

The City of Los Angeles 100% Renewable Energy Study Advisory Group Protocols and Operating Principles

August 2, 2017

INTRODUCTION

As part of the City Council motion adopted on March 2, 2016, the City of Los Angeles Department of Water and Power (LADWP) has begun the process to study, "What investments should be made to achieve a 100% renewable energy portfolio." Please refer to Attachment A for the City Council motion.

The 100% Renewable Energy Advisory Group (Advisory Group) has been convened for the study. This document establishes the protocols and operating principles that will guide the Advisory Group process. The overarching consideration for the protocols and operating principles is to establish, sustain and honor a constructive, collaborative process that informs and helps to guide the 100% Renewable Energy Study.

PURPOSE OF THE ADVISORY GROUP

The Advisory Group will play an essential role in helping to guide the 100% Renewable Energy Study, providing input and feedback based on the expertise, knowledge and resources of the organizations, institutions and/or constituent groups represented by the Advisory Group members.

Attachment B provides a "conceptual process map" that shows the Advisory Group involvement in the generalized steps of the study process.

CHARTER

As part of accomplishing the purpose described above, the Advisory Group members will:

- Contribute input and feedback to inform the 100% Renewable Energy Study, based on knowledge and expertise in relationship to policy and technical matters.
- Conduct outreach to constituent groups to bring their input into the process and to keep these constituencies informed of the study progress.
- Participate in-person in all meetings, or send alternate.
- Review meeting materials in advance of Advisory Group meetings.

PARTICIPATION AND COLLABORATION PRINCIPLES

The preferred deliberation process is a collaborative process whereby Advisory Group members choose to cooperate in order to achieve shared and/or overlapping objectives, in support of optimizing the City Council Motion direction for the 100% Renewable Energy Study. By agreeing to serve on the Advisory Group, members commit to the following principles:

- Participate in an active and focused manner commit to success of the process.
- Interact respectfully with all other members, valuing all perspectives.
- Communicate interests, no positions.
- Help involve all members.
- Seek solutions for all help to integrate each other's interests into creative solutions that address diverse needs.

ADVISORY GROUP COMPOSITION

The Advisory Group is designed to reflect the diverse perspectives and expertise necessary to understand the challenges and possibilities for serving 100% of LA's electricity demand with renewable energy. Advisory Group participants will be sought out for their expertise in the topics of:

- Power systems
- Policy
- Transportation
- Economic development
- Energy systems
- Sustainability.

Both local and nationally renowned experts will be invited to provide input on: the refinement of the study scope, development of data and tools, and review of final work products. Participation in the Advisory Group will be decided based on a proposed member's experience in developing policy for renewable technologies and/or experience with energy systems. The objective will be to build a broad, diverse, and inclusive advisory board comprised of established experts in their field.

ADVISORY GROUP WORKING TEAMS

Subgroups of the Advisory Group – called Working Teams – will be convened as needed for focused discussion and input on specific topics. They will be organized by topic, and Advisory Group members can participate in multiple Working Teams. Working Teams will report to the Advisory Group, and the Advisory Group will have the opportunity to review and discuss Working Team reports.

Topics of interest to half or more of the Advisory Group should be discussed at Advisory Group meetings rather than convening a Working Team.

Examples of potential Working Teams and their purviews include:

- **Technical Working Team:** Identify and provide input on potential data sets and models, Western regional renewable resources, and grid considerations.
- **Policy Working Team:** Provide input on policy topics, taking into consideration the potential local economic development benefits and environmental justice impacts.
- **Distribution Systems Working Team:** Provide input on specific variables, research, and technology for consideration in the distribution system component of the study.

Working Team meetings may be conducted by conference, webex, or in-person, depending on the discussion topics and the participants' availability.

RESEARCH PARTNER

The City of Los Angeles 100% Renewable Energy Study will be conducted by the National Renewable Energy Laboratory (NREL). NREL is tasked with conducting an objective economic and reliability analysis of options for reaching a 100% renewable energy supply for the city of Los Angeles. NREL will leverage the extensive data and modeling capabilities developed by the Department of Energy to lead a detailed technical analysis that considers long-term and short-term economic and reliability metrics.

- **Project Sponsor:** LADWP will provide leadership and guidance to the 100% Renewable Energy Study with support from the Mayor's Office and City Council.
- **Project Manager:** NREL will be responsible for assembling a world class research team to develop and execute the project scope approved by LADWP.
- **Research Team:** The research team will be led by NREL. It will be comprised of technical staff from national laboratories, universities and consultancies. The research team will be ultimately responsible for the research methodology, technical assumptions, and final results of the study.
- **LADWP Power System** will participate in the study by providing data, analyzing methods, and reviewing results. The Research Team will interact with LADWP staff on a regular basis to ensure current system characteristics and capabilities are accurately reflected in all analysis.

PRIMARY MEMBERS AND ALTERNATES

Protocol for primary members and alternates is guided by goals for consistent involvement, which will benefit the Advisory Group process and foster overall success of the 100% Renewable Energy Study. Each Advisory Group member organization will assign a primary representative. The primary member can identify an alternate representative or a proxy who can substitute for the primary if she or he is unavailable for a meeting. Alternates are highly encouraged to attend the meetings as observers. In the event that an alternate is asked to step in for a primary member, it is the primary's responsibility to ensure that the alternate is briefed on the process to date before activity participating.

MEETING SCHEDULE, LOCATION, AGENDAS AND SUMMARIES

Advisory Group meetings will occur at a minimum of once per quarter at the LADWP John Ferraro Building at 111 North Hope Street, with occasional off-site meetings at LADWP facilities in the Los Angeles area. The duration of the Advisory Group process is approximately two years, consistent with the two-year timeframe for the study.

To help Advisory Group members reserve time for the meetings, the meetings will be scheduled six months in advance to the extent possible. Agendas will be distributed at least one week in advance of meetings, and include a standing item for updates on meeting scheduling.

Following each meeting, a summary will be prepared. Following review by both the project manager and meeting facilitator, it will be distributed to Advisory Group members and posted on the study website. The meeting summary will identify major topics of discussion and input without making attributions to individual Advisory Group members.

INFORMATION SHARING WITH OTHER ADVISORY GROUP MEMBERS

Advisory Group members may want to share information and documents with other members during the study. To ensure that all members have the same information available to them, all documents are to be distributed through the established LADWP point of contact, who is listed at the end of this document.

EMAIL COMMUNICATION

The Advisory Group is meant to be a collaborative experience, in which members work through issues and dialogue in person to gain mutual understanding. As such, Advisory Group members agree to avoid engaging in email "dialogue" with other Advisory Group members, and instead commit to using the inperson Advisory Group meetings for dialogue and discussion purposes. Email exchanges often do not constitute constructive dialogue and at times, can result in unproductive exchanges that can cause unraveling of mutual understanding and collaboration.

MEDIA INTERACTION

Given the high interest in the 100% Renewable Energy Study, there will likely be coverage of the study in local media, blogs and other forms of communications. Advisory Group members agree to respect the open, frank discussions that occur within their meetings and not attribute specific conversations to other Advisory Group members in interactions with the media and other external communication channels. Furthermore, Advisory Group members agree not to make statements about Advisory Group meeting discussions and deliberations. The overriding consideration in all communications among Advisory Group members is to honor and sustain the constructive, collaborative process. While Advisory Group members are free to speak with the media from their perspectives as individuals or representing their respective organization, members are not to serve as a spokesperson on behalf of the Advisory Group.

PUBLIC INVOLVEMENT IN THE STUDY

The public is highly encouraged to become actively involved in the study.

100% Renewable Energy Study Website

The website provides information about the study and will be carefully updated as the study progresses. Advisory Group meeting summaries and incremental working papers from the technical team, presentations, and other documents will be posted on the website as they become available. Additionally, people can sign-up for email announcements and updates on the website: www.ladwp.com/CleanEnergyFuture.

Email Updates and Announcements

Periodic updates and announcements about new website postings will be sent to all who have signed up.

Public Outreach Plan

As the Advisory Group begins work and gets underway, communicating the group's work and progress will be useful to share with outside organizations. LADWP will continue to monitor progress and propose a plan for outreach at a later time. Requests for information on the Advisory Group's work or the status of the 100% Renewable Energy Study should be routed to the established LADWP point of contact below.

POINT OF CONTACT FOR ADVISORY GROUP MEMBERS

The established point of contact for Advisory Group members' questions and suggestions is:

Anton Sy, Project Manager Los Angeles Department of Water and Power Anton.Sy@ladwp.com (213) 367-2332 Attachment A City Council Motion March 2, 2016

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.

- Co-Presented by: Presented by:

PAUL KREKORIAN Councilmember, 2nd District

MIKE BONIN

MIKE BONIN Councilmember, 11th District

Herry Ken Seconded by

ORIGINAL

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 Councilmember, 2nd District

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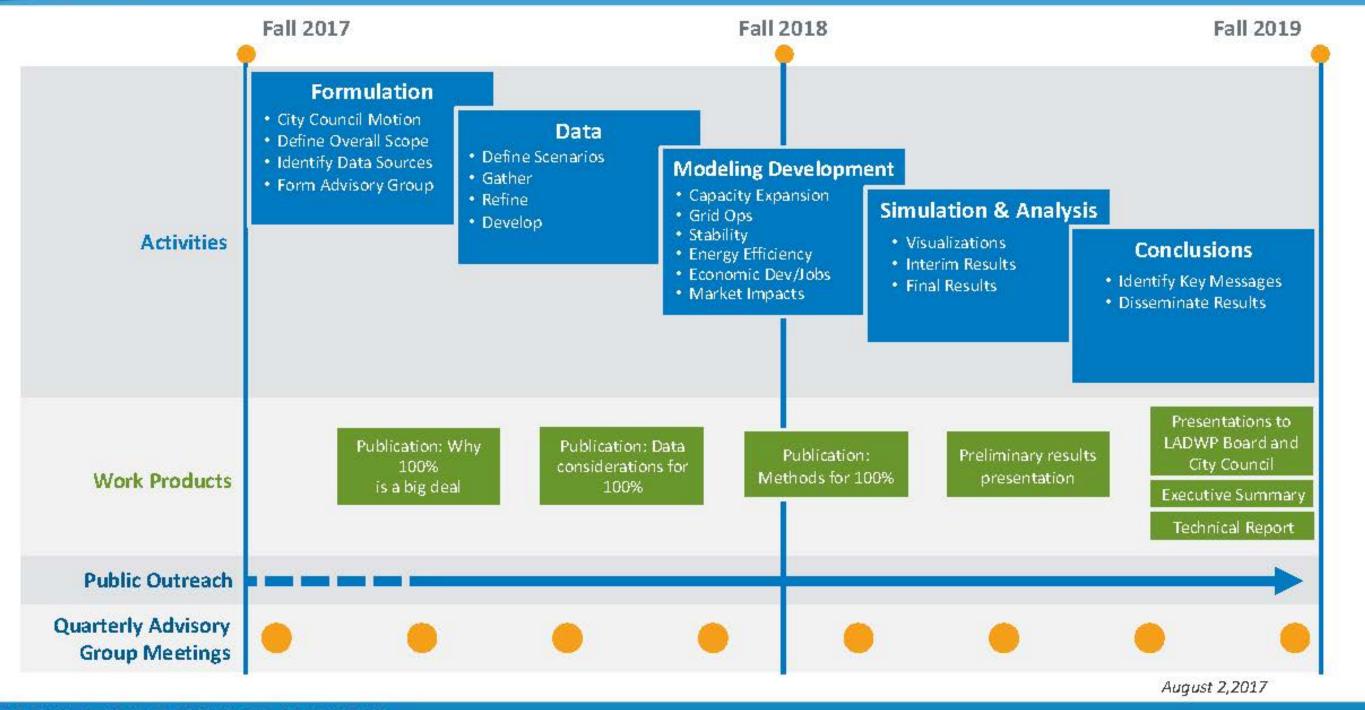


Seconded by:

Attachment B

Process Map

Los Angeles 100% Renewable Energy Study – Conceptual Process Map



NATIONAL RENEWABLE ENERGY LABORATORY

