LADWP 2024 Power Strategic Long-Term Resource Plan (SLTRP)

Advisory Group Meeting #1 – Kickoff

Summary

March 21, 2024, 9:00 a.m. – 12:15 p.m.
LADWP Wall Street Building (In-Person)
1350 Wall St., Los Angeles, CA 90015

Prepared by Kearns & West

Meeting Attendance

Advisory Group Members

1. Center for Energy Efficiency and Renewable Technologies (CEERT), V. John White
2. Central City Association, Anh Nguyen
3. City Attorney, Bill Kysella
4. Climate Emergency Management Office (CEMO), Marta Segura
5. Community Build, Faye Geyen
6. Community Build, Robert Sausedo
7. Council District 2, Patrick Ma
8. DWP MOU Oversight Committee, Tony Wilkinson
9. Food and Water Watch, Andrea Vega
10. LA Cleantech Incubator, Jack Symington
11. Los Angeles Alliance for a New Economy (LAANE), Lauren Ahkiam
12. Los Angeles Business Council (LABC), David Fink
13. Los Angeles City Planning Department (LACP), Gabriela Juarez,
14. Los Angeles Unified School District (LAUSD), Sylvia Wallis
15. Mayor's Office, Luis Gutierrez
16. Metropolitan Transportation Agency (METRO), Cris Liban
17. Neighborhood Council Sustainability Alliance, Dan Kegel
18. Pacific Asian Consortium in Employment (PACE), Susan Apeles
19. Pacoima Beautiful, Christopher Nyambura
20. Pacoima Beautiful, Miguel Miguel
21. Port of Los Angeles (POLA), Dac Hoang
22. Rate Payer Advocate, Camden Collins
23. Rate Payer Advocate, Fred Pickel
24. RePower, Roselyn Tovar
25. Sierra Club, Julia Dowell
26. Sierra Club, Teresa Cheng

27. South Los Angeles Transit Empowerment Zone (SLATE-Z), Ruth McCormack
28. South Los Angeles Transit Empowerment Zone (SLATE-Z), Tyresa Jackson
29. Southern California Gas Company, Paul Lin
30. Strategic Concepts in Organizing and Policy Education (SCOPE), Tiffany Wong
31. University of California, Los Angeles (UCLA), Bonny Bentzin
32. University of Southern California (USC), Zelinda Welch
33. Water and Power Associates, Bill Barlak
34. Water and Power Associates, Bill Engels
35. Water and Power Associates, Ken Silver

LADWP Staff

Aaron Gross
Alexandra Briseno
Arash Saidi
Bernardo Perez
Brandon Serna
Brendan Watson
Caleb Dennis-Kiyasu
Ceja Fredy
David Castro
David Jacot
David Rahimian
Dawn Cotterell
Deborah Hong
Denis Obiang
Faranak Sarbaz
Fredy Ceja
Greg Reed
Isai Navar
Isiah Smith
James Barner
Jay Lim
Jesus Enriquez
Kerry McCorkle
Linh Doan
Luis Martinez
Mukund Nair
Nazir Fazli
Nermina Rucic O'Neill
Paul Habib
Robert Hodel
Simon Zewdu
Vanessa Mahlkenecht
Yamen Nanne

SLTRP Consultants

Rachel Scheinberg, University of California, Los Angeles (UCLA)
Brandon Mauch, Ascend Analytics
Christian Mendez, Kearns & West
Joan Isaacson, Kearns & West
Juan Cabrera, Kearns& West
Karen Lafferty, Kearns & West
Robin Gilliam, Kearns & West

Welcome, Meeting Purpose, and Agenda Overview

Joan, Isaacson, facilitator from Kearns & West, welcomed attendees and thanked the Advisory Group members for their attendance. After a review of safety protocols by the Wall Street Building facilities supervisor, Isaacson introduced Simon Zewdu, Assistant General Manager of LADWP for the Power System, to make opening remarks.

Zewdu welcomed the Advisory Group members, noting some familiar faces from previous stakeholder engagement and the months of planning for this in-person meeting for launching the 2024 SLTRP. He reminded attendees how they have come together to collaborate in creating a roadmap for the best path for the 2024 SLTRP. Zewdu explained that this iterative process would build on the 2022 SLTRP and would now include Steering Committee members from the LA100 Equity Strategies Study, the first study in the nation to address energy equity in local clean energy transitions.

After describing how LADWP has been at the forefront of accelerating clean energy goals in California and citing major actions completed in the last three years, Zewdu outlined four pillars for the future: decarbonization, reliability and resiliency, affordability, and feasibility. He concluded his remarks by commenting on the expertise present in the room, reminding everyone that the Advisory Group members represent the best interest of LADWP customers and encouraging members to be open to ideas during the SLTRP process in the common goal of making Los Angeles a better place to live.

Next, Isaacson reviewed the meeting agenda, explaining that the focus would be on sharing information about the SLTRP's purpose, reviewing recommendations from the 2022 SLTRP, sharing metrics and strategies from LA100 Equity Strategies, and outlining what to expect in the 2024 SLTRP process. (Note: Later during the meeting, Isaacson invited Advisory Group members to provide questions and comments on index cards when time ran out on specific agenda items. The notes are documented in the appendix.)

Roles, Responsibilities, and Protocols of the Advisory Group

Isaacson first described the Advisory Group role (see SLTRP Background Overview slides 2-3), emphasizing members' communication and outreach to their constituent groups to let people know about input opportunities. She explained that because the meeting topics build on each other, attendance by the primary or alternate member is important. She also reminded attendees that to maintain stakeholder balance only one representative per member organization will participate in meeting discussions.

In reviewing the protocols, Isaacson encouraged Advisory Group members to refer media requests to Dawn Cotterell, Director of Public Relations at LADWP. She then showed the list of Advisory Group members, the guides for productive meetings, and the 2024 schedule, highlighting that meetings would alternate between in-person and virtual

with a two-month hiatus over the summer (see SLTRP Background Overview slides 4-7). She also noted that Advisory Group membership is based on organization, and that only the primary representative from each member organization should participate in meeting discussions. Alternates are encouraged to attend and can participate in meeting discussions when the primary member is absent.

Question: Will there be an opportunity for hybrid meetings? A workshop discussion would be better in-person. For information sharing, virtual/hybrid would be better. **Response**: Isaacson responded that the input was appreciated and that input from other members would also be appreciated as the team develops formats for future meetings.

SLTRP Advisory Group Roundtable Introductions

Isaacson asked Advisory Group members to introduce themselves and their organization and share a priority for the 2024 SLTRP. Below are responses captured during the introductions.

- To truly understand the technical underpinnings of the work being performed.
- How can SoCal gas infrastructure help with LADWP's decarbonization efforts?
- The public and LADWP are in sync with the changes that are going to happen.
- Equity resilience and support for thriving communities.
- Grid capacity and effects of decarbonization.
- Understanding everyone's perspectives on the SLTRP.
- A just and equitable transition to 100% renewable energy in LA.
- Integrating the lived experience of energy burdened communities.
- Learning more about working with LADWP to implement this ambitious plan and center equity.
- Outreach and sharing what we discuss with low-income communities.
- Short-term focus is zero-emission electrification transition; long-term focus is energy resiliency.
- Hearing South LA voices so residents and business can enjoy and prosper from the plan.
- Facilitating upgrades for electrification at LAUSD.
- A union-built clean energy LA that invests in communities.
- Implementation and transmission; no transition without transmission.
- Weaving a vision of equitable transition, reduce energy burden for those who can least afford it, prioritize health for communities, and identify gaps and limiting factors.
- Understanding that planning is essential; we should pace investment to wait for appropriate technology and avoid new stranded assets.

- A plan accommodates goals for local, state, and national transportation electrification.
- Leave room for industry professionals to share best practices in the process.
- Prioritizing environmental justice (EJ) communities and have an equitable and just transition.
- That plans reflect affordability priorities; build on LA100 Equity Strategies.
- Getting LA to clean energy in an equitable way.
- Having a pathway to meet solar and storage goals in an equitable way.

Review of 2022 SLTRP

Luis Martinez, Assistant Supervisor of Integrated Resource Planning at LADWP, let attendees know that the executive summary for the 2022 SLTRP was available in hard copy at the meeting, with the full report posted online at the project webpage. He then shared highlights from the seven chapters of the report, beginning with the policy drivers and the interplay with both the LA100 Study and LA100 Equity Strategies (see SLTRP Background Overview slide 12).

Martinez explained how the 2022 SLTRP modeled the four core cases studied in LA100, which are the reference case based on SB 100 and the three cases that met the LA City Council motion for 100% carbon-free energy by 2035. He also outlined the price and "what if" sensitivities for the study.

For model inputs, assumptions, and methodology, Martinez presented the diverse and complementary resources, noting that no one resource can meet all needs (see SLTRP Background Overview slide 17). Martinez next described the high, expected, and low projections for supply-side assumptions (e.g., load, greenhouse gas emissions, costs) and distributed energy resources (DER), noting that DER adoption relies on customer participation. He also described assumptions for green hydrogen capacity and the Power System Reliability Program (PSRP) revamp.

Martinez next presented the model results for annual build rates, bulk power resource capacity, DER capacity, and power system portfolio costs for each core case (see SLTRP Background Overview slides 22-25). He described the resources needed by 2035, highlighting that in comparison to the reference case, the required average build rate for new resources is more than double for the three carbon-free cases. He also pointed to factors not included in the results, such as full costs for transmission or distribution and availability of human resources.

Martinez explained that model results for greenhouse gas emissions show divesting fully from coal as the most impactful action. On reliability, all core cases have a loss of load hour (LOLH) below 0.5 per year, well below the industry standard of 2.4 LOLH per year. Martinez next presented rate and bill impacts, shown for both an apartment and a single-family home, noting that impacts from the Inflation Reduction Act were not factored in as it was signed into law late in the 2022 SLTRP process.

Martinez concluded by describing Case 1, the recommended case for the 2022 SLTRP, with 80% renewable energy by 2030 and 100% carbon-free energy by 2035. Of the carbon-free cases, Case 1 has the least need for transmission capacity. He concluded with descriptions of challenges and next steps, including risk assessments for the Power System.

Question and Answer

Question: Was the 2022 SLTRP a multi-faceted analysis?

Response: For 2022 it was multi-faceted. The 2024 SLTRP will be placing a more deliberate emphasis on energy burden.

Comment: Cost vs. energy burden vs. economic impacts, like for job development, must be considered.

Comment: The 2022 SLTRP did not include estimates of higher rates of sales and impacts in the commercial sector, and the destruction of jobs created by new investments.

Comment: Will monetize savings to cover costs on expenditures be considered, including migration paths that allow time for newer technologies. Other agencies that interfere with the process need consideration.

Question: We have to calculate the cost of not upgrading current infrastructure and the system failing to deliver the power needed. Reliability loss has economic impacts. How are costs for upgrades to current infrastructure addressed in the 2022 SLTRP?

Response: The main cost figure for current infrastructure was for a revamp of the PSRP, upgrades to distribution, and expansion for future increases. Our reference case (SB 100) was compared to other cases and compared to a long-run average inflation of 2-3%.

Question: There is value in including different variables for cost shifts in the next analysis. Is the Intermountain Power Project on track for the target to get off coal and transition to green hydrogen next year? Another consideration is targeting investment in DERs that are under utility control.

Response: IPP is a 1,800-megawatt (MW) coal-fired project in Utah, which will be converted to hydrogen-ready units by July 1, 2025. DER and a diverse array of solar programs are constantly being refined. Most are feed-in-tariff (FiT) and behind-the-meter. As we learn more from LA100 Equity Strategies, programs will be modified.

Comment: Business as usual at LADWP is to work toward clean energy, however, SB 100 is a slower march to completely clean energy; the other three cases are community-driven and political efforts to accelerate the transition.

Comment: The California Energy Commission voted to evaluate the non-energy benefits in energy planning. It would be good to see LADWP incorporate factors not traditionally included like local resilience, health, and environmental justice communities. Missing in the rate impacts was the positive impact for people who do adopt solar and storage. We need a more thorough accounting of new assets like green hydrogen, offshore wind, and other resources.

Question: The 2022 SLTRP includes definitions. As we bring this back to the community, are the terms consistent across the industry?

Response: The project team will look at the definitions of terms, but if there are any inconsistencies, please notify us.

Comment: I'd like to see a description of the drawbacks of the baseline case. People reading a report might appreciate having a preview of what we want to change in the baseline.

Questions: There is a lack of clean firm resources like geothermal. It's worth another look and to consider transmission.

Response: Firm dispatchable resources are ones that are controllable and can be called on any time when needed for reliability. Geothermal is in the plan and amongst the thousands of MW that will be required for the transition.

LA100 Equity Strategies Implementation

Greg Reed, Senior Assistant General Manager of Diversity, Equity and Inclusion at LADWP, provided a recap of the LA100 Equity Strategies Study conducted by the National Renewable Energy Laboratory (NREL) and University of California, Los Angeles (UCLA). He described how the study came on the heels of LA100 in trying to answer the questions of how to make the transition to clean energy without increasing disparities and make sure communities have a voice. He outlined the five community-identified priorities and then described the metrics and a mix of policy and program strategies developed to address them (see LA100 Equity Strategies slides 5-7).

The metric for affordability was energy burden, Reed explained, with strategies such as low-income assistance plans identified to address this priority. For housing, researchers looked at access to cooling and indoor temperatures, finding that by 2035, it is projected that 230,000 low-income households will experience more than two months of exposure to dangerous indoor temperatures each year. Reed pointed to strategies like heat pump rebates and direct installation programs.

Reed explained that NREL's metric for local solar was adoption in disadvantaged communities (DACs) as compared to non-DAC communities with identified strategies for the Shared Solar subscription rate and expansion of sites on multifamily properties in low-income neighborhoods. Electric vehicle (EV) adoption was used as the metric for household transportation electrification and strategies include increased incentives for used EVs and expansion of EV charging for multifamily building residents.

For air quality and health, Reed explained, NREL looked at exposure to nitrogen oxides (NOx) emissions and traffic in DAC and non-DAC communities with some identified strategies targeting electrification of heavy-duty trucks, which contribute the most to particulate matter. Finally, the number of outages per year was the metric for the distribution grid and resilience with more outages occurring in DAC as compared to non-DAC communities. Program recommendations included incorporating equity as a priority in grid planning.

Reed continued by describing UCLA's analysis of affordability, which included notes on legal constraints due to Propositions 26 and 218 and the Los Angeles City Charter. He continued by sharing UCLA's study of impacts to small, ethnic-owned businesses. On air quality and public health, researchers noted differences in mortality rates by race/ethnicity and the study's recommendation was to prioritize electrification of medium- and heavy-duty trucks.

The UCLA study also looked at the need for residential panel upgrades to support electrification, Reed explained, with a recommendation to leverage funding from the Inflation Reduction Act. On green jobs and workforce development, the study estimates

2,000 to 4,000 jobs to be created by 2035. Reed then presented the Energy Atlas database, which has a new interactive data visualization tool.

Finally, Reed indicated where to download the full LA100 Equity Strategies report and described how the Steering Committee would be engaged in the 2024 SLTRP process (see LA100 Equity Strategies slides 34-39).

Question and Answer

Question: How has LADWP collaborated with organizations like LA Metro in terms of strategies? LA Metro has additional tools to identify disparities.

Response: The LA100 Equity Strategies study had an Advisory Committee that included government agencies and LA Metro was part of that group.

Power System Strategic Vision

Denis Obiang, LADWP Director of Power System Planning, presented on the Power System Strategic Vision. He described the SLTRP as a roadmap for the energy transition, showing where LADWP is today with the renewables portfolio standard and carbon-free resources (see Power System Vision slide 5), emphasizing that 2030 is only six years away. He showed the current plan for existing plants, including that the Intermountain Power Project is on schedule to be divested from coal and equipped with green hydrogen-ready units by July 2025. Next, he shared enhancements to resource procurement, which include streamlining the interconnection process and working with developers. For new resources, he presented a plan for collaboration and outreach with LADWP customers.

For transmission, Obiang began by showing an overview of LADWP's system and describing constraints on the three major corridors into the LA Basin. He presented an update on the 34 transmission projects in process and then explained how LADWP plans to solve out of basin constraints through updates to existing lines, conversion from alternating current (AC) to direct current (DC), use of existing corridors to minimize costs, and addition of a new corridor from New Mexico to gain access to wind, solar, and geothermal resources.

Obiang illustrated the need to prepare for load growth in addition to decarbonizing (see Power System Vision slide 16). He next addressed needs for distribution, accommodation of EV chargers and charging hubs, and truck electrification. He concluded by showing the LADWP Powered by Equity initiatives and charts indicating the need for increased hiring for each of the 2022 SLTRP core cases.

LADWP SLTRP Overview

Jay Lim, Manager of Resource Planning at LADWP, began his overview of the SLTRP by describing the makeup of the Advisory Group and how it brings a diverse group of city stakeholders to the planning process (see SLTRP 2024 Overview slide 4). He reminded attendees that the recommended case from the 2022 SLTRP was finalized in July 2023 and noted caveats and challenges around the four key pillars outlined by Simon Zewdu in his opening remarks. He highlighted the need to more than double nameplate capacity for resources while addressing affordability.

In providing an overview of the Power System, Lim explained how as a vertically integrated utility, LADWP has assets spread across a wide geography and cited recent accomplishments, such as bringing the 331-MW Red Cloud Wind Project into service. He then reviewed the pros and cons of available technologies, noting that the SLTRP is technology-agnostic and that the model for resources can select different options.

Question and Answer

Question: How is the cost and plan for the gap in transformer voltage reflected in the SLTRP? We need enough transformer volts, especially in areas that have been historically underserved. What's the timeline to make sure they are up to speed for EV charging and decarbonization of buildings and transportation?

Response: Transformer voltage needs to be sufficient to maintain the capacity that goes with the PSRP that feeds into SLTRP. SLTRP is more about bulk level power. Another group handles distribution planning and we will work to incorporate their analysis in the SLTRP.

Question: Is there acceleration in areas that need it most?

Response: Investments are prioritized. The team looks at load growth and getting the grid ready for electrification to maximize the investment. In the future, we will have a meeting on distribution for stakeholders.

Question: Is it the case that fossil combustion resources are trending toward being used just for backup? If so, what's the timeline?

Response: As we transition to renewables, it is inherent that fossil resources are used less and less. We want to take advantage of serving load with renewables.

Question: What about long-duration energy storage? What about different batteries (e.g., iron air) and technologies like compressed air? Have you looked at federal and state dollars to invest in these technologies?

Response: Long-duration energy storage is of great interest. The chart in the slides is generic. Some resources are being discussed in confidential negotiations. It comes down to best-fit for need and pricing relative to other options.

Question: What is the status of the analysis for alternative hydrogen combustion requested by the City Council? How is that integrated into the 2024 SLTRP?

Response: We are working with the engineering team internally and conducting studies. We also have a contract with an independent party for further evaluation of safety, water usage, etc. for green hydrogen combustion. In April, we will have a specific presentation addressing hydrogen combustion.

Question: What's going to be done about the request for proposals (RFP) process and how soon? On distribution improvements, the equity metrics haven't been updated in a while. The department does monitor outages and should make that information public.

Response: On the RFP, we will incorporate proposals into the model and will follow up separately on request. The outage metrics are part of the SLTRP.

Nermina Rucic O'Neill, LADWP Manager for Power Planning, next presented on in-basin capacity needs for reliability, first describing how reliable electricity is essential for quality of life, health, and safety. She explained that a reliable decarbonized grid is technically achievable but noted that not all resources can act as alternatives to each other (e.g., firm vs intermittent sources). Next, she illustrated how local generation is needed in case of a transmission outage, using the Saddle Ridge Fire as an example and describing in-basin topology (see SLTRP 2024 Overview slides 17-18).

A key takeaway of the LA100 study, Rucic O'Neill explained, was that in-basin capacity must be maintained for reliability and resiliency, even in a decarbonized future power system. After outlining challenges such as limitations of transmission capacity, she described how reliability will drive electrification, which will in turn improve air quality, as found in the LA100 Equity Strategies study. These benefits, she explained, will come primarily through electrification of heavy-duty trucks.

Lim continued the presentation by describing the policy drivers for the 2024 SLTRP and how incorporating real-world constraints and challenges will determine a roadmap for meeting future power needs. He elaborated by showing guiding principles and

challenges, including feasibility constraints, and then briefly describing the methodology from NREL that will use capacity expansion modeling and the ability to simulate weather patterns for intermittent resources like wind and solar.

Lim concluded by outlining good news about grant funding benefits and showing a snapshot of grants awarded as of March 2024, that total nearly $52 million. He described that these include grants from the Department of Energy and the Environmental Protection Agency.

Question and Answer

Question: How can we invest and redirect funds to align with industry, for example self-charging EVs, and avoid costs in infrastructure development?

Response: In that example, self-charging cars will not increase LADWP's load. We look at different load forecasts and what that means for resource buildout. We look at sensitivities, high and low load forecasts, and factors such as rates, emissions, and resources.

Comment: We had offered feedback about separating cases from the strategies and sensitivities. It's good to see that reflected in the meeting topics for the 2024 SLTRP process.

SLTRP Priorities Questionnaire, and Wrap Up

Before the concluding activity, Lim showed the meeting map for the 2024 SLTRP and the dedicated email address for the project: PowerSLTRP@ladwp.com

He then introduced David Castro, Supervisor of LA100 Policy and Implementation at LADWP, who shared a questionnaire for gaining additional feedback from Advisory Group members. He led the process for completing the questionnaire using an anonymous polling activity in Mentimeter. Advisory Group members answered a series of questions where they first ranked primary themes and challenges and barriers and then using a rating scale to respond to items about different factors relevant to the SLTRP. They could also offer open-ended feedback. Responses from approximately 25 Advisory Group members who participated in the activity are presented in Appendix B.

The meeting concluded with reminders on dates for upcoming meetings and where materials are posted: https://www.ladwp.com/who-we-are/power-system/strategic-long-term-resource-plan

Appendix A
Questions and Comments Submitted on Cards from Advisory Group Members

Because there were more Advisory Group questions and comments than could be addressed during the meeting, the facilitator invited members to submit questions and comments on index cards. The following notes were received and have been lightly edited for clarity.

- Energy storage will be critical to support, leverage, and buffer renewables – need to assess pros/cons of different technologies (batteries vs. geological storage).
- The metric/value of assets used as backup, such as backup generation, will need to be clarified/articulated so that people see the potential losses should a power outage occur.
- Load shedding capacity from large users: We haven't addressed requirements for large orgs. To support peak load needs by load shedding. UCLA is regularly asked to load shed during extreme regional power need periods, others are not (such as USC). While they don't have a power plant, they could redesign their systems to allow to lightly shut down (for example). This strategy is used at Harvard University when asked by Edison Electric.
- For future meetings, use Slido App for ongoing question collection.
- All major users should be required to reduce regular consumption by a % and adopt programs/processes for peak load shedding.
- Timing: How will DOE/Fed funding impact LADWP SLTRP? Discussion of these opportunities and how that impacts timing and helps offset customer rates (equity) can be highlighted.
- Energy Security?
- Your NOx modeling shows that DWP powerplant emissions are low compared to other gas & utilities in LA City. If DWP in-basin powerplants plan to transition to green hydrogen, what are DWP's plans to transport this generated green hydrogen throughout or outside LA basin? Is this leakage rate also going to be studied? How will this impact emissions since hydrogen is an indirect greenhouse gas?
- How are existing resource development plans/MOUs with LAUSD, City agencies, universities, etc. accounted for or considered in the SLTRP? Are there updates on progress for those plans or new opportunities to ensure implementation?
- What will be the process to look at opportunities for joint energy/water efforts toward SLTRP goals? (ex. Water direct install).
- What will LA100 ES Action Plan and complementary process entail?

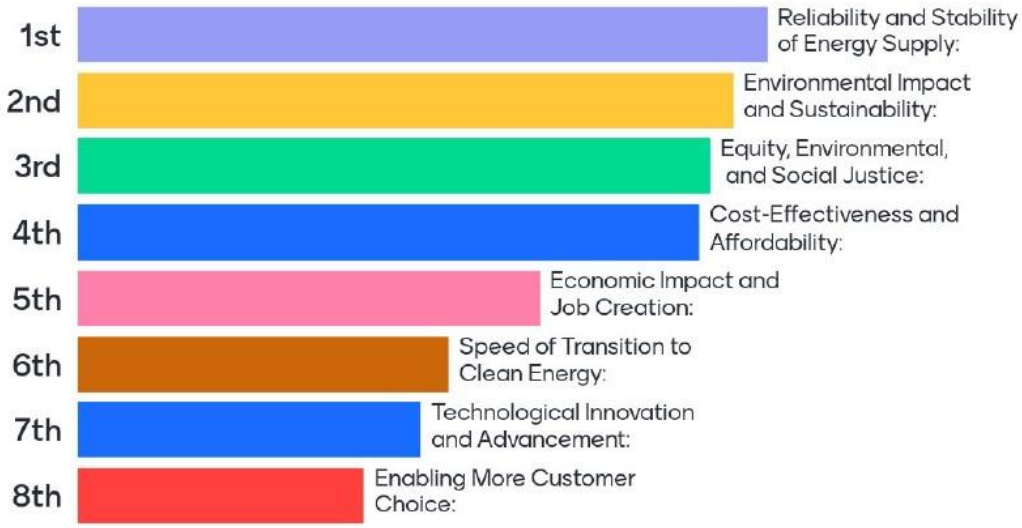
- Power System Vision: Has there been an energy analysis for the upcoming World Cup + LA28's events' impacts on the city's energy grid and how to ensure vulnerable communities are not impacted?
- Where are the EV charging stations occurring? SLATE-Z would like to ensure that South LA is a critical part of the EV infrastructure, including building job pipelines to these growing industries, to expand access to EV/new tech.
- Human Resources Capacity: LADWP is currently behind on the staffing/service support (transformer volts) to facilitate large orgs and adopting/installing EV infrastructure. When will this be resolved? Raises concerns about HR needs for SLTRP.
- Two areas missing from the analysis: 1. Biodiversity impacts particularly related to wind, solar, and transmission. 2. Does it count as complete decarbonization if we're buying green power from states who are then using fossil fuel-based power?
- Transmission: Does the transmission analysis include partnering with other utilities? LADWP isn't the only utility needing expanded capacity. Cost sharing?
- Like what we're hearing, but could various milestones from these different plans be leveraged and presented/used as the Advisory Group's tool for success?
- How will LADWP incorporate hyperlocal effects on air quality for in-basin generation under the hydrogen analysis?
- Will there be an analysis included of the policy levers needed/possible from other regulatory bodies like the state, city council, AQMD to support the shift to issues such as electrification of heavy-duty vehicles, energy efficiency/uptake of demand response, especially by high-income, high-energy users etc.?
- Can the development of EV charging hubs connect with local/distributed public institutions like parks, libraries, schools, churches, public housing and connect to solar installations at such facilities?
- Has LADWP considered gravity-based energy storage? (Not hydro-electric) (Ex: heindl-energy.com)
- Fuels produced from CO2; are carbon circularity technologies considered? (biomass to biofuels)
- Will stormwater capture be discussed in 2024 SLTRP? How will water usage be reduced while ensuring equitable access?
- How has energy efficiency/reduction been incorporated into load reduction? For example, incentives of lower rates during the day, rooftop solar, and batteries.
- To expand transmission capacity to increase clean energy imports from north to south, has DWP examined all unknown HVDC lines from Diablo to Scattergood?
- Use of the abandoned right of way for an oil pipeline from Kern County to LA that could install an HVDC line to LA?
- How does LADWP envision providing green hydrogen for use as backup power? And has DWP looked at selling green hydrogen or making it available to oil refineries in the South Bay?

- What is the rate of load growth in spreading the costs of new generating and transmission and reducing…from costs?
- Given the constraints of transmission capacity to deliver clean energy to the LADWP grid, is DWP exploring the use of Grid Enhancing technologies and reconductoring existing corridors?

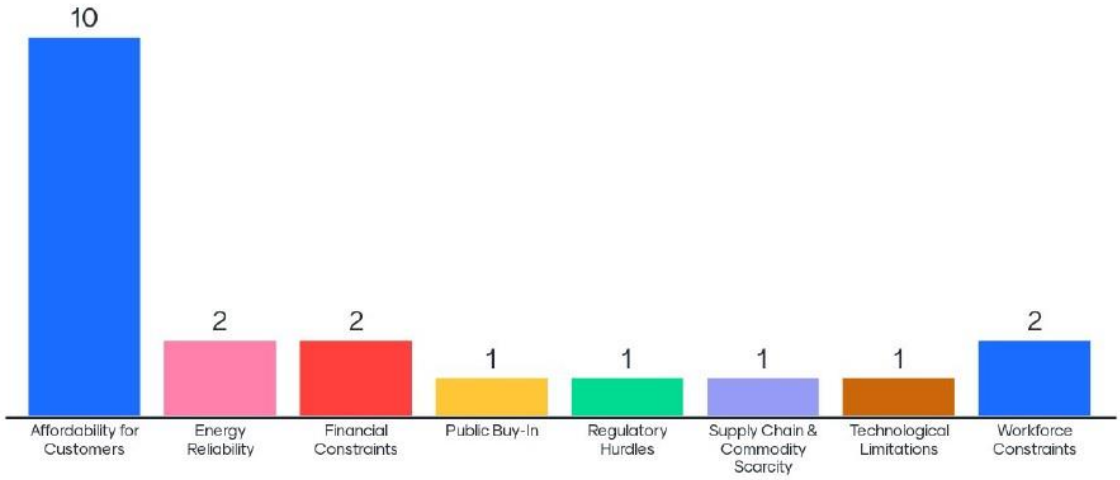
Appendix B
Mentimeter Polling

The following results represent the perspectives of Advisory Group members who participated in the polling (approximately 25) and not the perspectives of the Advisory Group as a whole.

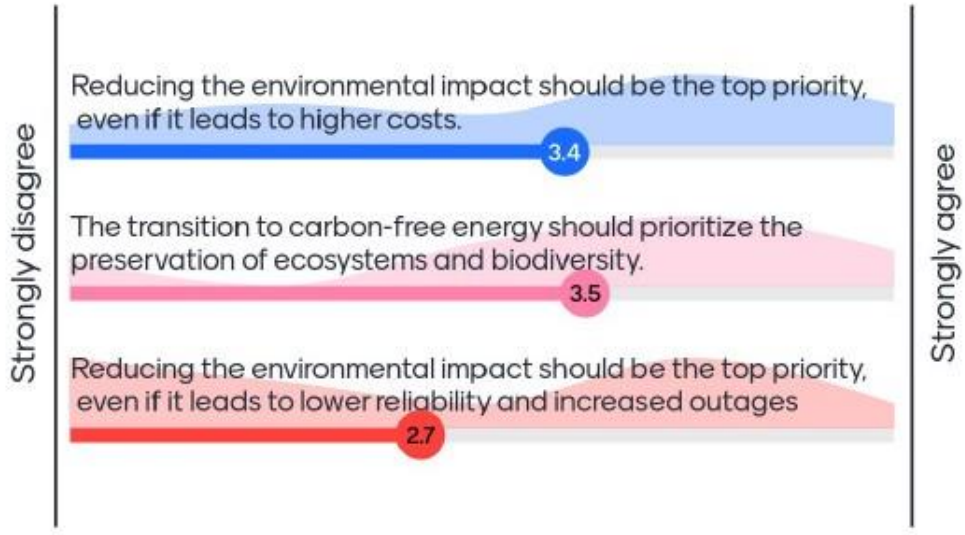
Ranking Primary Themes



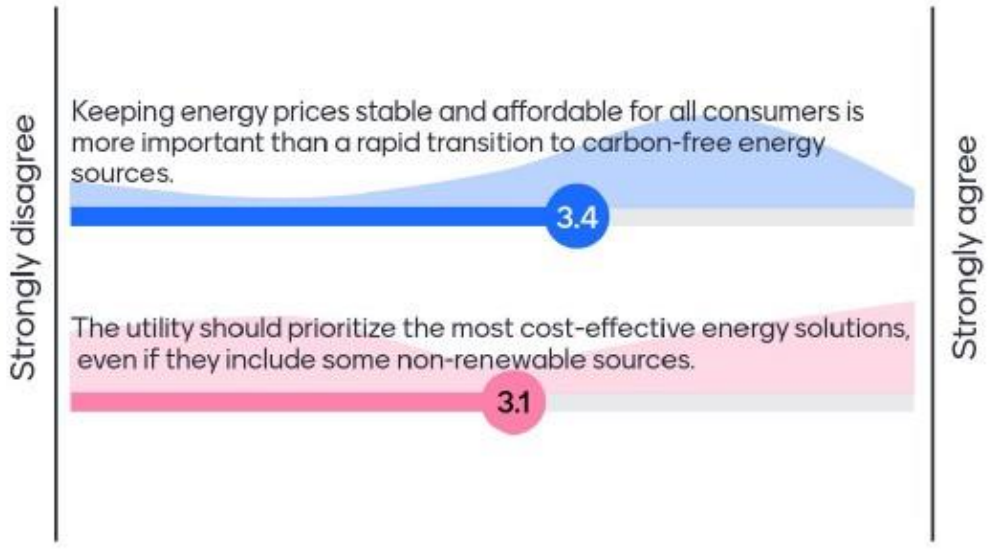
Challenges & Barriers



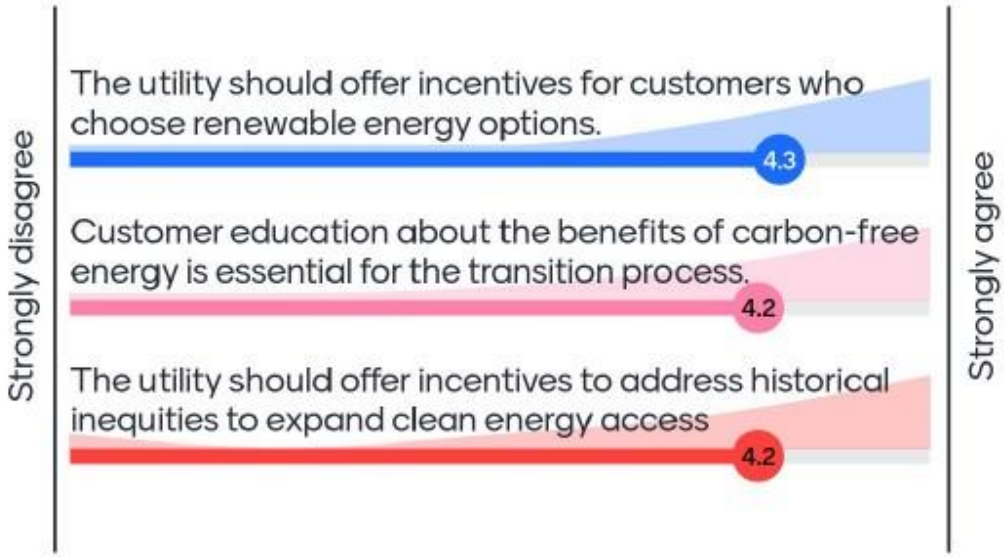
Environmental Impacts



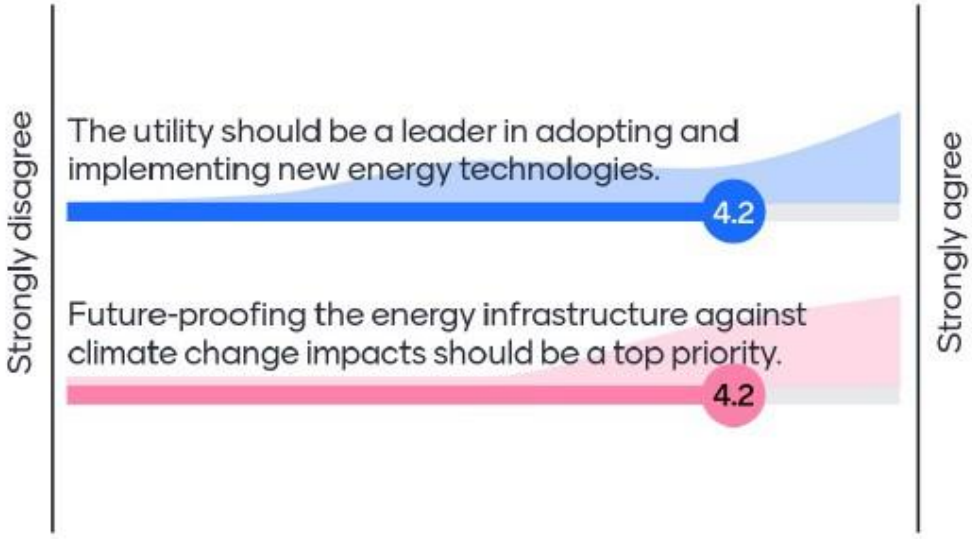
Cost & Sustainability Balance



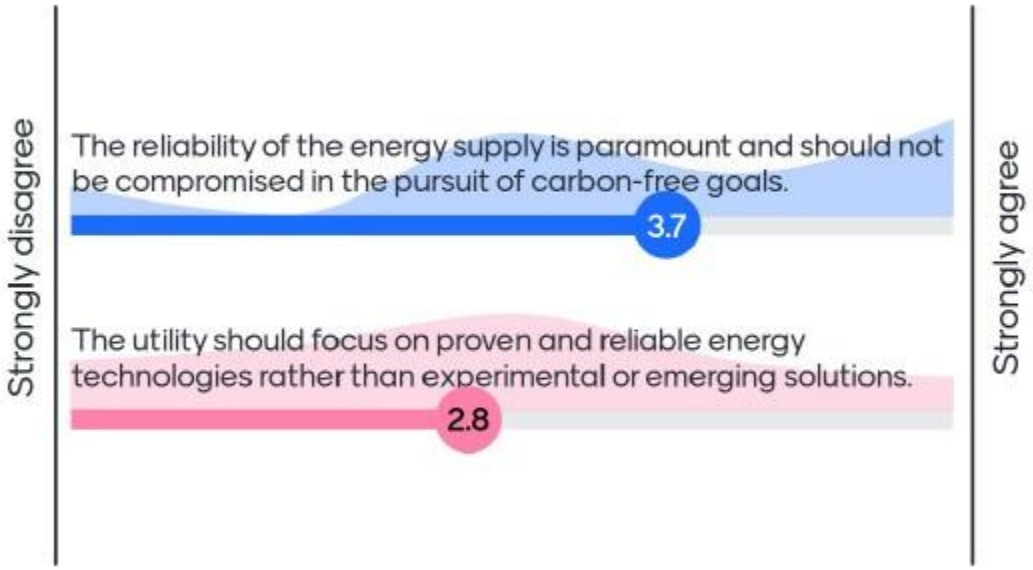
Customer Choice for Renewable Energy



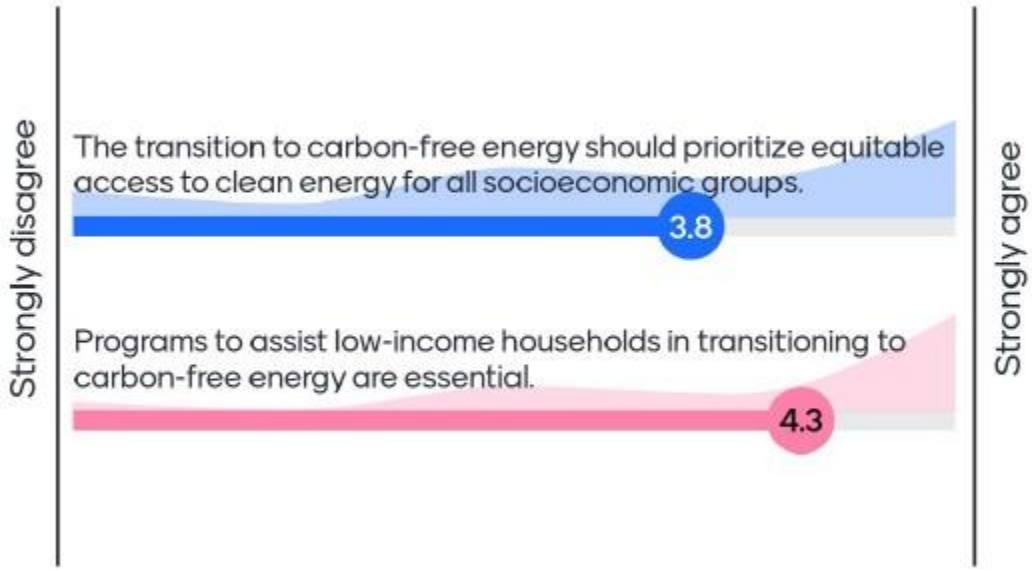
Innovation and Technology



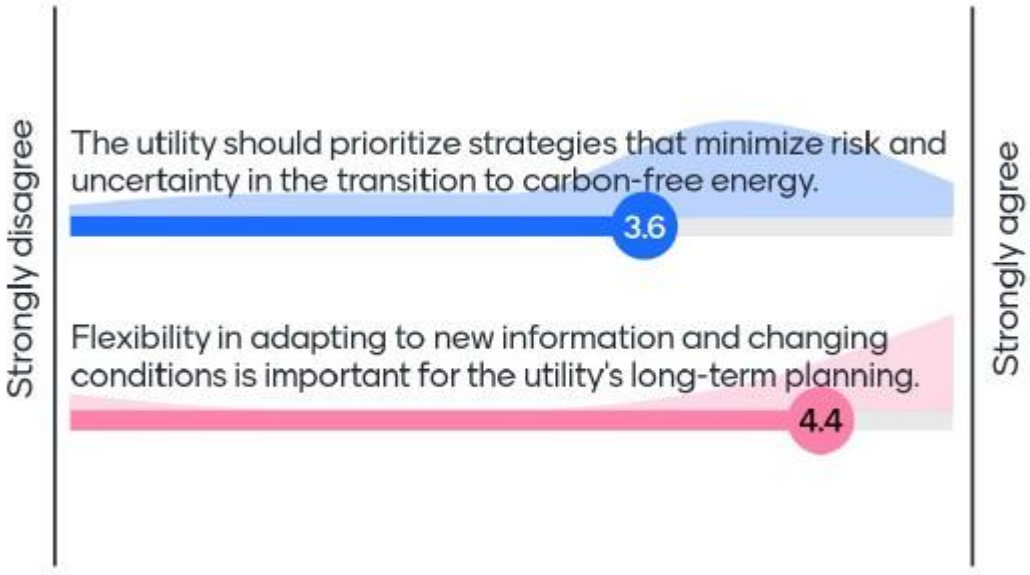
Reliability & Infrastructure



Equity & Accessibility



Risk Management & Uncertainty



Concerns or Points of Feedback

- Very well run today. Thanks!
- Time management should be improved and less Mentimeter questions.
- See the many cards that were submitted. Suggest using Q/A app to manage questions and allow crowd sourcing for prioritizing questions.
- Limit questions from AG.
- Provide one calendar of overlapping milestones and use as tool to track success.
- What are the plans for decommissioning the Harbor and Valley gas plants? Is LADWP exploring alternatives to hydrogen?
- Love Mentimeter! Also, Denis's presentation skills are superb.
- Hi! I think these questions are a little reductive and unfair. Of course, people don't want costs to go up for those who can't pay but want to transition to renewables. WHO is paying more is critical.