and improve the overall decision making process.

Clean Energy Storage - Council File No. 17-0115 (Englander- Bonin-Koretz-Martinez): LADWP transmitted a report to E&E Committee on June 21, 2017, highlighting its efforts to expand energy storage within its electric system. The report includes LADWP's response to State Assembly Bill 2514 (AB 2514) in setting energy storage procurement targets and also a listing of action items, mitigation measures, and plans to accelerate LADWP's utility-scale energy storage programs in response to the Aliso Canyon gas storage facility leak incident. In addition, the report affirms LADWP's continued efforts in partnering with investor-owned utilities, public-owned utilities, and other research organizations on how to integrate energy storage into the electric system while providing reliable service to its customers.

Reduce Reliance on Natural Gas - Council File No. 17-0155 (Englander- Bonin): LADWP transmitted a report to the E&E Committee on June 12, 2017, outlining its efforts to reduce its reliance on natural gas use and storage near local communities in light of the gas leak incident at the Aliso Canyon gas storage facility. The report

highlights in detail how LADWP continues to expand and look into viable options to reduce its reliance on natural gas in the long run. Areas of consideration include the purchase of excess power from other areas, expansion of energy storage options, acceleration of reliance on renewable energy resources, natural gas reduction plans in conjunction with local and state entities, and overall accomplishments and future plans to reduce greenhouse gas (GHG) emissions through efficiency and the electrification of the transportation sector.

2016 Integrated Resource Plan (IRP) and Report on Natural Gas Projects - Council File No. 17-0189 (Martinez-Koretz-Ryu): The 2016 IRP identifies a portfolio of generation resources and assets to meet the City of Los Angeles' future energy needs at the lowest cost and risk consistent with LADWP's environmental priorities and reliability standards. The IRP considers a 20-year planning horizon to guide LADWP as it executes new and replacement projects and programs. As part of its recommended case, the 2016 IRP projected 65 percent renewable energy portfolio in 2036, 1500 megawatts (MW) of local solar in 2035, 404 MW of energy storage in 2025, development of programs and infrastructure to support 580,000 electric vehicles by 2030, and the repowering of all aging local once-through cooling generators at LADWP's Scattergood, Haynes, and Harbor power plants with more efficient gas-fired units.

After the 2016 IRP was published, recognizing changes in innovation and technology along with the prevailing need to reduce fossil-based power generation, LADWP is reassessing all planned local repowering projects until a system-wide, in-depth, and independent study is completed. The study is scheduled to be completed in early 2018 and it is expected to analyze the necessity for repowering and identify all viable and practical alternatives. The comprehensive study will consider local energy resource and transmission planning needs and generation reliability requirements along with alternative technologies including energy storage and other technologies. Findings of the system-wide study will be incorporated into LADWP's 100 Percent Renewables Energy portfolio study and future IRPs.

Feasibility of Installing Solar Shade Structures over Parking Lots at Los Angeles Police Department (LAPD) Facilities - Council File No. 17-0255 (Englander-Blumenfield): LADWP's Power System is working with LAPD to develop a list of potential sites of facilities and to examine options for installing solar shades. On April 17, 2017, LADWP staff met with LAPD facility representatives to discuss the merits of the motion and plan a framework for future project coordination. Since the vast majority of LAPD facilities are under the operational jurisdiction of the Los Angeles General Services Department (GSD), LAPD is coordinating efforts with GSD to compile a list of sites that are feasible for installing solar shade structures. Upon developing a list of sites, LADWP, LAPD, and GSD will reach a collaborative agreement that will include roles and responsibilities of each agency and right of entry for LADWP electrical

construction and maintenance personnel. Final action on this motion is still pending and updates will be provided periodically.

Conclusion

LADWP will continue to make unprecedented investments to transform its power supply with new and innovative clean energy resources while reducing its GHG emissions and meeting its regulatory obligations of providing reliable electrical energy to the City of Los Angeles in a safe and environmentally responsible manner. In doing so, LADWP will continue to report its plans, projects, programs, and progress to the ECCEJ Committee to seek legislative and policy guidance.

If you have any questions or if additional information is required, please contact me at (213) 367-1338, or your staff may contact Ms. Winifred J. Yancy, Director of Legislative and Intergovernmental Affairs, at (213) 367-0025.

Sincerely,

David H. Wright
General Manager

RAK/SZ:ps
c: Councilmember Paul Koretz, Vice Chair, ECCEJ Committee
Councilmember Paul Krekorian, Member, ECCEJ Committee
Councilmember Gilbert A. Cedillo, Member, ECCEJ Committee
Councilmember Mitch O'Farrell, Member, ECCEJ Committee
Councilmember Mitchell Englander, President Pro Tempore, Twelfth District
Councilmember Mike Bonin, Eleventh District
Ms. Zina Cheng, Legislative Assistant, ECCEJ Committee
Dr. Frederick H. Pickel, Office of Public Accountability
Board of Water and Power Commissioners
Ms. Winifred J. Yancy

Cf # 15-1380-S7

ENERGY & ENVIRONMENT

MOTION

On April 19, 2016, the Department of Water and Power (DWP) reported to the Council on the Aliso Canyon Reliability Action Plan (Summer Action Plan) and its efforts to preserve power reliability in the coming summer. During the presentation, the DWP was joined by the California Energy Commission (CEC), California Public Utilities Commission (CPUC), and California Independent System Operator (CAISO).

The agencies stressed that the City and region could experience blackouts in the summer as a result of the Aliso Canyon natural gas leak. They identified the Aliso Canyon Gas Storage Facility as a critical supplier of natural gas to power plants in the region; and that the prolonged natural gas leak left the facility at minimum capacity. This situation could potentially impact power reliability in Southern California.

As a result, the agencies developed the Summer Action Plan to mitigate the risk of natural gas shortages large enough to cause power interruptions. Fortunately, there were no "worst-case" scenarios nor did any blackouts occur.

On August 22, 2016, the CEC, CPUC, CAISO and the DWP released the Aliso Canyon Reliability Winter Action Plan (Winter Action Plan) to address potential gas supply challenges the region may face in the coming winter. The Winter Action Plan is critically important since homes and small businesses tend to use higher levels of natural gas in the colder months than any other time of the year.

In order to ensure the health and well-being of the City's residents, it is vital that the DWP report to the Council on the Winter Action Plan and its efforts to mitigate the effects of a natural gas shortage.

I THEREFORE MOVE that the Department of Water and Power be requested to report to the Council in 30 days on the Aliso Canyon Reliability Winter Action Plan and its efforts to mitigate the potential effects of a natural gas shortage in the winter.

PRESENTED BY: _____ _____

BOB BLUMENFIELD
Councilmember, 3rd District

MITCHELL ENGLANDER
Councilmember, 12th District

SECONDED BY: _____

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CF# 16-0768
ENERGY & ENVIRONMENT

MOTION

On June 15, 2016 the Independent Hearing Board for the Southern California Air Quality Management District granted a variance to the Los Angeles Department of Water and Power (DWP) which allows DWP to burn diesel fuel at 3 key generating stations, if necessary, to prevent any potential blackouts in the event that SoCalGas restricts the supply of natural gas as a result of the recent gas leak at Aliso Canyon.

While it is important for Angelenos to have a reliable source of power, the greater good that comes with this limited variance – if utilized – would come at the expense of residents in Environmental Justice communities such as Sun Valley and Wilmington, who are already struggling with the burdens of disproportionate pollution levels, incompatible land uses, and other challenges to community health and quality of life.

In granting this variance, SCAQMD established several conditions and mitigations for LADWP to address community concerns, including development of a mitigation plan, payment of environmental fees, and operating conditions.

I THEREFORE MOVE that the Department of Water and Power report to Council District Six and Council District Fifteen with information on how it will work with the affected communities adjacent to the generating stations to develop the appropriate mitigation plans, what outreach efforts will be made for the required public hearings, and what other efforts it will take to recognize and ameliorate any negative impacts that would come with the use of this variance.

I FURTHER MOVE that the Chief Legislative Analyst and LADWP communicate with the Southern California Air Quality Management District and request SCAQMD to work closely with LADWP, Council District Six, and Council District Fifteen to receive input and recommendations on the expenditures of any environmental fees that may be collected.

PRESENTED BY: _____
NURY MARTINEZ
Councilwoman, 6th District

SECONDED BY: _____
JOE BUSCAINO
Councilman, 15th District

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Cf # 16-0243

ENERGY & ENVIRONMENT

MOTION

Climate change is the most significant issue facing the global environment today.

There is a broad, overwhelming consensus among scientists that the climate is changing as a direct result of human activity that produces greenhouse gases. The city has already acted decisively and deliberately to reduce its emissions of greenhouse gases and thereby reduce its contribution to the changing climate. Among these steps are investing in LED street lights, developing electrical hookups for ships at the Port of Los Angeles, expanding the use of electric vehicles at the city and major investments in energy efficiency among all types of electrical customers.

The most significant reduction in greenhouse gas emissions that the city will achieve will be the elimination of coal-fired power plants from the Department of Water and Power's electricity portfolio by 2025. In the period between 2005 and 2025, the utility will have reduced its greenhouse gas emissions by over 9 million metric tons each year. However, even after those investments in eliminating coal, the utility will still produce over 7 million metric tons of greenhouse gases, the equivalent of nearly 1.5 million cars on the road in Los Angeles each year. The remaining energy portfolio of the LADWP will be extremely reliant on natural gas, another source of greenhouse gases, and that portfolio will be susceptible to price and supply constraints of the gas market.

Clean energy and renewable technologies have developed significantly since the state began implementing renewable energy mandates in 2002 with the original Renewable Portfolio Standard legislation. Renewable projects, once viewed as a significant risk and potentially destabilizing for the electricity sector, are now readily available and adapted to the needs of utilities throughout the world. With advances in energy storage technology and distribution grid resilience, adopting greater quantities of renewables has become ever more possible and, in some cases, significantly more desirable than new fossil fuel generating stations.

On March 30, 1916, the Los Angeles Bureau of Power and Light constructed the first power poles to bring electricity from Pasadena and distribute it to customers in Los Angeles. Nearly a year later, its first hydroelectric generating station came on line to provide fossil-free electricity to even more customers. Today, with the LADWP on the verge of making significant investments in its infrastructure, and with that 100-year-old power system in need of significant upgrades, the city has an opportunity to re-create its utility in a way that recognizes the potential for a fossil-free future, demonstrates global leadership in its commitment to clean energy, and protects ratepayers from the increasing costs of carbon-based fuels.

I THEREFORE MOVE that the Council REQUEST that the Los Angeles Department of Water and Power report with a program to develop and implement a research partnership, utilizing relationships with the region's universities, members of the Southern California Public Power Authority, the California Independent System Operator, neighboring utilities and other stakeholders, with the objective of determining what investments should be made to achieve a 100% renewable energy portfolio for the LADWP.

I FURTHER MOVE that the aforementioned research partnership should utilize the resources and develop in partnership with the efforts of the U.S. Department of Energy and its support of Mission Innovation and the Breakthrough Energy Coalition.

Presented by: Paul Krekorian
PAUL KREKORIAN
Councilmember, 2nd District

Co-Presented by:
MIKE BONIN
Councilmember, 11th District

Seconded by:

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CF 16-0243

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MOTION

I MOVE that the Council AMEND the Energy and Environment Committee report relative to a research partnership with appropriate entities to determine what investments should be made to achieve 100 percent renewable energy portfolio for the Los Angeles Department of Water and Power, CF Number 16-0243 and Item Number 6 on today's agenda, to add additional recommendations to read as follows:

3. REQUEST that the LADWP work with local academic institutions to examine, over the course of the research into a 100% renewable portfolio, the potential for high quality careers and equitable local economic development, including local hiring programs for work that must be performed to modernize the electric system infrastructure within the City to increase efficiency, install energy storage, add distribution-connected renewable generation and otherwise enhance the electrical grid within Los Angeles.

4. REQUEST that the LADWP report to Council in 60 days on the specific areas of research to be considered and how it will initiate a stakeholder engagement process.

Presented by: Paul Krekorian
PAUL KREKORIAN
Councilmember, 2nd District

MIKE BONIN
Councilmember, 11th District

Seconded by: Paul Koretz

SEP 16 2016

CF # 17-0115

MOTION

State Senator Henry Stern recently introduced a legislative proposal that seeks to accelerate clean energy storage projects throughout Southern California. Senator Stern's proposal would establish a framework for expediting 120 MW of clean energy storage projects in both investor-owned and municipal-owned utilities.

This plan follows efforts by Southern California Edison and San Diego Gas & Electric to implement 100 MW of clean energy storage projects in their territories. These efforts were in response to the Aliso Canyon gas leak and the impact the leak had on local communities and the region.

The health and welfare of the Porter Ranch community was significantly affected by the natural gas leak. In addition, it threatened the reliability of local power systems given their dependence, in part, on natural gas.

Battery installations are able store power generated by the grid during the day and can be used to offset higher demand at night. This is especially desirable in places like California with high generation from renewables like solar. These efforts were in response to the Aliso Canyon gas leak and the impact the leak had on local communities and the region.

The implementation of clean energy storage projects in the region would serve to mitigate the dangers associated with natural gas use. These projects are cleaner, safer and more cost-effective for ratepayers. These projects also provide for greater power system reliability.

In order to ensure the City maximizes opportunities associated with the implementation of clean energy storage projects in the region, it is critical that the Department of Water and Power report to the Council. This way, the health and welfare of the City's residents and the environment can be ensured.

I THEREFORE MOVE that the Department of Water and Power immediately report to the Council on its efforts to implement clean energy storage projects in the City.

I FURTHER MOVE that the Department of Water and Power report on the feasibility of partnering with local investor-owned and municipal-owned utilities to implement clean energy storage projects in the region.

PRESENTED BY: _____
MITCHELL ENGLANDER
Councilmember, 12th District

SECONDED BY: _____

CF# 17-0155

MOTION ENERGY & ENVIRONMENT

The Department of Conservation's Division of Oil, Gas, and Geothermal Resources (DOGGR) and the California Public Utilities Commission (CPUC) recently conducted public meetings in Woodland Hills regarding the Aliso Canyon Storage Facility and the natural gas leak which occurred in 2015. The purpose of these meetings was to obtain public comments regarding the safety of the Storage Facility, its operations and potential impacts on local communities.

For those who have lived through the largest gas leak in U.S. history, were removed from their homes for months, sickened with nausea, nosebleeds, headaches or worse and for those whose children were forced to attend alternative schools or whose businesses failed – there is no acceptable option but a permanent closure of this facility. Beyond that, the responsible path forward would be to reduce and eliminate the need for all such facilities in communities by ending our dependence on natural gas.

DOGGR and the CPUC are slated to review safety studies and public comments to determine if the Aliso Canyon Storage Facility should be allowed to operate. The Southern California Gas Company, which owns the Facility, is claiming the Facility is safe to operate. During these meetings, local residents expressed strong concerns about resuming Facility operations and the impact on their health and welfare.

Simultaneously, the Los Angeles Times reported that California is experiencing a glut of excess power which state residents are paying for. According to the article, during the last decade the CPUC approved the construction of numerous power plants throughout the state despite declining energy demand.

The Department of Water and Power (DWP) and local utilities rely, in part, on natural gas supplied by the Southern California Gas Company to run their power systems. Given health and safety concerns regarding the operation of the Aliso Canyon Storage Facility, the City should look at ways to reduce its reliance on natural gas; and eliminate its use and storage near communities.

To achieve this objective, the City should look at a variety of options such as obtaining excess power from other areas of the state and storage options for excess power from renewables. In addition, the City should accelerate implementation of and reliance on renewable energy sources; and seek to achieve a 100% Renewable Portfolio Standard (RPS) in the near term.

These approaches, and others, can be critical to reducing and eliminating the City's reliance on natural gas and storage near communities. This way, the health and welfare of local communities and the environment can be preserved.

I THEREFORE MOVE that the Department of Water and Power (DWP) report to the City Council in 30 days on options to reduce the City's reliance on natural gas use and storage near local communities; reviewed options should include the following:

- The purchase of excess power from other areas of the state;
- Storage options including batteries for excess power from renewable sources;
- The acceleration of renewable energy source reliance in an effort to achieve 100% RPS;
- The formulation of an aggressive natural gas reduction/elimination plan for the City and region developed in conjunction with local utilities and the California Public Utilities Commission (CPUC) and the Division of Oil, Gas, and Geothermal Resources (DOGGR).

I FURTHER MOVE that the City and DWP communicate to the CPUC and DOGGR, their review of the Aliso Canyon Storage Facility matter, and that the City's report consider the state's established policy to maximize de-carbonization of energy sources in order to preserve the health and welfare of state residents and the environment.

PRESENTED BY: _____
MITCHELL ENGLANDER
Councilmember, 12th District

SECONDED BY: _____

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FEB 08 2017

CF # 17-0189

MOTION

On January 17, 2017, the Department of Water and Power (DWP) presented the Power System's 2016 Integrated Resource Plan (IRP) to the Board of Water and Power Commissioners. The goal of the 2016 IRP is to identify generation resources that meet the City's future energy needs while meeting key environmental priorities and reliability standards. The IRP has historically served as an important planning document for the DWP as it charts out projects and programs for the next 20 years.

The DWP identified its Recommended Strategic Case for the 2016 IRP. The Recommended Strategic Case seeks to obtain a 65 percent Renewable Portfolio Standard by 2036. This option includes increased levels of local solar, energy efficiency and the implementation of energy storage projects. The Recommended Strategic Case also identifies electrification of the transportation sector to facilitate the use of electric vehicles.

The DWP considers its Recommended Strategic Case to provide an optimal balance between its reliability goals and environmental objectives. In order to better understand the 2016 IRP and its potential effects, the matter should be presented to the City Council.

In light of ongoing concerns, the DWP should also report as to the role of natural gas in the 2016 IRP and the Recommended Strategic Case. The report should identify the DWP's current and upcoming natural gas related projects and purchases.

I THEREFORE MOVE that the Department of Water and Power be requested to report to the City Council in 30 days on the Power System's 2016 Integrated Resource Plan and the Recommended Strategic Case.

I FURTHER MOVE that this report include an update and recommendations for the continued pursuit of a 100 percent Renewable Portfolio Standard, as well as a report on the role of natural gas in the 2016 IRP and the Recommended Strategic Case.

I FURTHER MOVE that the DWP identify its current and upcoming natural gas related projects and purchases; and report on potential options to accelerate the reduction of natural gas use for energy generation.

PRESENTED BY: _____
NURY MARTINEZ
Councilwoman, 6th District

SECONDED BY: _____

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CF 17-0255

ENERGY & ENVIRONMENT

MOTION

Solar panels make use of renewable energy and offer an environmentally friendly means of generating electrical power. As the use of solar energy has expanded, solar carports, also known as solar shade structures, have gained popularity. Solar carports provide numerous benefits including the efficient utilization of space by using parking lots for both parking and energy producing purposes, providing shade and protection for people and vehicles, and providing locations and energy for electric vehicle charging.

Currently, California is the largest market for solar carport installation. Across California, municipalities have begun utilizing solar carports on city owned properties. In late 2012, the City of Santa Cruz installed solar carports at their City Hall and Police Department parking lots. In December 2015, the City of Murrieta completed installation of solar carports at the Murrieta Police Station. Similarly, school districts have begun utilizing solar shade structures at their parking lots. Most recently, Paso Robles Joint Unified School District announced a program to install solar carports and other solar shade structures in school parking lots.

In Los Angeles, solar carports have been installed in the parking lot of the Department of Water and Power's (LADWP) headquarters, providing shade for staff and municipal fleet vehicles, while also generating power. LADWP also plans on installing solar carports at its Van Nuys location.

It would be beneficial for the City to explore the installation of solar carports at other City facilities, including Police Department (LAPD) facilities. Installation of solar carports in parking lots at LAPD facilities would generate numerous benefits including providing power for police stations, shade and protection for the police fleet, and a reduction in the heat island effect.

I THEREFORE MOVE that the Police Department (LAPD) and the Department of Water and Power be instructed to report on the feasibility of installing solar shade structures over parking lots at LAPD facilities.

PRESENTED BY: _____
MITCHELL ENGLANDER
Councilmember, 12th District

MAR - 7 2017

SECONDED BY: _____

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