LA100 EQUITY STRATEGIES

Los Angeles 100% Renewable Energy Equity Strategies

Steering Committee Meeting #9
July 20, 2022

Summary[1]

Schedule and Location

Wednesday, July 20, 2022, 10:00 a.m. to 12:00 p.m.
Conducted virtually

Virtual Meeting #9 Attendees

Steering Committee Members

City of LA Climate Emergency Mobilization Office (CEMO), Marta Segura
Climate Resolve, Bryn Lindblad (alternate)
Community Build, Inc., Robert Sausedo
DWP-NC MOU Oversight Committee, Tony Wilkinson
DWP-NC MOU Oversight Committee, Jack Humphreville (alternate)
Enterprise Community Partners, Jimar Wilson
Los Angeles Alliance for a New Economy (LAANE), Kameron Hurt
Los Angeles Alliance for a New Economy (LAANE), Estuardo Mazariegos (alternate)
Pacific Asian Consortium in Employment (PACE), Celia Andrade
Pacific Asian Consortium in Employment (PACE), Susan Apeles (alternate)
Pacoima Beautiful, Veronica Padilla
Pacoima Beautiful, Annakaren Ramirez
RePower LA Coalition, Roselyn Tovar (alternate)
The South Los Angeles Transit Empowerment Zone (SLATE-Z), Zahirah Mann
South LA Alliance of Neighborhood Councils, Thryeris Mason
Strategic Concepts in Organizing and Policy Education (SCOPE), Agustín Cabrera
Strategic Concepts in Organizing and Policy Education (SCOPE), Tiffany Wong (alternate)

City of Los Angeles Department of Water and Power (LADWP) Staff

Ashkan Nassiri
Carol Tucker
Cathie Chavez-Morris
David Castro
David Rahimian
Dawn Cotterell

[1] This summary is provided as an overview of the meeting and is not meant as an official record or transcript of everything presented or discussed. The summary was prepared to the best of the ability of the notetakers.

LA DWP NREL Transforming ENERGY UCLA

Denis Obiang
Jason Rondou
Mudia Aimiuwu
Mukund Nair
Pjoy Chua
Ramon Gamez
Steve Baule
Vanessa Gonzalez

Project Team

Alana Wilson, National Renewable Energy Laboratory (NREL)
Ashreeta Prasanna, NREL
Bingrong Sun, NREL
Eda Giray, NREL
Janet Reyna, NREL
Luna Hoopes, NREL
Patricia Romero-Lankao, NREL
Ry Horsey, NREL
Sonja Berdahl, NREL
Thomas Bowen, NREL
Cassie Rauser, UCLA
Felicia Federico, UCLA
Greg Pierce, UCLA
Paul Ong, UCLA
Rachel Sheinberg, UCLA
Stephanie Pincetl, UCLA
Christian Mendez, Kearns & West
Jasmine King, Kearns & West
Joan Isaacson, Kearns & West
Karen Lafferty, Kearns & West
Robin Gilliam, Kearns & West

Welcome Remarks

Joan Isaacson, facilitator from Kearns & West, welcomed members to the ninth Los Angeles 100% Renewable Energy Equity Strategies (LA100 Equity Strategies) Steering Committee meeting. She introduced Pjoy Chua, Assistant Director of the Transmission Planning, Regulatory, and Innovation Division to provide opening remarks. Pjoy Chua welcomed Steering Committee members to the meeting and thanked them for their continued participation and input. She noted that the project team would be presenting on several research topics and would look forward to Steering Committee input.

Agenda Overview and Introductions

Joan Isaacson reviewed the meeting agenda (see slide 3 in Appendix). She explained that the project team had planned the meetings to prioritize hearing Steering Committee input. Joan Isaacson shared that Steering Committee members would hear from UCLA researchers on their work related to affordability, rates, and revenue. She then explained that discussion and input on the equity strategies topics of buildings, affordability and rates, and electric vehicles (EV) would occur in breakout rooms with members of the project team. Joan Isaacson stated that Jay Lim, Manager of Resources Planning at LADWP, would complete the Strategic Long-Term Resource Plan (SLTRP) presentation begun at the previous meeting.

Affordability, Rates, and Revenue

Greg Pierce, Co-Director of the Luskin Center for Innovation (LCI), presented UCLA's research on affordability, rates, and revenue related to the LA100 Equity Strategies. He stated that customer affordability was found to be among the most important considerations identified through the LA100 Equity Strategies process, as well as broader LADWP equity considerations.

Greg Pierce then highlighted key findings from the UCLA team's research. First, he explained that the LA100 transition costs necessitate additional utility revenue and that revenue is primary recovered through the rates paid by customers. Greg Pierce also noted that affordability refers to customers' ability to pay their bill, the bulk of which affects rates. He explained that rate redesign is a primary affordability policy instrument but is not the only one. Lastly, Greg Pierce shared that folding building and transportation electrification costs into the LA100 transition heightens concerns over affordability.

Greg Pierce overviewed the LCI's three affordability analyses, including structural and baseline affordability considerations, energy affordability metrics, and energy affordability policy options. He stated that the LCI is synthesizing data from four types of sources, including existing quantitative data, academic literature, published reports, and stakeholder input. Greg Pierce also noted that the LCI's approach is complemented by NREL's modeling and the rate structure focus from UCLA Law. He highlighted key goals of the methodology, such as focusing on meaningful goals and policies; working with partners to set up a long-term data, analysis, and strategy architecture; and considering legal challenges.

Greg Pierce reviewed baseline affordability consideration questions (see slide 11 in Appendix) and data sources from Loyola Marymount University and UCLA, the California Energy Commission's Residential Appliance Saturation Study (RASS), LADWP Community Services and Development (CSD) program enrollment data, and others (see slide 12 in Appendix). He then noted several considerations of the analysis (see slides 14-16 in Appendix), including the inequitable debt burden, air conditioning under-consumption in low-income communities, revenue impacts to LADWP for EZ SAVE and Lifeline program participants, and barriers to participating in customer programs. Greg Pierce underscored initial metrics being used in the analysis such as bill discount enrollment, percentage of income payment plans, and a household-based energy budget (see slide 18 in Appendix).

Greg Pierce shared that the team will be analyzing eight policy categories by policy mechanism, LADWP offerings and other relevant policy models, barriers to enrollment and scaling up, and the impact of the policy approach. Finally, he invited Steering Committee members to participate in a ranking poll of the metrics and policy categories presented.

Major Themes from Steering Committee Questions and Discussion

- Can you explain household-based budget again? Is it the size of the household or other measure?
    - Greg Pierce: Studies have shown that households should not spend more than 6% of income on energy. The approach would be to track households that pay more than 6% of their income on energy bills. The percentage of income plan would ensure households only need to pay X % on their energy bill. This is being piloted by energy investors in California.

    - Greg Pierce: Yes, household size is one measure. In compliance with Prop 218, this is based on lot size, but household size is a more equitable approach.
- Selecting one option is a hard choice. Is it possible to consider a combination of percentage of income and household size? Those are separate metrics in the ranking poll.
    - Joan Isaacson: If you are unable to make that response on the poll, you can provide those responses via chat.
- The LA Times article "The LADWP is charging outdated power rates and there's no easy fix" outlines the relationship between rates and the transfer tax. See this article: https://www.latimes.com/opinion/story/2022-07-10/dwp-rates-ballot-measures
- Household size is a better metric to use than lot size. Today's rates are based on single family suburban use in an increasingly urbanized multifamily city.
- What do the colors in categories mean?
    - The colors are represented like a stop light where green is good, red is bad, and yellow is in-between. This is an assessment of these programs across three dimensions. The colors show the analysis in limited detail; much more analysis goes into this.
- Can you clarify your definition of demand response?
    - Demand response is classified in terms of demand but also in terms of rate and billing design. It asks customers to save or reduce consumption during peak demand.
- There are concerns with the 3-level priorities on page 1 of the pre-read material.
- If microgrids are viewed negatively as a solution, then local resiliency is recognized as an impractical answer to total generation shortage (blackouts). "Resiliency" = local solar and storage to address a lack of power generation. This equity analysis may be excluding reliability as a priority repeatedly expressed by LADWP.

Major Themes from Steering Committee Ranking Poll

Steering Committee members were asked to respond to a ranking poll on metrics that are most important to track progress on affordability from the LA100 Equity Strategies and policy categories that are most important to effects on affordability from the LA100 Equity Strategies.

In response to the ranking poll on metrics, bill discount enrollment, shutoffs due to non-payment, and electricity insecurity were identified as the most important metrics to track (see Appendix B). Electricity burden and household-based energy budget were also considered of high importance.

In response to the ranking poll on policy categories, rate and billing design, direct assistance and crisis relief, and appliance energy efficiency were ranked most important in their effect on affordability (see Appendix B). Structural energy efficiency and community solar were also ranked with high importance.

Rate Structure

Rachel Sheinberg, UCLA School of Law, presented on the rate structure analysis for affordability and distributed energy access. She stated that she is working with the UCLA School of Law and LCI to analyze ratemaking and mitigate rate impacts on vulnerable residents. Rachel Sheinberg explained that some programs the team is looking into are New York's household percentage program, the Seattle City Lights Low-Income Rate where residents receive a 60% reduction in bills, the California Public Utility Commission's percentage of income payment plans, which limit bills based on income levels, and on-bill financing for energy efficiency measures that enable customers to access energy efficiency upgrades with no up-front costs.

Rachel Sheinberg shared that the team is taking into consideration the legal constraints with a goal of developing a portfolio of options that are both possible now and may become possible with legal changes. She welcomed Steering Committee members' feedback on these programs and noted that the program analysis will be done without legal constraints. Rachel Sheinberg noted that the team will collaborate with NREL and the California Center for Sustainable Cities to understand the costs and benefits of various programs using data from LADWP. She stated the team's goal is to provide the community and LADWP with a portfolio of possible affordability programs and how they can be implemented.

Major Themes from Steering Committee Questions and Discussion

- The current LADWP Board has told the LADWP rate planners (who take the power plan and turn it into proposed rates) to ignore legal constraints in the LA100 Equity Strategies recommendations. The reality is that getting legislative/state assistance with low-income rates in the energy transition will take years, so considering legal constraints needs to be a priority now.
- The city can finance low-income and lifeline discounts.
- Another consideration is that if you live in the Valley, the rates for those customers are lower as the Valley is in its own zone, but not all Valley residents are low-income.
- California Edison has been making the transition. LADWP outreach is needed for time-of-use (TOU) education as there are mixed feelings amongst community members.

Small Business Affordability

Paul Ong, UCLA Center for Neighborhood Knowledge, presented an analysis focused on ethnic minority-owned small businesses (MOBs). He stated that the team wants to ensure that MOBs remain viable in the transition to renewable energy. Paul Ong explained the three components of the analysis, including an analysis of current energy use amongst MOBs, an assessment of MOB participation in previous LADWP energy savings programs, and a survey conducted via phone, internet, and in-person in partnership with small businesses serving community-based organizations (CBO). He noted that key modules include COVID impact analyses and access to relief programs, sustainability practices, and structural elements of the energy burden.

Major Themes from Steering Committee Questions and Discussion

- All of these requests for input should be presented in slide decks sent out before the Steering Committee meetings. Asking for input after a few minutes of listening to the material for the first time is challenging for Steering Committee members.
- Including SAJE (Strategic Actions for a Just Economy), homeowners' associations, tenant rights organizations, and Neighborhood Councils would be helpful for the survey.
- Many MOBs are run out of their homes, so they often deal with paying rates that are higher in the middle of the day.
    - Paul Ong: Part of the analysis of secondary data is developing an estimated number of businesses run separately from the brick-and-mortar structure. Micro-businesses are often run from homes. This poses an interesting policy question about how to think about commercial vs. residential energy use. This is a challenge for the analysis being conducted. Insights related to this overlap are welcomed and important.
    - Paul Ong: The programs shared are key components to addressing rates. The intent is to host workshops with MOBs to address concerns and provide technical assistance.
- Access to capital is a key barrier to all small businesses.

- Within the context of this work, the technical assistance needed is for navigating grants, contracting with LADWP, or helping businesses think through the transition.
- Specifically, within the African American community, 4.3 million jobs will be lost to artificial intelligence in the technology transition. How can academia and businesses be engaged to analyze value streams and look at business models differently?
- Will these surveys be translated to other languages?
- Energy is the key to advanced civilization and public good. So, in looking at Los Angeles' local low-income communities, "equity" should result in increased power use. The same applies to MOBs since with using computers and manufacturing that reduces manual labor, more power is used.
- The gig economy is the freelance business that operates primarily at home. These freelancers are not represented in chambers per se.
- The gig economy includes many online businesses, which need to be included in the analysis.
- Some businesses are very small and don't have the technology to process or access programs.
- Legislation should be in alignment with micro and small business goals. Independent contractor legislation should be introduced to allow for other opportunities to access programs and technical assistance.
- Some CBOs support outreach for the commercial direct install program. These workers could be compensated to share their expertise and knowledge for small business needs.

Equity Scenarios and Metrics Breakout Group Discussions

Janet Reyna, Technical Lead on Housing and Buildings at NREL, described the goal of discussing the equity metrics to measure success. For the LA100 Equity Strategies, she explained, the NREL project team is working to ensure that each topic area has common reference and equity scenario. Janet Reyna also noted that some sensitivities and variations will be explored. She emphasized that the project team is interested in understanding what should be considered in each technical area topic.

Joan Isaacson then explained the process for the breakout sessions, noting there would be two discussion groups. She stated that the technical teams would rotate and present to each discussion group on the three topics.

Affordability and Rates

For the affordability and rates topic, Steering Committee members were asked, "How do we measure success?" and given a list of strategies/approaches (e.g. expansion of existing programs such as Lifeline programs, income-adjusted rates, and rental/leasing/direct install with attractive financing for high energy efficiency equipment) to discuss as well as the opportunity to suggest other strategies/approaches (see slide 38 in Appendix). They were also asked if strategies should look for higher impacts in fewer, greatest need households, or look for reduced impacts for a larger group of the population.

Major Themes from Steering Committee Questions and Discussion – Group 1

- How will the success of income-adjusted rates be measured?
- Does the household need to enroll in the income-adjusted program, or will LADWP be proactive with enrollment based on specific factors?
- Income-adjusted rates sound best because it leaves room for people to use energy efficiency (TOU or off-peak programs) to support the larger goals of reducing peak energy use.

- The number one priority would be income-adjusted rates, followed by fraction of income, and expansion of existing programs as far as measures of success are concerned.
- Income-adjusted rates sound enticing, but there is a concern that if existing programs are not well utilized, how will this be different? For example, if you are required to submit your income to be eligible, this may be a hurdle for low-income customers and leads to lack of utilization. Use lessons learned from existing programs. Is there an infrastructure piece that needs to be shifted?
- As a second resort, the maximum bill as a fraction of income is a good measure of success, but what you start to lose there is people starting to pay attention to energy efficiency and you might start to hit that cap and it may not be the most beneficial to the bigger picture of trying to reduce energy.
- The pre-read material speaks of resiliency as a solar/battery microgrid operating if the larger system is dead. Having a more resilient "total grid" is necessary to keep electricity affordable and reliable for low-income customers.
- The basic affordability measure is total rates. It is important to not lose perspective on the impact technology and upgrades have on rates.
- Do you do 100% or 90% renewables? And, on what time schedule do you do it? All of these questions have huge impacts on low-income customers.
- Point of sale rebates work best for people who are concerned about financing technologies, especially if a third party is involved.
- Why not have the city subsidize rates?
- Should the city politicians fork out the general fund money to subsidize low-income customers so they can survive increased levels of green energy, or should other ratepayers be asked to subsidize low-income customers?
- Low-income communities should get extra protection in the variable rates system.
- How will the project team account for whole bill impacts in this analysis?
- In the pre-read materials, it seemed a metric was going to be how rate designs compare to "modeled and forecasted utility costs." The Steering Committee needs transparency on what that entails before being presented the analysis.
- There has been no discussion of cost shifting and the impact on the other ratepayers, of the recent editorial in the LA Times about TOU and the transfer fee, or the impact of LA100, the Power System Reliability Program (PSRP), and the upgrading of the distribution system to 34.5 kV on average rates.

Major Themes from Steering Committee Questions and Discussion – Group 2

- Would there be a potential shift over time on the income-adjusted rates if they were to rise based on having more renewable energy? How successful has the 6% of income rate structure been in other areas? If we were to have more renewable energy, would that change what the percentage of income spent on electricity looks like?
    - Greg Pierce: With the percentage shifting over time and the historical costs for natural gas and gasoline, it's more like a standard of 9%. It would be quite complicated for a utility to shift over time. If there were frequent reviews and accountability, that could be done. The 6% is based on historical use.
    - Rachel Sheinberg: The 6% comes from the literature and surveys on how people pay their power bills, which includes natural gas for heating and water as well as electricity in the home. In Los Angeles, we have the SoCal Gas bill in addition to LADWP, so it would be interesting to see how that's allocated with maybe a 3%/3%. Illinois has the most robust income-adjusted program. People will pay up to a certain percentage and it's on the same bill,

    - but the Illinois program goes through a low-income board of affordability to subsidize the bill. That's where the money comes from to pay the bill, so it would be complicated.
    - Greg Pierce: There's potential for the percentage to go down as efficiency measures and local supply and storage measures take effect.
- Is there a literature review on the income-adjusted rates that can be shared?
- One strategy in thinking about housing burdens is not just looking at income but how much people are paying of their income toward housing. There are enough resources to stop shutoffs in that way. Some community members live in households where they pay more than 50% of their income in housing and had to made tradeoffs on paying for food and electricity.
- Household size should also be considered, as our society has shifted towards sharing households with children, other family members, and friends.
- Look at accessibility in programs such as Lifeline. Where can the biggest impact be made? How many folks are benefitting from these programs and are there ways to increase the accessibility and reduce some of those application barriers? The structure of benefits such as rebates makes it challenging to access these benefits.
- It's difficult for community members to receive benefits from programs due to a lack of awareness. Where is the outreach happening and who is being targeted? Who can be a partner and help to expand program awareness?
- A clear picture of program projections and costs is needed so this information can be shared with the communities. When will we have that more comprehensive conversation on this?
- LADWP is considering green hydrogen and technologies that will increase everyone's utility bill. What's unclear is how these technologies will benefit communities and who they benefit. If there's an opportunity for a community conversation about these it's important. When can community benefits plans be discussed and how those fit with the STLRP?

Buildings

For the buildings topic, Steering Committee members were asked, "How do we measure success?" and given a list of strategies/approaches (e.g., resident vs. building or utility-owned technologies, cooling/weatherization measures), to discuss as well as the opportunity to suggest other strategies/approaches (see slide 37 in Appendix).

Major Themes from Steering Committee Questions and Discussion – Group 1

- Low-income communities often have landlords who don't care, ignore tenants' needs, and sometimes steal subsidies from tenants.
- Will landlords be able to pass the costs through the renters?
- Landlords often reap the benefits and do not share them with their tenants. If the landlords do not benefit directly, they generally are not interested in bothering with making any needed changes. For example, when weatherization is offered to make homes more energy efficient, landlords are reluctant to participate because they are not allowed to raise rents for 2 years. Even if the value of the property increases, they do not want to bother. It is essential to get landlords on board to make programs successful. They must see a benefit of putting charging stations on their property.
- The city of London is doing a program assessing the state of energy efficiency in a building and "taxing" the "leaky" building to incentivize efficiency upgrades.
- Upgrades for cooling and weatherization are a priority for safety as well as health and comfort.

- It may be helpful to include lower-cost options like window film instead of replacement windows. Give people a choice in the transition.
- LADWP and California weatherization programs are free to eligible homeowners but should be expanded to higher incomes because of the larger climate goals.
- It's important to see health outcomes modeling in the SLTRP, for example keeping peak plants open like the Valley Generating Station and looking at the impacts of their NOx emissions.
- Low-income should be defined as a combination of family size/household size and income.
- Focus on the elderly and those most vulnerable to excessive heat in homes.
- Look at rent-controlled properties as a subgroup.
- City ordinances on things like rent control need to be adjusted in conjunction with LADWP rates and subsidy actions intended to pass through to renters.
- Energy bill caps based on a combination of income and family size are essential.
- What is the anticipated increase in average rates through 2035? This includes not only LA100 but PSRP and the upgrading of the distribution system.

Major Themes from Steering Committee Questions and Discussion – Group 2

- With past solar share, when the utility has owned it, the rate of compensation for tenant/owner was minimal. What is the return on investment for the resident? This hasn't been ideal or equitable in the past.
- If owning technologies worked like a tariff it might be more beneficial. If individuals install solar as an owner, they should see the same compensation as a company would. If individuals don't own it and the utility does, then they need a greater compensation so it lowers the burden.
- The priority is for tenants to also benefit from lower rates, so the energy efficiency isn't just captured by the landlord. That value should be either in lower rent or a lower cost somewhere. If the landlord is capturing that value, it's not really helping the tenant, especially for those paying more than 30% of income in housing. It's worth the effort to look at since it also lowers housing burden and mitigates things like displacement.
- It may be helpful when tenants and owners install panels to understand what a fixed bill would look like. That variation in bills is where a lot of instability comes from. Understanding how paying for the panels themselves and what bills will look like each month or billing cycle is another thing to prioritize.
- Different rates for different hours in the day is counter-intuitive to ensuring folks use cooling systems when they are needed the most. If there are ways to adjust this rate difference for vulnerable areas (e.g., heat islands), that would be beneficial.
- From an equity, energy, and climate adaptation perspective, the word comfort is used so "cooling" may be misleading. Heat pumps are what affordable developers are exploring as more comfortable and safe homes are developed to avoid increasing bills and demand. How is LADWP projecting the increasing number of heat waves, extreme heat in June to mid-November and then the heat waves that come back in March? More climate-adapted homes will be needed in the future. Even homes with air conditioning and fans are increasing use with this mid-day charge that is beyond precedent. It is unclear how LADWP is managing the grid and capacity of each neighborhood to ensure there are climate-adapted homes.
- In terms of deployment, prioritize areas that have severe heat island effects, such as areas with fewer shade trees and areas in the urban core. Deploy cooling strategies in those areas first.

- Another consideration for different rates for different times of day is that it's counter-intuitive to people using cooling when it's needed the most. This penalizes people for using technology. Consider ways to look at that.
- Those with low use of energy perhaps shouldn't be penalized with TOU. This might include people who are at 30% of their housing burden and those with pre-existing conditions and medical issues.

Electric Vehicles

For the EV topic, Steering Committee members were asked, "How do we measure success?" and given a list of metrics (e.g., access, use (adoption), and affordability) to discuss as well as the opportunity to suggest other strategies/approaches (see slide 39 in Appendix).

Major Themes from Steering Committee Questions and Discussion – Group 1

- There might be a metric missing around awareness of options. If people do not understand what EVs are and how they work, they may not be utilized.
- The measures of success are good.
- Expand how to offer e-mobility to disadvantaged communities. Cost makes these out of reach and access to charging stations is limited. The range of miles an EV can drive on one charge is also a factor when driving to communities without charger access.
- Could a potential economic impact of benefits be included? The cost of owning an EV is a major challenge.
- Consider what shows progress vs. what shows success. Use shows success. Use considers all these factors (issues with range, affordability, parking, etc.). Affordability is impacted by various programs in existence and who is accessing the program. From a small business perspective, having access to charging is important. Use and access are two important metrics.
- LADWP's plan to upgrade voltage has a 30–40-year timeline. LA100 is scheduled to be completed in 2035, which is a mismatch between system upgrade needs and the LA100 timeline.
- What were/are residents' previous transportation methods? Are they moving from gas to EVs or from public transportation to EVs? How about panel upgrades?
- Is home readiness a metric?
- Some concerns with e-bikes are that they represent a trivial amount of energy use and transportation circulation. They meet "optics" desires, but the time and cost to study does not match the rate and power impacts. Electric panel upgrade financial assistance is needed.

Major Themes from Steering Committee Questions and Discussion – Group 2

- Electric buses would be great to see on our streets.
    - Alana Wilson: The project team is not looking specifically at buses because Metro has a defined timeline for electrification of its fleets, but it is an essential component.
- Investments need to be made in the most historically disadvantaged communities. If not, they are left out of the economic viability of the future.
- There is not a lack of electric vehicles but issues with where they are being charged. Assumptions should not be that they are charging at home, but rather charging at malls, at work, etc. There must be a calculation for margin of error.

- Electric mobility programs are available in some communities, especially electric car share. They are always being used. They are accessible (like $5 an hour) and are at the hub for the electric bikeshare program. The amount and accessibility must be increased, especially with jobs and training opportunities. There is an opportunity to increase job opportunities by hiring people to work in these programs as e-bike technicians.
- Teslas are not the priority for some communities, but electrifying large trucks is.
    - Bingrong Sun: Electric vehicles are not just cars. The sharing programs are more affordable for disadvantaged communities. LADWP can offer incentives for privately owned e-bikes if that would improve accessibility.
- The cheapest EV is the Charge, but a lot of those vehicles are not affordable. It is important to look at other ways to electrify. As Los Angeles works to build this infrastructure, there are opportunities to integrate this into the overall mobility plan. Rideshare and scooter programs should not be a standalone. Ensure that there is a strategic partnership with LA Metro and LADWP. There is an opportunity to move away from cars and could move around the city without cars.

Strategic Long-Term Resource Plan

Jay Lim presented on the SLTRP and emphasized that the SLTRP and LA100 Equity Strategies processes are iterative with assumptions updated each year. He noted that outcomes of the 2022 SLTRP (see slide 41 in Appendix) include a high-level roadmap to 100% carbon free energy by 2035; a focus on key buckets of resources; modeling scenarios to determine the best path to meet mandates; and integrating total power system costs, infrastructure, and resource planning.

Jay Lim reviewed elements and examples that relate to the LA100 Equity Strategies, one example being reduced use of the Valley Generating Station. He explained that several key strategies to mitigate the use of this station from 30% to 5% include combining with 80% renewables by 2030, using Haynes recycled water cooling, and drawing on Scattergood capacity.

Jay Lim noted that by 2045, LADWP's mission is to reduce emissions to lower levels and utilize the power sector to decarbonize other sectors such as buildings and transportation. He stated that NREL will also analyze source levels at different areas and stations to ensure emissions in different neighborhoods are not disproportionate.

Another component of LADWP's mission, Jay Lim explained, is deploying distributed energy resources equitably, which requires 1000 MW of local solar, 500 MW of demand response, doubling energy efficiency, and supporting 580,000 EVs by 2030 (see slide 45 in Appendix). He shared that the SLTRP will be identifying buckets of resources, which can be refined by recommendations from the LA 100 Equity Strategies process, to meet LADWP's energy goals. Jay Lim stated that the SLTRP team is also looking at expanding the feed in tariff (FiT) program, FiT+ program, and a virtual Net Energy Metering (NEM) pilot program (see slide 45 in Appendix).

Jay Lim highlighted several key takeaways on the 2022 SLTRP, such as the SLTRP being a living document updated yearly with major stakeholder engagement every two years and that the SLTRP will identify buckets for achieving energy goals (see slide 46 in Appendix). He shared that the SLTRP has a dedicated website including meeting agendas and presentations at LADWP.com/SLTRP.

Joan Isaacson shared that there are community meetings related to the SLTRP and the team will share more information as the meetings draw closer.

Major Themes from Steering Committee Questions and Discussion

- Keep the powder dry and use any extra space for fast peaker units. This will be faster and cheaper than transitioning to 100% clean energy by 2035.

- Is the goal of the SLTRP process to single out one specific scenario? LADWP also mentioned that there would also be an air quality and health analysis, but the pre-read did not specify this.
    - Jay Lim: The goal is to produce a recommended scenario by looking at the nexus between the scenarios and incorporating feedback from the Advisory Group.
- Equity should be uplifted as the driver in resource planning. Tacking on equity strategies later is not equitable. There are concerns about this process and coordination between SLTRP and the LA100 Equity Strategies.
    - Jay Lim: Some equity components were presented today (e.g., Valley Generating Station and distributed energy resources [DER]). This is an iterative process. Planning a power system to use 100% clean energy by 2035 takes time. The SLTRP team is looking forward to the LA100 Equity Strategies recommendations when they come out. When those are available, the SLTRP will be updated.
- What is the anticipated increase in average rates through 2035? This includes not only LA100, but also PSRP and the upgrading of the distribution system.
    - Jay Lim: The SLTRP team plans to present an update on this at next SLTRP meeting in August. The SLTRP team is working with financial services. The financial services model considers all financial metrics and is a more detailed forecast of rates. In the meantime, there are case comparisons being conducted to assess what this means for average customers in terms of bills.
- The power system choices made by the SLTRP are probably more important to affordability than our "equity recommendations" now under discussion. That is why that timeline for the clean energy transition (2035 vs. 2045) and use of fossil fuel generation at a low percent during the transition decade need to be part of the policy options for LA100. The assumption of entirely clean energy by 2035 is adverse to low-income interests as costs will be too high in the short-term.

Wrap Up and Next Steps

Joan Isaacson shared that the upcoming Steering Committee meetings will take place on August 17, 2022, and September 21, 2022, and that subsequent meetings will occur monthly on the third Wednesday of each month from 10:00 a.m. – 12:00 p.m. She also explained that agenda items will include a progress update on the LA100 Equity Strategies project and a summary and metrics synthesis from the June and July Steering Committee breakout group discussions.

Pjoy Chua thanked everyone for their continued participation and highlighted the importance of the input to ensure the Steering Committee is part of the planning process and progress of the LA100 Equity Strategies. She noted that the project team will continue to update the Steering Committee. Pjoy Chua thanked the Steering Committee members for their time.

LA100 EQUITY STRATEGIES

Appendix

Steering Committee Meeting #9
July 20, 2022
Presentation Slides

LA DWP NREL Transforming ENERGY UCLA

LA100 Equity Strategies
Steering Committee Meeting #9
July 20, 2022

LA DWP

NREL
Transforming ENERGY

UCLA

Los Angeles Department of Water & Power (LADWP) Project Leads

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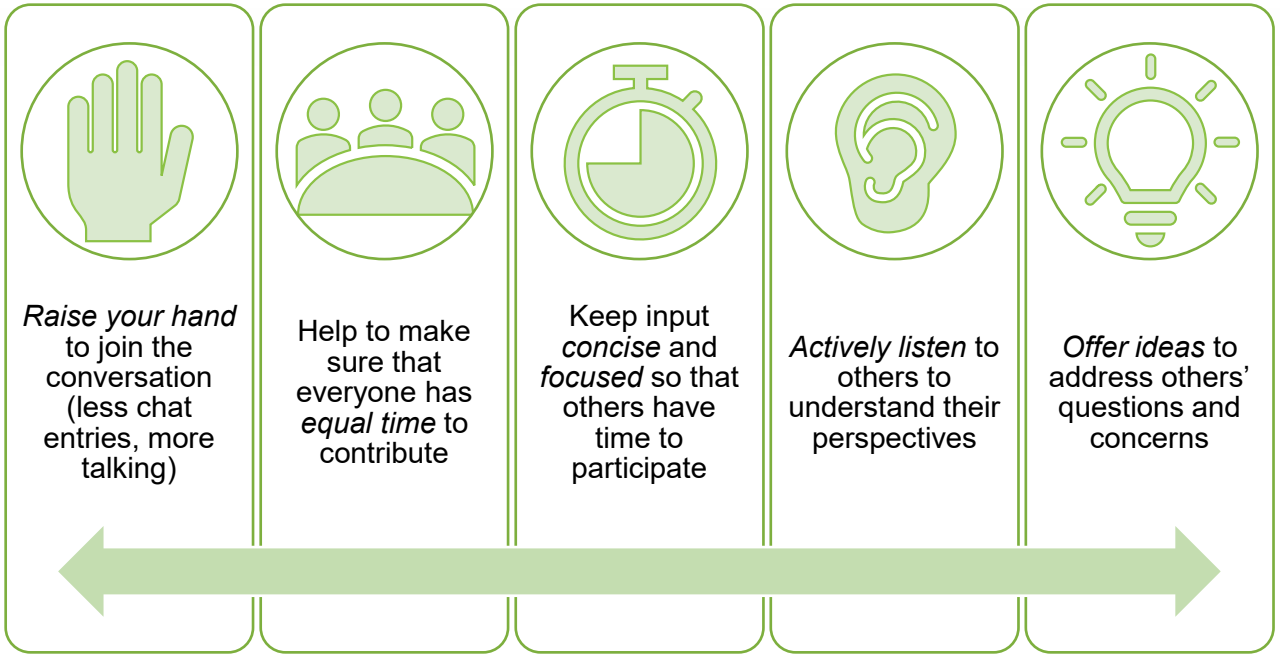
Agenda

Start Time	Item
10:00 a.m.	Welcome
10:05 a.m.	Meeting Purpose and Agenda Overview
10:10 a.m.	Affordability, Rates, and Revenue
10:50 a.m.	Equity Scenarios and Metrics Breakout Group Discussions • Buildings • Affordability and Rates • Electric vehicle (light duty) electrification and charging
11:45 a.m.	Strategic Long-Term Resource Plan
11:55 a.m.	Wrap Up and Next Steps

Our Guide for Productive Meetings



Steering Committee Roster

Organization	Representative
Alliance of River Communities (ARC)	Vincent Montalvo
City of LA Climate Emergency Mobilization Office (CEMO)	Marta Segura, Rebecca Guerra
Climate Resolve	Jonathan Parfrey, Bryn Lindblad
Community Build, Inc.	Robert Sausedo
DWP-NC MOU Oversight Committee	Tony Wilkinson, Jack Humphreville
Enterprise Community Partners	Jimar Wilson, Michael Claproth
Esperanza Community Housing Corporation	Nancy Halpern Ibrahim
Los Angeles Alliance for a New Economy (LAANE)	Kameron Hurt, Estuardo Mazariegos
Move LA	Denny Zane, Eli Lipmen
Pacific Asian Consortium in Employment (PACE)	Celia Andrade, Susan Apeles
Pacoima Beautiful	Veronica Padilla Campos, Melisa Walk
RePower LA	Michele Hasson, Roselyn Tovar
The South Los Angeles Transit Empowerment Zone (SLATE-Z)	Zahirah Mann, April Sandifer
South LA Alliance of Neighborhood Councils	Thryeris Mason
Strategic Concepts in Organizing and Policy Education (SCOPE)	Agustín Cabrera, Tiffany Wong

Including Future Agenda Items

Tentative Schedule

This Meeting

- Affordability
- Feedback on scenarios/metrics
  - Buildings
  - Affordability and rates
  - Electric vehicle (light duty) electrification and charging

August 17, 2022

- Equity scenarios and metrics synthesis from June/July Steering Committee feedback

Future Meetings

- Equity metrics
  - How are we measuring success?
  - Energy justice metrics and guardrails.
  - How are we using equity metrics?
- Future meeting with Technical Leads
  - Where is offshore wind power? Why isn't it part of the future mix?
  - Better real-time information about peak energy use rates to nudge behavior / save money on energy bills.
  - Hydrogen.

Energy Affordability and Policy Solutions Analysis

Greg Pierce, Rachel Sheinberg and Paul Ong
UCLA Luskin Center for Innovation (LCI)
UCLA School of Law
UCLA Center for Neighborhood Knowledge

Affordability, rates and revenue

Customer affordability is among the most key considerations identified throughout the LA 100 ES process, and broader LADWP equity conversations

- The LA 100 transition cost necessitates additional utility *revenue*
- Revenue is primarily recovered through *rates* paid by customers
- Affordability refers to customers' ability to pay their bill, the bulk of which reflects rates
  - Rate (re)design is a primary but not the only affordability policy instrument
  - Folding in of building and transport electrification costs into LADWP bill heightens affordability concerns

LCI's Three Affordability Analyses

Task 1. Structural and Baseline Affordability Considerations

- Assembling existing data sources to assess structural energy affordability and considerations for households across LADWP territory and utility itself

Task 2. Energy Affordability Metrics

- Identifying and analyzing goals and metrics to inform actionable plans

Task 3. Energy Affordability Policy Options

- Identifying and analyzing priority policy options to inform actionable plans

Deliverables

- Each task will result in the equivalent of a report chapter, as well as briefs

Methods and Approach

General Approach

- LCI is synthesizing data from 4 types of sources: existing quantitative data, academic literature, published reports, and stakeholder input
- Complements NREL modeling emphasis, UCLA Law rate structure focus

Goals

- Focus on fewer, meaningful goals and policies, building on internal efforts
- Work with partners to set up a long-term data, analysis, and strategy architecture
- Consider but do not be entirely constrained by legal challenges

Baseline Affordability Considerations

Guiding Research Questions

- What do we (not) know about the transition cost and its impact on rates?
- What are the implications of current rate/bill structure for in-need customers?
- What are prevailing consumption/billing levels among in-need customers?
- What is general and specific points of in-need customer satisfaction with LADWP?
- What is prevailing enrollment in assistance programs among in-need customers?
- Are there barriers to procedural equity in assistance program enrollment?
- What is the ability of in-need customers to maintain thermal comfort?
- How do tenant-landlord split incentives affect customers now and in the transition?

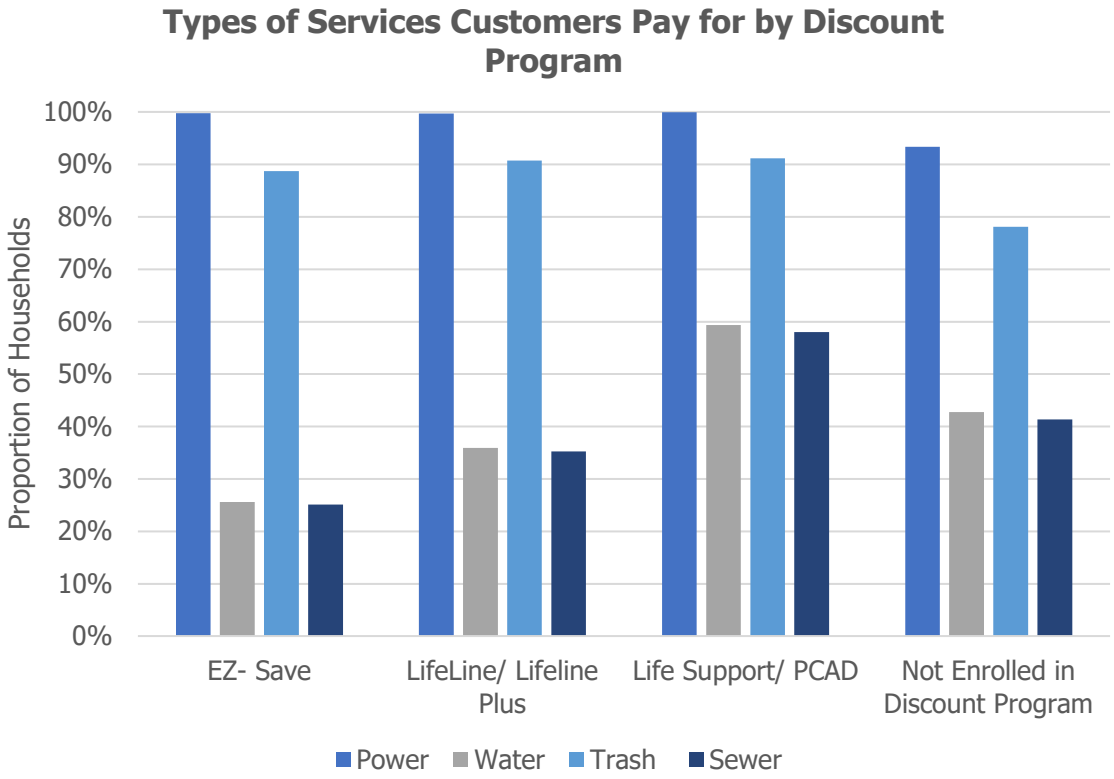
Baseline Affordability Considerations

Data Sources

LCI is using available, representative or census-type data sources that support this assessment, including:

- Survey data from Loyola Marymount University and UCLA
- The California Energy Commission's RASS,
- LADWP CSD Service and Program Enrollment Data,
- The UCLA CCSC Energy Atlas (pending)
- NREL Model data (pending)
- OPA, City Controller several other recent city focused reports

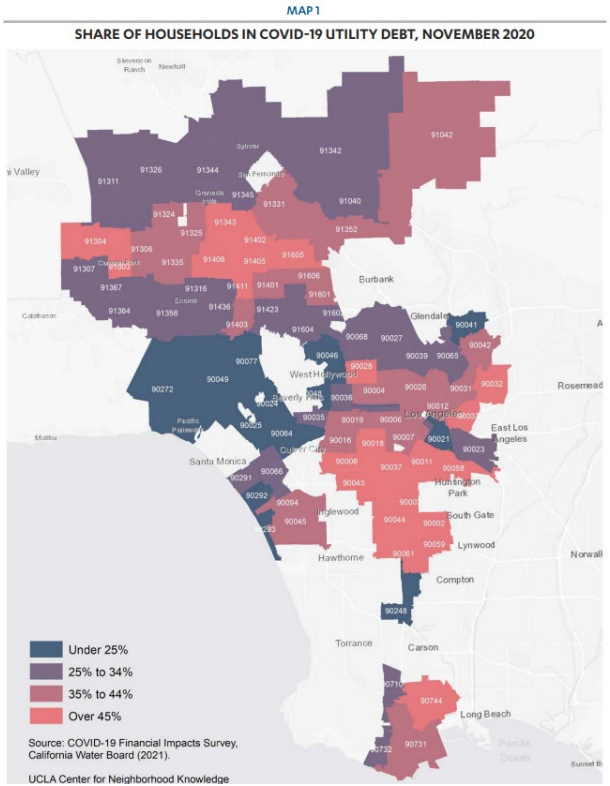
Considerations: Whole Bill Matters



- The whole bill matters for affordability
- There are 15 combinations of the 4 services that can be on an LADWP bill
- The most common are:
  - Power only
  - Power & trash
  - Power, water, sewer & trash

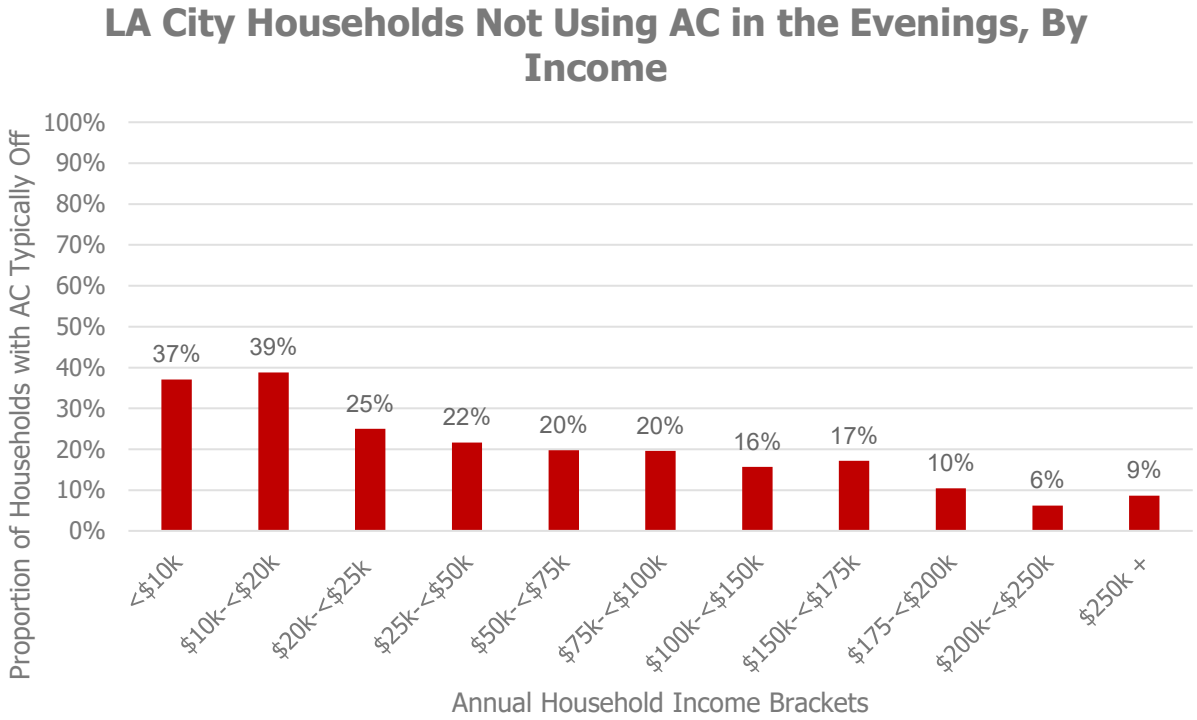
Source: Calculation based on LADWP Service and Program Enrollment Data

Considerations: Inequitable debt burden



Source: Keeping the Lights and Water on: Covid-19 and Utility Debt in Los Angeles' Communities of Color (2021). Silvia R. González, Paul M. Ong, Gregory Pierce, and Ariana Hernandez. UCLA Centers for Neighborhood Knowledge and Luskin Center for Innovation

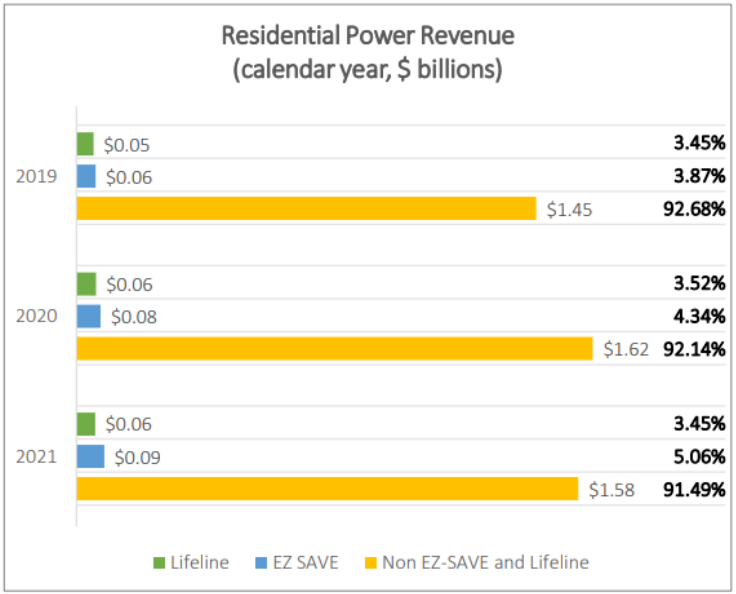
Considerations: AC Under-Consumption

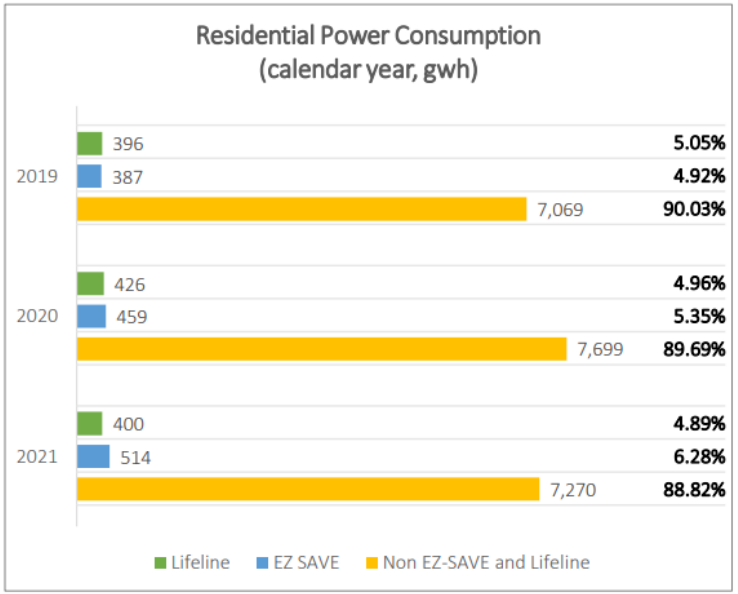


Source: CEC's 2019 Residential Appliance Saturation Survey (RASS)

Considerations: Revenue Impacts

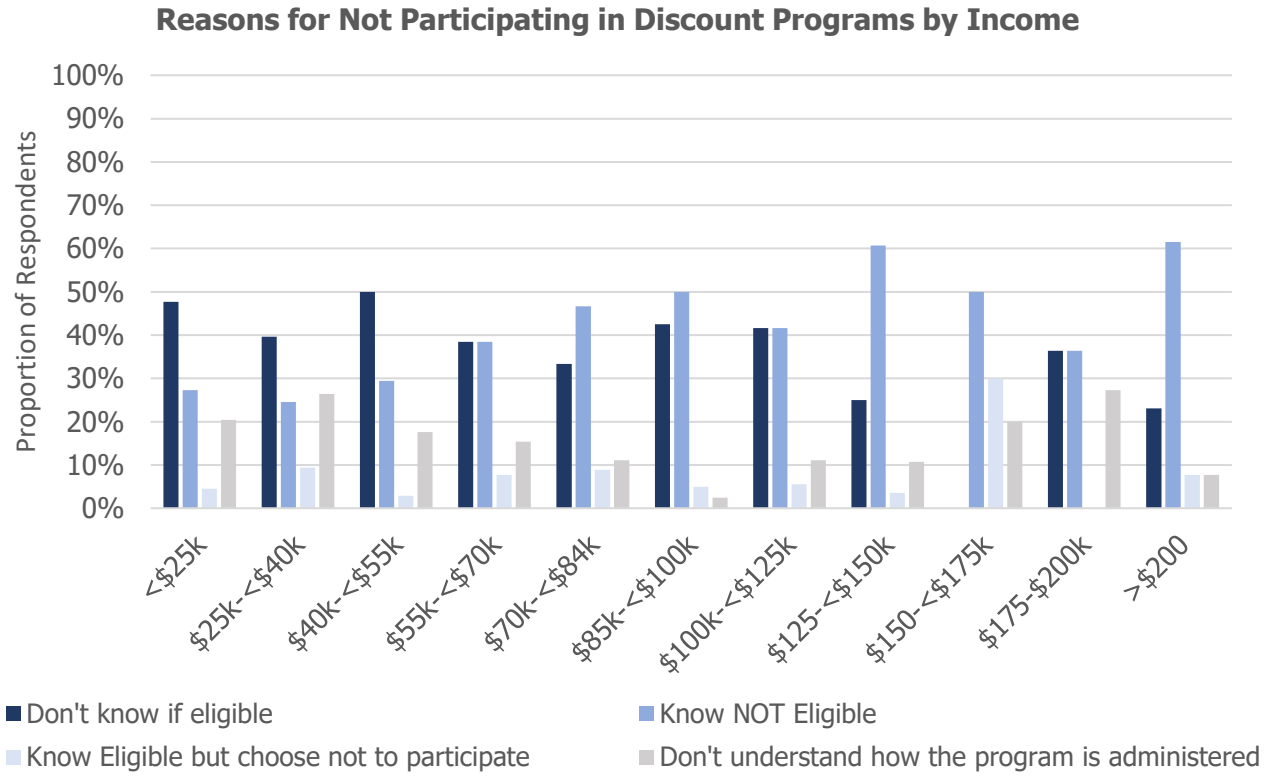
Power Revenues and Consumption





Source: LADWP CSD and FSO Estimate

Considerations: Program Barriers



Source: Loyola Marymount University Survey Data

Metrics in 1st stage analysis

Concept	Description (potential goal)
Bill discount enrollment	30% discount on electricity portion of LADWP bill
Electricity burden/ Percentage of Income Payment Plan	Limit “in need” household expenditure on electricity to 4- 6% of pre-tax income
Household-based energy budget	Lowest rate tier set at level above necessary household consumption level
Shutoffs due to non-payment	Reduction or elimination in residential customer shutoffs
Thermal comfort	# of households reporting they can(not) keep their indoor space cool
Rating of electricity service based on cost	# of in-need households rating their service as ‘poor’ on cost basis
Electricity Insecurity	# of households reporting they need to make tradeoffs between paying electric bill and other essential services
Electricity use intensity	Unclear precedent. Helps get at equitable efficiency and use v. end service disparities

- **Analyzed by:** example goals, magnitude of impact addressed, impact ability, implementation and tracking feasibility, downsides, and precedents
- **Data:** academic literature, report review, and precedent of use by other utilities
- **Next steps:** narrow to 2-4 metric concepts for deeper analysis

Ranking of Metrics Poll

See SurveyMonkey link in Zoom chat.

Please answer the first question only.

https://www.surveymonkey.com/r/LA100SC9

Scan QR code to access poll

Metrics Discussion

- Which metrics are a priority to consider to track progress on affordability?
- Are there metrics which we missed, or should be discarded?

Policy Categories in 1st-Stage Analysis

- **8 policy categories analyzed by:** policy mechanism, LADWP offerings and other relevant policy models, barriers to enrollment and scaling up, and impact of policy approach
- **Data:** primary data, academic literature, reports, and comparative utility offerings review (alongside Law analysis)
- **Next steps:** narrow to 3-5 policy options for deeper analysis

Policy Categories in 1st-Stage Analysis

Policy/Program	LADWP Offerings	Barriers to Enrollment/ Scaling	Magnitude of Impact
Appliance Energy Efficiency			
Structural Energy Efficiency			
Demand Response			
Direct Assistance and Crisis Relief			
Microgrids			
Rate and Billing Design			
Community Solar			
Rooftop Solar and NEM			

Ranking of Policy Categories Poll

See SurveyMonkey link in Zoom chat.

Please answer the second question.

https://www.surveymonkey.com/r/LA100SC9

Scan QR code to access poll

Policies Discussion

- Which policies are a priority to consider to effect progress on affordability?
- Are there policy options which we missed, or should be discarded?
- What type of further analysis would you like to see on the prioritized policies and metrics?

Rate Structure Analysis for Affordability and Distributed Energy Access

Exploring Electricity Ratemaking for Affordability, Access, and DER Implementation

Lead: UCLA School of Law; Dr. William Boyd and Rachel Sheinberg

Goal: Inform how LADWP can implement and adapt to carbon-free energy in a way that does not further existing distributional injustices

Research Questions:

How can creative ratemaking be utilized to protect Low-Income residents from increasing energy costs?

How will LADWP's business model be impacted by increasing renewable penetration?

Tasks:

Create a high-level portfolio of rate design and utility financing strategies informed by other states' and countries' programs

Analyze impacts of potential rate structures on bills using the energy atlas and NREL modeling

Rate Structure Analysis for Affordability and Distributed Energy Access

Discussion Questions

Are there affordability programs that have been mentioned today or from other utilities that we should explore further?

How do you think that rate structures such as time-of-use pricing, where electricity cost varies throughout the day, would be received by your communities? Would a changing price create additional burden on residents?

Small Business Affordability

Assessing Energy Affordability Barriers and Opportunities for Ethnic Minority-Owned Small Businesses (MOBs)

Lead: UCLA Latino Policy and Politics Institute; Drs. Paul M. Ong & Silvia R. González
Leverages larger research project focused on California's ethnic businesses

Goal: formulate evidence-based policy recommendations that promote an equitable clean energy transition for racial/ethnic minority small businesses

Tasks:

1. Analysis of secondary and administrative data to identify minority-owned businesses to assess their current energy use
2. Assessment of participation in previous DWP energy savings programs
3. Design, test, and administer a survey of minority-owned businesses in Los Angeles with support from small business serving community-based organizations

Small Business Affordability

Assessing Energy Affordability Barriers and Opportunities for Ethnic Minority-Owned Small Businesses

Survey Data Collection

- **10-15 minutes**
- **Phone, internet, and in-person** in partnership with small business serving CBOs
  - Citywide
  - Prioritize ethnic economic enclaves
- **Key Modules**
  - COVID impacts and access to relief programs
  - Sustainability practices
  - Structural elements of energy burden

Small Business Affordability

Discussion Questions

- Are there particular issues facing minority-owned businesses which we should consider further examining?

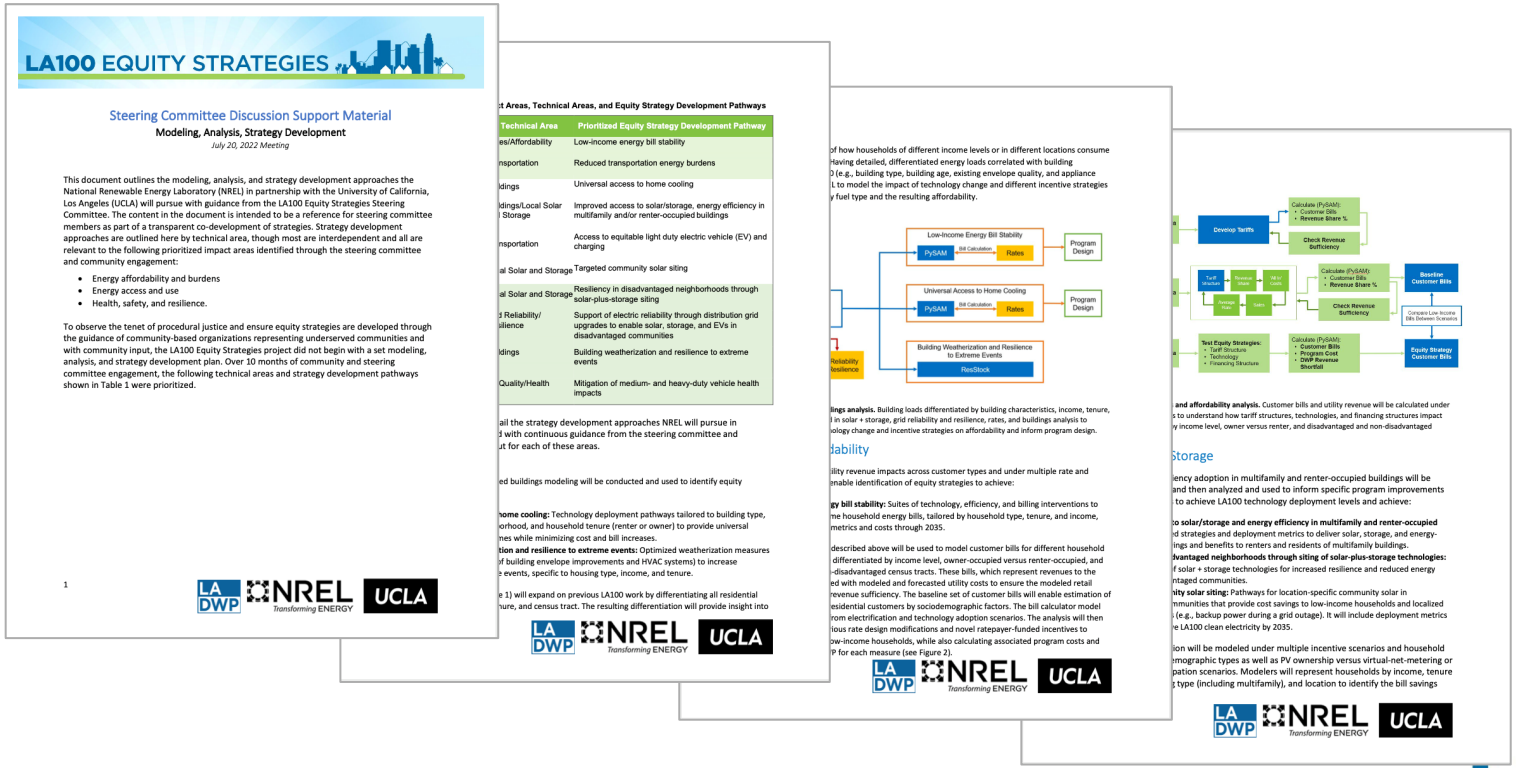
- Are there other organizations that we should contact as part of the survey outreach effort?

Thank you

Equity Scenarios and Metrics Discussion

- Buildings
- Affordability and Rates
- Light duty vehicle electrification and charging

Discussion Support Material



Modeling, Analysis, & Strategy Development

Equity Outcomes & Metrics

The goal of today's discussions is to hear feedback on **how we should measure success** in just distribution of:

Building efficiency upgrades and electrification

Rates and affordability

Light duty vehicle electrification and charging

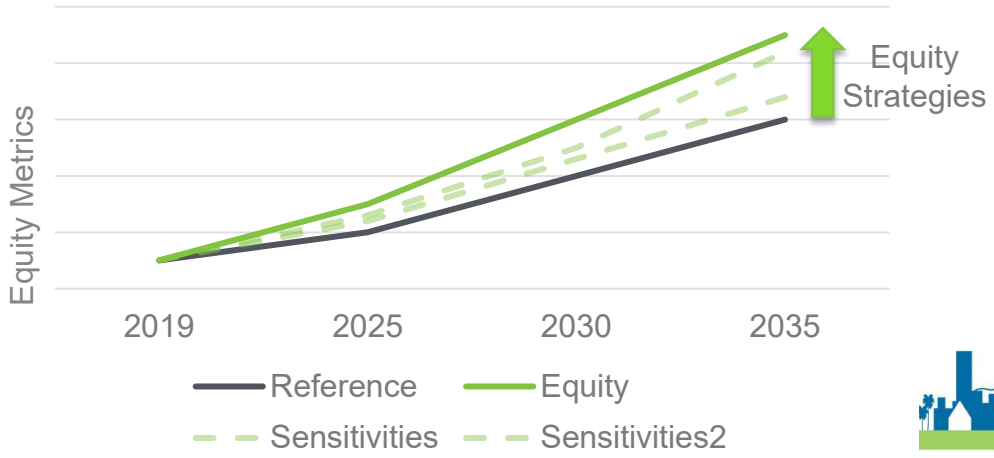
Modeling, Analysis, & Strategy Development

Shared:

100% clean electricity by 2035 with high electrification and efficiency

LA100 Equity Strategies **common scenarios:**

- **Reference:** LA100 (100% by 2035 with High electrification) without equity considerations
- **Equity strategies:** Achieve LA100 in ways that improve energy justice
- Some topics will explore variations (sensitivities) to explore which strategies achieve greater equity



Breakout Groups

- Buildings
- Affordability and Rates
- Light duty vehicle electrification and charging

Breakout Groups

Group	1	2
Steering Committee Member	Alliance of River Communities (ARC)	City of LA Climate Emergency Mobilization Office (CEMO)
	The South Los Angeles Transit Empowerment Zone (SLATE-Z)	Move LA
	Strategic Concepts in Organizing and Policy Education (SCOPE)	RePower LA
	Pacific Asian Consortium in Employment (PACE)	South LA Alliance of Neighborhood Councils
	DWP-NC MOU Oversight Committee	Community Build, Inc.
	Climate Resolve	Pacoima Beautiful
	Esperanza Community Housing Corporation	Enterprise Community Partners
	Los Angeles Alliance for a New Economy (LAANE)	

Buildings

How do we measure success?

- Does success in improving access to energy efficiency in multifamily and/or renter-occupied housing mean prioritizing
  - Resident-owned technologies or
  - Building or utility-owned technologies?
- What would an impactful and compelling strategies look like to:
  - ensure universal home cooling?
  - deploy weatherization measures for health and comfort?

  How might they be differentiated by community or housing type?

Affordability and Rates

How do we measure success?

- What strategies/approaches should be analyzed:
  - Expansion of existing programs?
    - e.g., Low-Income, Lifeline programs
  - Income-adjusted rates?
  - Maximum bills as fraction of income?
  - Rental/leasing/direct install with attractive financing for high energy efficiency equipment?
- Should strategies look for higher impacts in fewer, greatest need households, or look for reduced impacts for a larger group of the population?

Electric vehicles (bikes, scooters and personal cars) and charging

How do we measure success?

- **Access**
  - The number of people or households in disadvantaged communities who can access EV chargers – home, workplace, and public?

- **Use (Adoption)**
  - The number of people or households in disadvantaged communities who use EVs (e-bikes and/or personal cars) and electric vehicle charging? Or another metric?

- **Affordability**
  - Potential economic impact on or benefits of using or owning EVs for disadvantaged communities in terms of household income-expenditure?

LADWP's
Strategic Long-Term Resource Plan

Roadmap to an Equitable Carbon-Free Future

SLTRP Outcomes

Outcomes of 2022 SLTRP

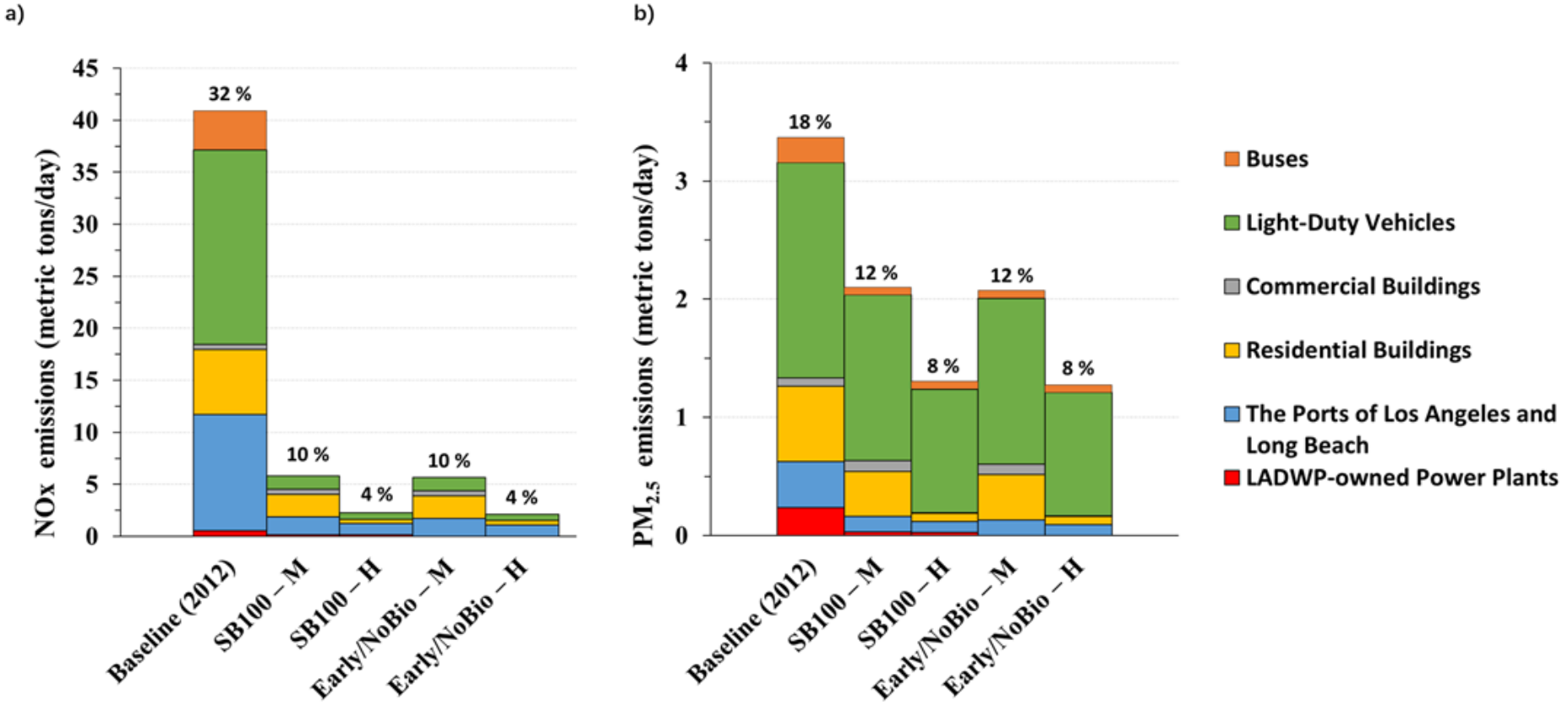
- High-level roadmap to 100% carbon free by 2035, driven by LADWP with stakeholder input
- Focus on big buckets of resources (large-scale renewables and energy storage, small-scale local solar and storage, EE and demand response, etc.)
- Modeling scenarios to determine best path to meet our mandates based on the guiding principles
- Integrates total Power System costs, infrastructure, resource planning, etc.

SLTRP Examples that relate to LA100 Equity Strategies

Reducing Use of Valley Generating Station

- LADWP to dramatically reduce utilization of Valley Generating Station:
  - The combination of **80% renewables** by 2030, **Haynes recycled water cooling,** and **Scattergood capacity** reduces Valley usage
  - Valley usage to be reduced from 30% to 5% thereby reducing adverse impacts on the local community
- Utilize significant space at Valley Generating Station for future clean energy projects

Electrification Drives Air Quality and Health Benefits



Deploying Distributed Energy Resources Equitably

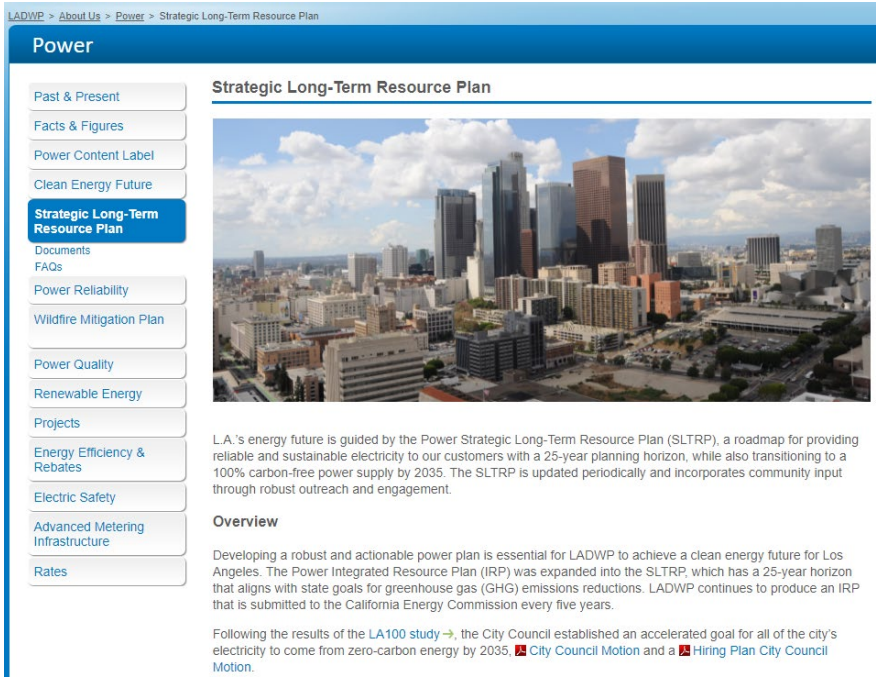
- We need: 1,000 MW of local solar, 500 MW of demand response, double energy efficiency, and support 580,000 electric vehicles by 2030.
- Progress:
  - LA100 Equity Strategies study through 2023
  - Expanded FiT from 150 MW to 450 MW
  - Launched FiT+ allowing energy storage
  - Launched VNEM Pilot Program
  - Expanded Power Savers (residential DR program)
  - More DER proposals under negotiations

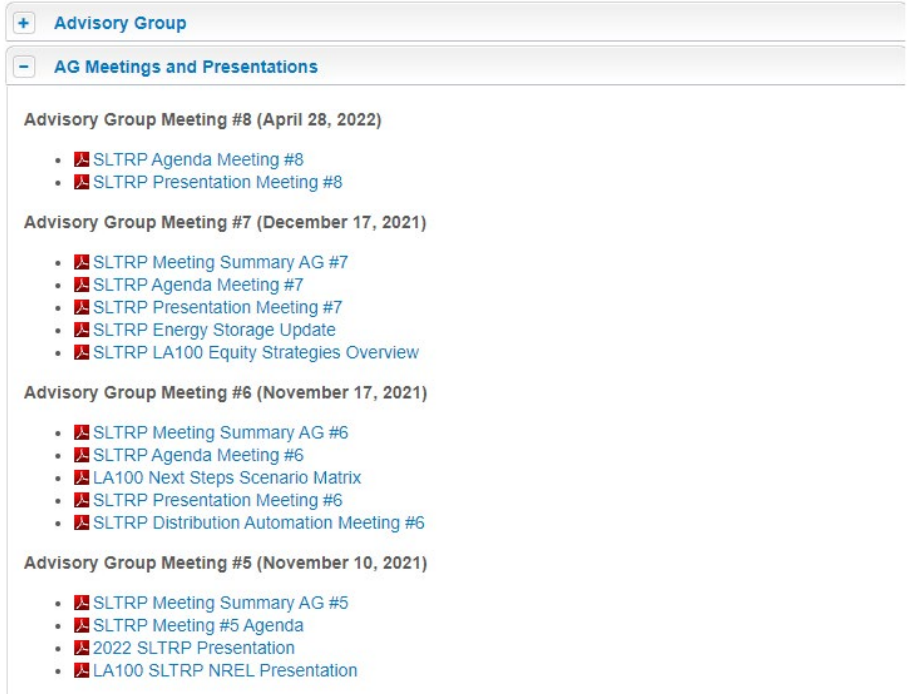
Key Takeaways on the 2022 SLTRP

- SLTRP is a living document; updated each year with stakeholder engagement every 2 years.
- 2022 SLTRP will identify the buckets for achieving goals. Within these buckets, LADWP will incorporate the LA100 Equity Strategies findings.
- Expect to fully incorporate LA100 Equity Strategies recommendations in 2024 SLTRP update.
- LA100 Equity Strategies recommendations will inform future programs designs and bulk power development.

Communications & Public Affairs

- Website: *ladwp.com/sltrp*
- Email address: *powerSLTRP@ladwp.com*





Q&A

Wrap Up and Next Steps

Going Forward

Tentative

Steering Committee Meetings

August 17, 2022
Virtual

- Update on project progress
- Summary and metrics synthesis from June and July breakout groups and the impact on equity scenario development

September 21, 2022
Virtual

- Air quality and health medium- and heavy-duty vehicle emissions impact modeling approach – presentation and feedback
- Workforce development

Subsequent Meetings

- **Third Wednesday of each month, 10:00 a.m. – 12:00 p.m. PT**
- **Virtual** for near-term

What would you like to discuss in upcoming meetings?
Drop your agenda suggestions in the chat!

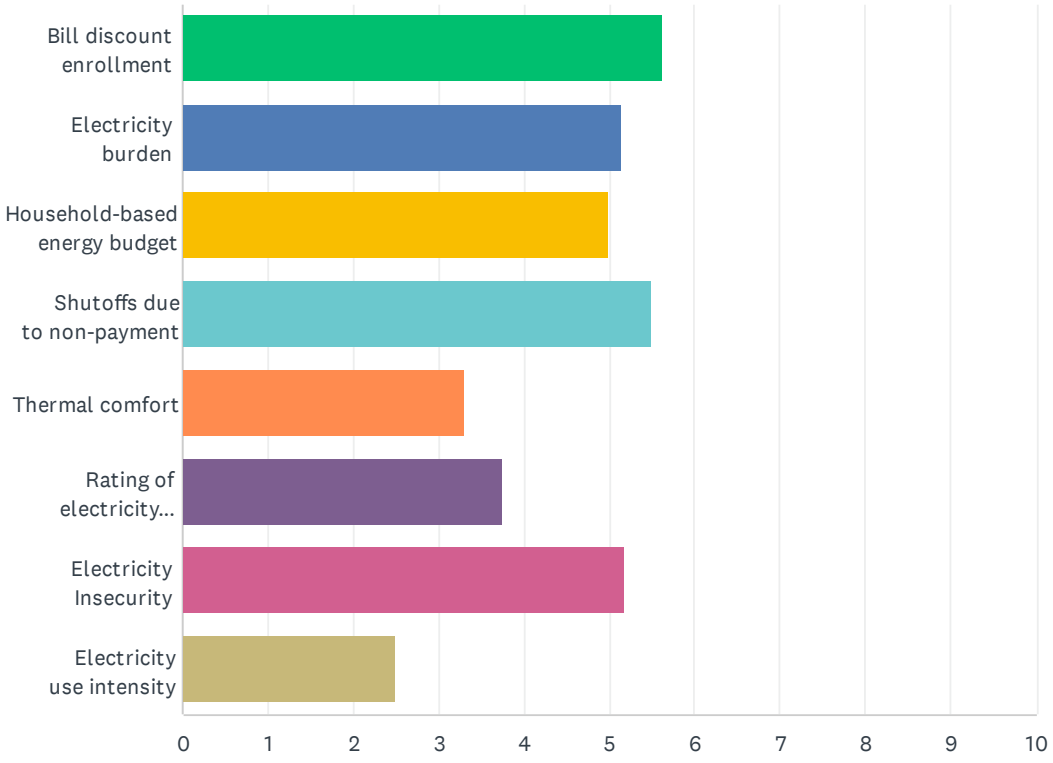
Thank you!

Appendix B

Steering Committee Ranking Poll

Q1 Please rank in order (1 being most important) the metrics which you think are most important to track progress on affordability from LA 100 ES?

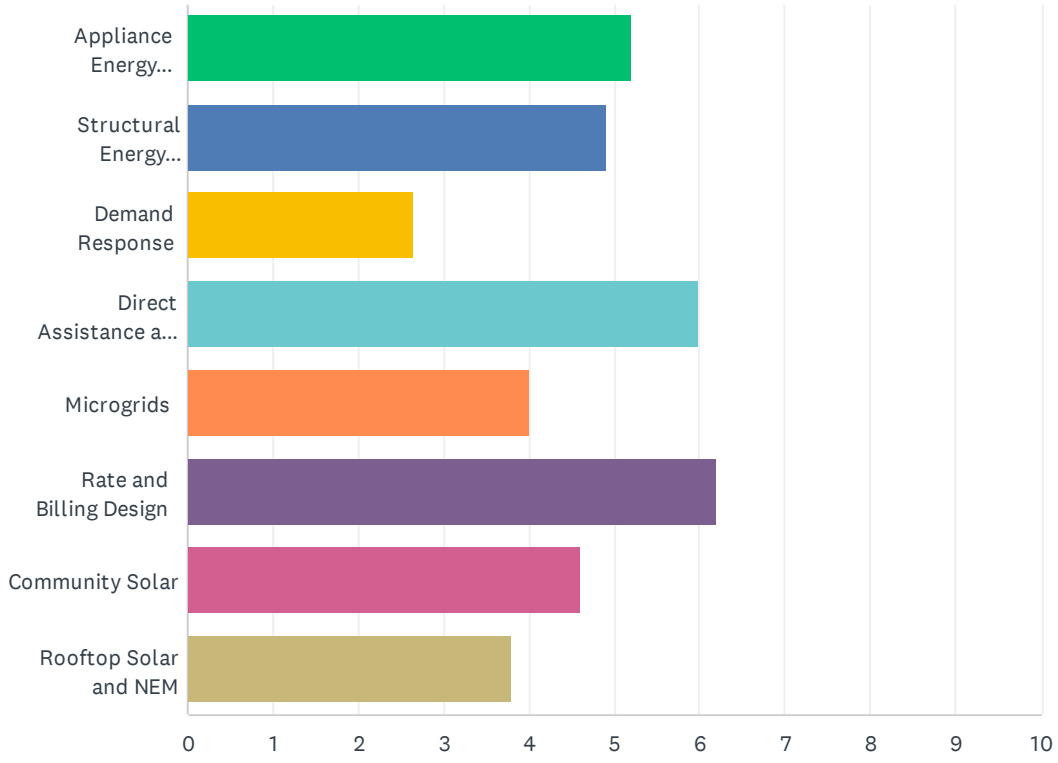
Answered: 16 Skipped: 0



	1	2	3	4	5	6	7	8	TOTAL	SCORE
Bill discount enrollment	12.50% 2	25.00% 4	31.25% 5	6.25% 1	6.25% 1	6.25% 1	12.50% 2	0.00% 0	16	5.63
Electricity burden	6.25% 1	12.50% 2	25.00% 4	31.25% 5	6.25% 1	12.50% 2	0.00% 0	6.25% 1	16	5.13
Household-based energy budget	12.50% 2	6.25% 1	25.00% 4	6.25% 1	31.25% 5	12.50% 2	6.25% 1	0.00% 0	16	5.00
Shutoffs due to non-payment	37.50% 6	6.25% 1	0.00% 0	25.00% 4	12.50% 2	0.00% 0	12.50% 2	6.25% 1	16	5.50
Thermal comfort	6.25% 1	6.25% 1	0.00% 0	0.00% 0	25.00% 4	37.50% 6	0.00% 0	25.00% 4	16	3.31
Rating of electricity service based on cost	0.00% 0	25.00% 4	0.00% 0	12.50% 2	12.50% 2	18.75% 3	0.00% 0	31.25% 5	16	3.75
Electricity Insecurity	25.00% 4	18.75% 3	0.00% 0	18.75% 3	6.25% 1	6.25% 1	25.00% 4	0.00% 0	16	5.19
Electricity use intensity	0.00% 0	0.00% 0	18.75% 3	0.00% 0	0.00% 0	6.25% 1	43.75% 7	31.25% 5	16	2.50

Q2 Please rank in order (1 being most important) the policy categories which you think are most important to effect on affordability from LA 100 ES?

Answered: 11 Skipped: 5



	1	2	3	4	5	6	7	8	TOTAL	SCORE
Appliance Energy Efficiency	10.00% 1	20.00% 2	30.00% 3	0.00% 0	20.00% 2	10.00% 1	0.00% 0	10.00% 1	10	5.20
Structural Energy Efficiency	9.09% 1	18.18% 2	18.18% 2	18.18% 2	9.09% 1	9.09% 1	9.09% 1	9.09% 1	11	4.91
Demand Response	0.00% 0	0.00% 0	9.09% 1	9.09% 1	0.00% 0	18.18% 2	45.45% 5	18.18% 2	11	2.64
Direct Assistance and Crisis Relief	27.27% 3	18.18% 2	18.18% 2	27.27% 3	0.00% 0	0.00% 0	0.00% 0	9.09% 1	11	6.00
Microgrids	0.00% 0	33.33% 3	11.11% 1	0.00% 0	0.00% 0	11.11% 1	22.22% 2	22.22% 2	9	4.00
Rate and Billing Design	40.00% 4	20.00% 2	0.00% 0	0.00% 0	40.00% 4	0.00% 0	0.00% 0	0.00% 0	10	6.20
Community Solar	10.00% 1	0.00% 0	20.00% 2	20.00% 2	20.00% 2	20.00% 2	10.00% 1	0.00% 0	10	4.60
Rooftop Solar and NEM	10.00% 1	0.00% 0	0.00% 0	30.00% 3	10.00% 1	30.00% 3	0.00% 0	20.00% 2	10	3.80