December 2, 2015

The Honorable Felipe Fuentes
Councilmember, Seventh District
Room 395, City Hall
Mail Stop 160

Dear Councilmember Fuentes:


This is in response to Motion 14-0907 (Motion) requesting the Los Angeles Department of Water and Power (LADWP) to report on actions to reduce utility GHG emissions to 80 percent below 1990 levels by 2030.

SUMMARY

Since 1990, LADWP has made significant investments to reduce GHG emissions while maintaining electrical system reliability at competitive rates. For over 15 years, the Power System of LADWP has prepared an Integrated Resource Plan (IRP) in order to provide a framework to ensure that the future energy needs of LADWP’s customers are met in the following manner while balancing the following key objectives:

- Superior reliability and supply of electric service
- Competitive electric rates consistent with sound business principles
- Responsible environmental stewardship

The IRP, which is updated on an annual basis, considers a 20-year planning horizon to guide LADWP as it executes major new and replacement projects and programs to meet these goals.
ACTIONS TO REDUCE GREENHOUSE GAS EMISSIONS

The next IRP update, to be released in early 2016, will provide detailed information on LADWP’s overall efforts and the associated costs of the different scenarios to reduce GHG emissions to varying levels through 2035. The following is a summary of the major actions to be included in the IRP to reduce GHG emissions:

1. Early Coal Replacement

While LADWP has multiple GHG emissions reduction strategies, the primary focus is on early replacement of coal-fired generation. Because coal-fired energy emits relatively high levels of carbon dioxide, switching to renewables and other cleaner fuels will significantly lower LADWP’s overall emission levels.

During calendar year 2014, 40 percent of the energy delivered to LADWP customers was generated from two coal-fired generating stations: the Intermountain Power Project (IPP) located in Utah and the Navajo Generating Station (NGS) located in Arizona. The NGS’ operating agreement expires in December 2019 and IPP’s Power Purchase Agreement contract expires in June 2027. LADWP plans to replace these units approximately two years earlier than the current expiration dates with a combination of natural gas and renewable energy resources.

2. Increase of the Renewable Portfolio Standard from 33 percent in 2020 to 50 percent in 2030

SB 350, signed into law on October 7, 2015, requires utilities to procure 50 percent of retail sales from eligible renewable energy resources by 2030, including the following interim targets:

- Achieve 40 percent renewables by 2024
- Achieve 45 percent renewables by 2027
- Achieve 50 percent renewables by 2030 and maintain this level in all subsequent years

LADWP is committed to meeting these new targets and is developing a strategy to procure additional renewable energy resources while meeting the integration challenges of increased intermittent power and impacts to system reliability. LADWP recently approved plans to implement 506 Megawatts (MW) of demand response by 2026 and 154 MW of energy storage by 2021 as solutions to address the reliability and operational impacts from implementing 33 and 50 percent renewable energy goals by 2020 and 2030, respectively.
3. Advanced Energy Efficiency

Energy efficiency plays a vital role in meeting future demands and is a cornerstone of helping customers to manage their energy usage and costs. LADWP’s five year Efficiency Solutions Portfolio Business Plan (Fiscal Years 2014/15 – 2019/20) includes joint programs that address both a customer’s energy and water usage as well as individual programs. LADWP has long partnered with the Metropolitan Water District of Southern California regarding water conservation and efficiency programs and entered into an agreement with Southern California Gas Company in Fiscal Year 2012/13 to provide combined energy, water and natural gas efficiency programs.

The Board of Water and Power Commissioners has approved aggressive energy savings targets to be achieved by 2020, an increase of 50 percent over prior goals. LADWP is modifying existing programs and developing new programs to achieve these higher savings levels. In August 2014, the Board formally approved increasing the energy efficiency goal to 15 percent by 2020. LADWP’s next IRP will include the following energy efficiency goals:

- Leverage energy efficiency as part of the strategy for eliminating coal from LADWP’s energy portfolio
- Achieve an energy efficiency goal of 15 percent by 2020
- Contribute to greenhouse gas emissions reduction through reduced energy usage

4. Increased Levels of Local Solar

The local solar cases to be considered in the IRP will target 800 MW and 1,000 MW of local solar by 2023. Higher levels of local solar will need to be further studied and a study entitled, “Maximum Distribution Renewable Energy Penetration Study” is underway to determine the maximum amount of local solar that can be incorporated reliably into LADWP’s distribution system. The study will analyze the maximum distribution feeder saturation level to accommodate local solar while mitigating issues of feeder overloads, backward power flows, voltage fluctuations, and islanding. The first phase of this study is expected to be complete in 2016.

5. Electrification of the Transportation Sector

Recognizing that the electric power generation sector produces considerably less emissions compared to traditional fuel sources, LADWP considers electrification of the transportation sector as a strategy to reduce overall GHG emissions while
increasing electric sales revenue to support clean energy programs and minimize
the associated rate impact. Electrification of the transportation sector is the process
of converting gasoline and diesel-powered vehicles, light rail, docked shipping
vessels, and other processes to electric power. LADWP plans to promote
electrification through the conversion of its own fleet to electric vehicles and through
incentives, rebates and public education to customers, similar to its energy efficiency
programs. LADWP is currently expanding its electrification program and will provide
additional details of the program in 2016.

RECOMMENDED REVISION TO THE MOTION

As previously discussed and presented in Figure 1 below, the use of LADWP’s
electricity by the transportation sector will result in significant overall GHG emission
reductions for the City of Los Angeles. However, there will be a need to account for
LADWP’s emissions due to the extensive electrification.

Figure 1

If the overall net emissions benefits from electrification are included when calculating
LADWP’s future emission profile, it is expected that a reduction of 80 percent below
1990 levels by 2030 is close to being met if all major programs are fully implemented
(Figure 2). Due to the significant environmental benefits associated with switching from
petroleum fuels to low GHG emitting electricity, LADWP respectfully requests the
following revision to the second paragraph on Page 2 of the Motion:
"I FURTHER MOVE that the Council direct the Department of Water and Power to report back to the Council in 90 days on actions they can take to reduce their carbon dioxide and other greenhouse gas emissions to at least 80 percent below 1990 levels by 2030, based on planned coal divestitures, an increase in the renewable energy mix to 50 percent of retail sales and quantification of emission reduction benefits associated with the increased use of electricity as a fuel source by cars, trucks and off road equipment."

Figure 2

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

Sincerely,

Marcie L. Edwards
General Manager

MS/JG:dms
c: Councilmember Bob Blumenfield
   Councilmember Gil Cedillo
   Councilmember Paul Koretz
   Councilmember Mitch O'Farrell
   Mr. Sharon Tso, Chief Legislative Analyst
   Mr. Rafael Prieto, Legislative Analyst, CLA
   Ms. Winifred Yancy