

# LA100 EQUITY STRATEGIES



## Los Angeles 100% Renewable Energy Equity Strategies

### Steering Committee Meeting #5

March 23, 2022

### Summary<sup>1</sup>

#### Schedule and Location

March 23, 2022, 10:00 a.m. to 12:00 p.m.

Conducted virtually

#### Virtual Meeting #5 Attendees

##### Steering Committee Members

Alliance of River Communities (ARC), Vincent “Chente” Montalvo  
City of LA Climate Emergency Mobilization Office (CEMO), Marta Segura  
City of LA Climate Emergency Mobilization Office (CEMO), Rebekah Guerra (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  
Enterprise Community Partners, Michael Claproth (alternate)  
Esperanza Community Housing, Nancy Ibrahim  
Los Angeles Alliance for a New Economy (LAANE)/ RePower LA Coalition, Kameron Hurt  
Move LA, Eli Lipmen (alternate)  
Pacific Asian Consortium in Employment (PACE), Susan Apeles (alternate)  
Pacoima Beautiful, Veronica Padilla  
Pacoima Beautiful, Melisa Walk (alternate)  
The South Los Angeles Transit Empowerment Zone (SLATE-Z), April Sandifer (alternate)  
Strategic Concepts in Organizing and Policy Education (SCOPE), Augustin Cabrera  
Strategic Concepts in Organizing and Policy Education (SCOPE), Tiffany Wong (alternate)

##### Board of Commissioners

Board President Cynthia McClain-Hill

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

Ashkan Nassiri

Carol Tucker

<sup>1</sup> 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.



# LA100 EQUITY STRATEGIES



Cathleen Chavez Morris  
David Castro  
David Rahimian  
Dawn Cotterell  
Dennis Obiang  
Jason Rondou  
Jay Lim  
Joe Ramallo  
Pjoy Chua  
Ramon Gamez  
Simon Zewdu  
Stephanie Spicer  
Steve Baule  
Vanessa Gonzalez

## Project Team

Alana Wilson, National Renewable Energy Laboratory (NREL)  
April Sandifer, NREL  
Ashreeta Prasanna, NREL  
Danny Zimny-Schmitt, NREL  
Eda Giray, NREL  
Jane Lockshin, NREL  
Janet Reyna, NREL  
Kate Anderson, NREL  
Megan Day, NREL  
Nicole Rosner, NREL  
Patricia Romero-Lankao, NREL  
Scott Haase, NREL  
Christian Mendez, Kearns & West  
Jasmine King, Kearns & West  
Joan Isaacson, Kearns & West  
Abel Valenzuela, UCLA  
Cassie Rauser, UCLA  
Greg Pierce, UCLA  
Kelly Trumbull, UCLA  
Magali Sanchez-Hall, UCLA  
Raul Hinojosa, UCLA  
Stephanie Pincetl, UCLA  
Yifang Zhu, UCLA



# LA100 EQUITY STRATEGIES



## Welcome Remarks

Joan Isaacson, facilitator from Kearns & West, welcomed Steering Committee members to the fifth Los Angeles 100% Renewable Energy Equity Strategies (LA100 Equity Strategies) Steering Committee meeting and thanked them for joining. She introduced Simon Zewdu, Director of Transmission Planning, Regulatory, and Innovation Division at LADWP and Project Manager for LA100 Equity Strategies, who welcomed members and shared LADWP's appreciation for their participation. Simon Zewdu stated that the project team has continued to listen and integrate Steering Committee feedback into the study and proposed strategies. He shared that the LADWP Board of Commissioners is following this effort and the outcomes identified by the Steering Committee.

## Meeting Purpose and Agenda Overview

Joan Isaacson reviewed the meeting agenda (see slide 3 in Appendix A). She explained that the project team will share proposed meeting agendas that incorporate the discussion topics shared by the Steering Committee. Joan Isaacson said the bulk of the meeting will be spent discussing the potential strategy priorities and pathways developed by the project team. She stated that UCLA will also be presenting on proposed pathways related to policy design, jobs, and air quality and health.

## What We Heard: Steering Committee Input on Agenda Topics

Paty Romero-Lankao, Equity Strategies Technical Lead from NREL, shared a tentative schedule that incorporates agenda items proposed by the Steering Committee (see slide 8 in Appendix). She explained that this meeting will include a discussion on the proposed pathways and how to prioritize affordability, automatic enrollment in low-income rate subsidy programs, and keeping cost increases transparent and clean before introducing a technology. Paty Romero-Lankao shared that during the upcoming meetings on April 20<sup>th</sup> or May 18<sup>th</sup>, proposed topics will include debriefs from the community meetings and listening sessions, a discussion on community engagement activities, and how the Equity Strategies are considered in the Strategic Long-Term Resources Planning. She also stated that future meetings will include discussions on equity metrics and conversations with NREL technical leads.

Joan Isaacson invited the Steering Committee to provide input on the proposed schedule. She explained the next agenda will be shared at the end of each meeting and Steering Committee members will be able to share comments and perspectives on the proposed topics.

## Modeling, Analysis, Equity Strategy Development Pathways

Megan Day, Equity Strategies Project Manager and NREL Senior Energy Planner, shared that NREL is a partner to the Steering Committee in developing and incorporating Steering Committee priorities into the modeling, analysis, and strategies. She stated that LA100 Equity Strategies is based on the modeling done in LA100 Renewable Energy Study. In addition, Megan Day explained that NREL has been learning about the Steering Committee's perspectives on pathways in prior meetings.

Megan Day stated that the project team is approaching the pathways through a lens of distributional justice by understanding and modeling a just distribution of the costs and burdens of this energy transition. She described the just energy outcomes visioning from the first Steering Committee meeting (see slide 12 in Appendix) that included the following:

- Low-income energy needs are affordable
- Efficiency first
- Equal energy for all



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- Solar and roof electric panel upgrades
- Safe, comfortable homes for all
- Culturally compelling messaging
- Jobs access

Megan Day overviewed high-level themes from Steering Committee Meeting #3:

- Affordable transition
- Distribution of risk
- Collaboration across sectors and agencies
- City infrastructure, programs, and policies
- Customer programs
- Health and environmental infrastructure strategies
- Health risks and opportunities
- Urban heat inequity
- Health impact factors
- Measuring inequity
- Targeted outreach and implanting equity
- Displacement prevention
- Jobs and workforce
- Labor and hiring practices

Megan Day then overviewed impact areas from Steering Committee input that included:

- Affordability
- Reliability
- City/LADWP infrastructure investment
- Air quality
- Public health and safety
- Jobs and workforce

Thirteen modeling and analysis pathways that address both Steering Committee priorities and LADWP's pragmatic impact were then presented by Megan Day. She shared that Steering Committee input is needed on the prioritization poll, which was distributed prior to the meeting, because all thirteen identified pathways cannot be studied due to budget constraints. The project team asks for one poll response per member organization, and responses to the poll can be revised if already submitted.

## Major Themes from Steering Committee Questions and Discussion

- Costs and cost-shifting need to be discussed for each pathway.
- Where will funding for bill stability come from? Will the Coronavirus Aid, Relief, and Economic Security (CARES) Act funding be utilized and made available?
  - Megan Day explained that the modeling pathways will determine the level of funding and where funding could come from.
- The Steering Committee needs to spend more time reviewing the proposed pathways. As they are written, they are difficult to comprehend.



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- Regarding feed-in tariffs (FiT) and the compensation given to building owners, can any of that compensation go to renters instead?
- How will the emissions from large trucks be mitigated in the Northeast Valley of Los Angeles? Will the City Council ordinance require that all trucks that drive in Sun Valley be electric? How will this mitigation work in LADWP's current scope?
  - Simon Zewdu shared that LADWP is considering what kind of EV infrastructure will be needed to support the transition of mid-sized trucks and trucks in the valley.
- What number of strategy development pathways will be within time and budget?
- Programs to address multifamily buildings run the risk of the building owners keeping the benefits and not passing them through to renters.

## Modeling, Analysis, and Strategy Development Pathways

### Air Quality and Health

Megan Day overviewed the air quality and health pathway and described the mitigation of medium- and heavy-duty vehicle health impacts (see slide 17 in Appendix). She explained that modeling will be done on different air quality pollution and health impacts to understand what could provide the greatest benefits in disadvantaged communities. The project team would compare medium and heavy-duty vehicle (trucks) electrification to light-duty vehicle (cars) electrification and the health benefits between the two.

### Major Themes from Steering Committee Questions and Discussion

- The geographical component of the movement of trucks through communities needs to be considered. Electrification of trucks should maximize payoff for equity communities and prioritize electrifying where there is greater truck pollution.
- For a just distribution, frontline communities (e.g., CalEnviroScreen areas) should be prioritized for all energy remediations. Frontline communities tend to suffer from disparities in all areas, including health, housing, transit, and toxic pollutants.
- Who will pay for the electric trucks?
- Freeways go through all equity communities, so this pathway does make sense if the travel is from Port or LAX to anywhere in the region.
- What legal tool can be used to ensure the electrification of trucks benefits neighborhoods that experience higher pollution? What is within LADWP's ability to implement and enforce this?
- Green gentrification greatly affects disadvantaged communities. How much will this project cost and will it raise their utility bills?
- Is the analysis of the proposed pathway twofold? Does it look at medium and heavy-duty vehicles impacts in disadvantaged communities and compare these impacts to small vehicles?
- For each of these options, the cost of buying electric trucks versus using those funds and applying them directly to lowering the bills of low-income ratepayers must be considered.
  - Megan Day stated that the NREL project team is not assuming public or LADWP purchasing of electric vehicles in the proposed pathway.

### Buildings





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Megan Day overviewed the buildings pathway and explained that the project team is looking at universal access to home cooling, low-income access to demand flexibility programs, and improving access to solar/storage and energy efficiency in multifamily and/or renter-occupied buildings (see slides 18 – 19 in Appendix). She stated that the project team is using census-tract level data based on building type, income level, neighborhood, and renter/owner specific technology to develop the lowest-cost and lowest bill increase pathways to provide universal cooling access in homes. Megan Day shared that the project team is considering the impact on utility bills, the costs of installment, and how this differs amongst groups in Los Angeles.

## Major Themes from Steering Committee Questions and Discussion

- What technologies are being considered for universal access to cooling?
  - Megan Day explained that central air conditioning technology through heat pump access (efficient heating and cooling) is being considered.
- The "building type" aspect of this pathway is going to be very important. Many multifamily affordable housing owners have older properties with deferred maintenance that might not have the infrastructure to support things like upgraded cooling systems.
- Is the project team considering the fact that in many frontline communities' energy consumption must be increased to address infrastructure needs, e.g., air conditioning? Well-endowed consumers are overutilizers. Is this disparity in energy usage being considered in the "just distribution approach?"
  - Megan Day stated that increasing energy consumption to support comfort, safety will be part of several modeling pathways, including universal access to cooling.
- Universal cooling is favored, especially in older housing units.
- Low-income building owners may only experience financial negatives to putting solar on their roofs. How is this an equity benefit? When all power is 'green,' what individual value (vs. cost) does local solar have for a low-income household?

## Rates and Energy Bills

Megan Day overviewed the rates and energy bills pathways, including low-income energy bill stability and rate/bill options for solar affordability (see slide 20 in Appendix). She explained that the project team is considering how to distribute technologies in an equitable way across communities with regard to home types and income levels. Megan Day shared that equitable retail rate options to facilitate solar affordability in disadvantaged communities are also being considered.

## Major Themes from Steering Committee Questions and Discussion

- How will specific technology solutions be implemented in specific geographic areas?
- A bigger and more fundamental problem is the cost subsidy for low-income power bills. All of these options to satisfy specific interests detract from the funds available to subsidize bills.

## Local Solar and Storage

Megan Day overviewed the local solar and storage pathway and explained that the project team is looking at targeted community solar siting in disadvantaged communities to deliver cost savings and local resilience benefits (see slide 21 in Appendix). She stated that overall costs, costs to LADWP, and prioritizing local community benefits are being considered in the analysis. Megan Day also described potential options for ownership or prioritized subscriptions to local solar and storage programs.

## Major Themes from Steering Committee Questions and Discussion

- How are we overcoming the current legal challenges of siting resources in communities that most need them?



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- Siting solar farms in disadvantaged and low-income areas might be loading environmentally challenged neighborhoods with more industrialization. Is community solar being considered in higher-income neighborhoods as well?

## Transportation

Megan Day overviewed the proposed transportation pathways that include equitable electric vehicle and charging access and reduced transportation energy burdens (see slide 22 in Appendix). She explained that equitable EV and charging access could be achieved by accelerating light-duty EV and charging infrastructure across communities through increased EV ownership or access and siting or incentivizing EV charging. Megan Day described how transportation energy burdens can be reduced by increasing multimodal electric mobility (bikes, scooters, car share, taxis, ride-hail) and measuring the implications for reducing energy costs and grid demand.

### Major Themes from Steering Committee Questions and Discussion

- Consider multifamily dwelling charging access or how residents can charge EVs away from where they live.
- Leaving charge installation to the private industry may pose challenges to successful distribution.
- LADWP should install (and collect retail rates for) EV chargers in low-income communities.

## Reliability and Resilience

Megan Day overviewed four reliability and resilience pathways: 1) building weatherization, thermal storage, and resilience to extreme events; 2) access to public and community cooling; 3) resiliency in disadvantaged neighborhoods through solar-plus-storage siting; and 4) improving distribution system reliability through upgrades to support solar/storage/EC adoption in disadvantaged communities (see slides 23 – 24 in Appendix).

### Major Themes from Steering Committee Questions and Discussion

- Los Angeles County's recent Climate Vulnerability Assessment identified electricity and reliability thereof to be a lynchpin — essentially important — to keeping Angelenos safe.
- Cooling centers are largely not used, but resilience hubs or centers at an existing facility or a place the community already knows and frequents are recommended.
- Health dangers from high temperatures will become even more important with global warming.
- What some are calling cooling "centers" are cooling "hubs," which include and prioritize social infrastructure.
- Resiliency in Disadvantaged Neighborhoods through Solar-plus-storage Siting
- Increase house/days of electricity service in an outage situation through targeted solar and storage for distribution grid resilience in disadvantaged communities.
- Improve distribution system reliability through upgrades to support solar/storage/EV adoption in disadvantaged communities.
- Infrastructure improvements, costs, and avoided costs that ensure equitable system reliability and technology deployment in underserved communities.
- Power resiliency in disadvantaged neighborhoods should also be considered, such as putting micro-grids with their own local storage in disadvantaged neighborhoods, which is very different from a focus on "community solar."
- A reliant workforce to provide maintenance for electricity is needed.
- Reliable energy and keeping the grid going is the greatest thing to do for low-income Angelenos. Reliable energy is vastly more important in small living units with poor insulation and ventilation and high people loads.
- Is "solar plus siting" a resilient microgrid proposal? Storage and microgrids should be included in local solar proposals.



## Steering Committee Guidance on Modeling, Analysis, and Strategy Development Priorities

Cassie Rauser, Executive Director of the UCLA Sustainable LA Grand Challenge, introduced the potential equity strategy development pathway priorities to be studied by UCLA. She shared that Steering Committee input has been reviewed and used to develop the priorities.

### Energy Affordability and Policy Solutions Analysis

Greg Pierce, Co-Director of the Luskin Center for Innovation (LCI), shared what was heard from the Steering Committee on energy affordability and described the UCLA project team's work on this topic (see slides 26 – 30 in Appendix). Greg Pierce described the feedback heard from the Steering Committee, including affordability being among the most key equity considerations, support for long-term affordability policy, and priority metrics and policies. He noted several proposals to address affordability that include structural affordability considerations, energy affordability metrics, and energy affordability policy options. Greg Pierce shared specific examples where impacts of potential rate structures on bills are analyzed by using the energy atlas, and where energy affordability barriers and opportunities are assessed for ethnic minority-owned small businesses.

### Major Themes from Steering Committee Questions and Discussion

- Why should the ratepayers pay the bill for the clean energy transition?
- Currently, there is no funding for nonprofits for Demand Energy Response (DER), so perhaps an assessment can be done on nonprofit businesses' capacity to serve low-income areas like Esperanza Community Housing or small businesses in Leimert Park or Boyle Heights, targeted low-income areas.
- There are issues with going for the highest levels of pure green energy when it results in both higher costs and greater cross-subsidies to all.
- 
- Can you clarify what funding a publicly owned utility is eligible to access from the state and federal government (e.g., BIL money)
- What data source is being used by UCLA and LADWP to determine low-income households?
- Is LADWP prepared to apply for competitive funds? The Hydrogen Hub is a key source of significant funding for helping reach the 100% renewable energy outlined in the NREL study.
- Can we include the top 10% of CalEnviroScreen areas in the measures of low-income areas that will be served by these potential pathways?
- Affordability data sources that should be used in the analyses:
  - Long-term operation and maintenance cost data that include the operations and maintenance costs over the life of the system
  - Income and cost of living of disadvantaged communities
  - Electricity insecurity and the proportion of bills that ratepayers pay for electricity
  - Shutoffs and arrearages data by neighborhood
  - Metrics on not just financial tradeoffs but also health and comfort tradeoffs (e.g., limiting the use of health devices, tolerating high heat)
- Board President Cynthia McClain-Hill: Is it possible to simply share what have already been identified as possible metrics and also possible policy options? Can you share what you have learned again as background and context?

### Jobs and Workforce Development





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Abel Valenzuela, Jr., Director of UCLA's Institute for Research on Labor and Employment, and Raul Hinojosa-Ojeda, Associate Professor at the UCLA Department of Chicana and Chicano Studies, presented potential pathways for jobs and workforce development (see slides 31 – 34 in Appendix). They explained current relevant research projects, including the Green Jobs Calculator Tool Kit that tracks and projects green and non-green jobs over various LA100 Energy Models scenarios. The Institute for Research on Labor and Employment is also working on a data portal that will include community-level data on green jobs as well as research on building community and stakeholder coalitions for green jobs workforce development funding and implementation strategies.

## Major Themes from Steering Committee Questions and Discussion

- In addition to Labor & Hiring practices, workforce development funding, and targeted education and training, what are the jobs concerns?
- What are the top one or two job development priorities?
- Because of LADWP's strong commitment to equity, it is more likely that LADWP jobs (for example) will be more responsive to equity needs than private industry jobs. (For example, DWP installing 'equity' EV chargers versus private industry.)
- Underserved communities also work at polluting facilities and ports. How do we balance job opportunities and equity and transition out of polluting jobs?
- Regarding the conversion rate of jobs, is it a 1:1 worker at a polluting facility to a clean energy facility?
- Clean energy jobs may also be less paying – how do wages compare?
  - Raul Hinojosa-Ojeda stated that social account matrices look at the induced effects of general economic activity on the whole economy and broad workforce impacts. Raul Hinojosa-Ojeda explained that their team is also looking for options for hydrogen and restructuring the port of Los Angeles.
  - Abel Valenzuela, Jr. stated that training programs and resources earmarked for Just Transitions need to be local and can draw from empirical data so that they can secure resources for E&T.
- Frontline communities (like Wilmington, Pacoima, South LA) need to see and experience the Targeted Education and Training and should be prioritized.
- Enforcement of local hire requirements is needed to ensure developers and builders agree to the requirements and follow through.
- Training programs that support the wide variety of living wage green jobs connected to employment are needed that can support the blue economy (sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of the ocean ecosystem).
- Ensure training is connected to employment opportunities.
- The biggest equity measure is the cost of power to low-income and disadvantaged households. For example, green hydrogen is a very high cost, while using natural gas 5% of the time is a much lower cost.
- The proposed strategies may also affect the policy choices in the LA100 project.

## Air Quality and Community Health

Yifang Zhu, PhD, Fielding School of Public Health, overviewed UCLA's proposed pathways for air quality and community health (see slides 35 – 39 in Appendix). Yifang Zhu explained the proposed research approach that focuses on the transportation sector in the air quality study. Yifang Zhu stated that UCLA will project emission changes at the census-tract level based on the current light-duty zero-emission-vehicle (ZEV) adoption trends to better understand disparities, air quality, and health effects among disadvantaged communities. She explained that UCLA will also use a personal trip-level transportation model to provide fine-scale emission change estimates for both modeling efforts in the Equity Strategies.



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## Major Themes from Steering Committee Questions and Discussion

- How is water quality included in this analysis?
- More granular measurements are needed for more equitable results.
- Can information on the proposed modeling tools be included separately?
- The focus on reducing truck emissions should be on medium and heavy-duty trucks.
- There needs to be some financial analysis on the economics of each scenario and how cost-shifting can burden ratepayers.
- Should LADWP be financing heavy-duty trucks and charging stations? Is that LADWP's responsibility?
- Does the ranking of NREL pathways (i.e., medium- or heavy-duty trucks) affect the air quality proposal?
- Renewable energy infrastructure is very different now than it was 100 years ago.
- In addition to summarizing what was heard at the community meetings, can you outline how it is/was used as input on developing and identifying the proposed pathways?

## Wrap Up and Next Steps

Joan Isaacson shared that the upcoming Steering Committee meetings will take place on April 20<sup>th</sup> and May 18<sup>th</sup>, 2022, and 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 input from the Steering Committee on draft modeling, analysis, strategy development planning, a summary of what was heard at community meetings, a summary of what was heard at listening sessions, and how the LA100 Equity Strategies are guiding the LADWP's Strategic Long-Term Resource Planning.

Simon Zewdu thanked everyone for participating in the meeting. He also stated that economic issues will be addressed as part of the LA100 Equity Strategies study and that this study is a continuation of the LA100 Renewable Energy study. Simon Zewdu asked the project team and the Steering Committee to consider how as the findings are implemented, how can they be equitable to all Angelenos? He explained that some topics are difficult to find specific implementable targets so Steering Committee feedback will help the project team in doing so.



# LA100 EQUITY STRATEGIES



## Appendix A

Steering Committee Meeting #5  
March 23rd, 2022  
Presentation Slides





**LA100 Equity Strategies  
Steering Committee Meeting #5  
March 23, 2022**



# Los Angeles Department of Water & Power (LADWP)

## Project Leads



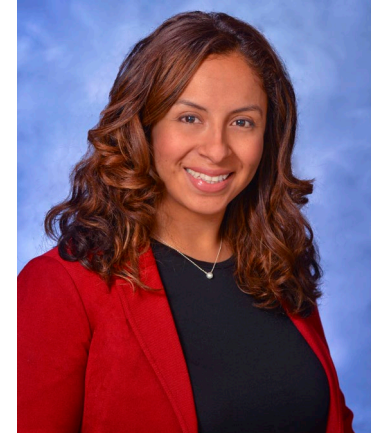
**Simon Zewdu**  
Director  
Transmission Planning,  
Regulatory, and Innovation Division



**Pjoy T. Chua, P.E.**  
Assistant Director  
Transmission Planning, Regulatory,  
and Innovation Division



**Steve Baule**  
Utility Administrator  
LA100 Equity Strategies Oversight  
& UCLA Contract Administrator



**Stephanie Spicer**  
Community Affairs Manager





# Agenda

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Start Time	Item
10:00 a.m.	Welcome
10:05 a.m.	Meeting Purpose and Agenda Overview
10:10 a.m.	What We Heard: SC input on future agenda item topics (NREL) <i>Summary of input from Miro exercise in last meeting</i>
	Steering Committee Guidance on Modeling, Analysis, and Strategy Development Priorities (NREL)
10:15 a.m.	<ul style="list-style-type: none"><li>• <i>Rates</i></li><li>• <i>Buildings</i></li><li>• <i>Local Solar &amp; Storage</i></li><li>• <i>Transportation</i></li><li>• <i>Reliability &amp; Resilience</i></li></ul>
11:05 a.m.	Feedback on Proposed Equity Strategy Development Pathways, continued from Steering Committee #4 (UCLA) <ul style="list-style-type: none"><li>• <i>Policy design for affordability</i></li><li>• <i>Jobs &amp; workforce development</i></li><li>• <i>Air quality, health, environment</i></li></ul>
11:55 a.m.	Wrap Up and Next Steps

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# Our Guide for Productive Meetings



*Raise your hand*  
to join the  
conversation  
(less chat  
entries, more  
talking)



Help to make  
sure that  
everyone has  
*equal time* to  
contribute



Keep input  
*concise* and  
*focused* so that  
others have  
time to  
participate



*Actively listen* to  
others to  
understand their  
perspectives



*Offer ideas* to  
address others'  
questions and  
concerns



# 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, Alicia Morales-Perez
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	Gina Palencar
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



# What We Heard (NREL)

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Report Out from Last Meeting| Future Agenda Items



# Future Agenda Items Activity

Sample of agenda topics  
captured in Miro activity

Automatic  
enrollment in  
low-income rate  
subsidy  
programs

Ensuring  
affordable  
housing  
preservation

What does  
engagement and  
accountability  
look like after the  
LA100 ES project  
is done

Clean drinking  
water as a social  
justice/equity  
issue

All community  
engagement  
activities (ex.  
community  
meetings, listening  
sessions, surveys,  
outreach/education  
al resources)

How LA100  
equity is guiding  
SLTRP

Prioritizing  
affordability

Energy justice  
metrics and  
guardrails

How are we  
using equity  
metrics

HACLA retrofits  
for solar energy  
and DERs

Tenant  
protections

How can  
LADWP's EMDI  
project  
overlap/intersect  
with LA100 ES?



# Including Future Agenda Items

## Tentative Schedule

### This Meeting

- **Proposed Pathways Discussion**
  - How to prioritize affordability
  - Automatic enrollment in low-income rate subsidy programs
  - Keep cost increases transparent and clear before introducing a technology

### 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

**April 20, 2022  
or  
May 18, 2022**

- **Debriefs**
  - Community Meetings
  - Community Listening Sessions
- **Discuss all community engagement activities**
  - E.g., community meetings, listening sessions, surveys, outreach/educational resources
- **SLTRP**
  - How LA100 equity is guiding SLTRP
  - Intersect SLTRP/LA 100ES/PSRP and EMDI etc.

# Modeling, Analysis, Equity Strategy Development Pathways (NREL)

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Steering Committee Feedback and Guidance





**NREL's distributional justice modeling, analysis, and strategy development will reflect Steering Committee feedback and guidance**

# Modeling, Analysis, & Strategy Development

	Rate Analysis/ Affordability	Buildings	Solar & Storage	Reliability & Resilience	Transportation	Air Quality, Health, Environment	Jobs & Workforce Development
<b>LA100 2035 100% Clean Energy Metrics</b>	\$86 Billion to achieve 100% clean electricity by 2035	↓54% residential natural gas consumption ↑27% residential electricity consumption	2,362 MW residential 366 MW commercial rooftop PV 986 MW storage	\$831 Million distribution system upgrade costs	80% electric vehicles	\$1.4 Billion in annual health benefits based on 2 sq km air quality modeling	15,561 in-basin 3,594 out-of-basin clean energy jobs
<b>Community Engagement</b>	<ul style="list-style-type: none"> <li>- Prioritized equity outcomes &amp; pathways</li> <li>- Policy and program knowledge &amp; guidance</li> <li>- Procedural justice</li> </ul>						← <b>Today's focus</b>
<b>LA100 Equity Strategies Modeling and Analysis</b>	dGen utility bill rate impact analysis for 600,000+ buildings by income, renter/ owner, electricity/ natural gas	ResStock modeling of all residential buildings by income, renter/owner to optimize efficiency and electrification for affordability	dGen modeling of residential, commercial rooftop and community solar optimized for DACs	Distribution grid modeling of upgrades required to support PV, EV adoption, building and transportation electrification and reliability in DACs	Sustainable transportation scenario modeling to optimize benefits for DACs	Neighborhood-level air quality modeling and health-impacts analysis to target benefits to DACs	Job training and readiness and workforce standards analysis
<b>Metrics</b>	Measurable, interim & final distributional justice metrics						
<b>Outcomes</b>	Equity strategies						



# Steering Committee Guidance

## What We Heard

### Just Energy Outcomes Visioning: Steering Committee Meeting #1

Low-income energy needs are affordable

Efficiency first

Equal energy for all

Solar + roof, electric panel upgrades

Safe, comfortable homes for all

Culturally compelling messaging

Jobs access

### Select, High-Level Themes: Steering Committee Meeting #3

Affordable Transition

Distribution of Risk

City Infrastructure, Programs, and Policies

Health Risks & Opportunities

Measuring Inequity

Jobs & Workforce

Collaboration Across Sectors & Agencies

Customer Programs

Urban Heat Inequity

Targeted Outreach & Implementing Equity

Labor & Hiring Practices

Health & Environmental Infrastructure Strategies

Health Impact Factors

Displacement Prevention

### Impact Areas: From Steering Committee Input

Metrics Outreach/ Implementation

Affordability

Reliability

City/LADWP Infrastructure Investment

Air Quality

Public Health / Safety

Jobs & Workforce



## Potential Equity Strategy Development Pathways (13)

Low-income energy bill stability

Building weatherization, resilience to extreme events

Access to public and community cooling

Universal access to home cooling

Low-income access to demand flexibility programs

Tariff options for solar affordability

Resiliency in disadvantaged neighborhoods through solar + storage siting

Improve access to solar/storage, energy efficiency in multifamily and/or renter-occupied buildings

Targeted community solar siting

Equitable light duty electric vehicle (EV) & charging access

Reduced transportation energy burdens

Improve distribution system reliability through upgrades to support equitable distributed energy resources

Mitigation of medium- & heavy-duty vehicle health impacts

# Online Poll

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Prioritization | Modeling, Analysis, & Strategy  
Development Pathways



# Prioritization Poll

## Prioritizing strategy development pathways and associated outcomes

- One response per member organization
- Submitted responses can be revised
- **Deadline:** Monday, March 28, 12:00 p.m.

<https://www.surveymonkey.com/r/Y5W2NTX>

### LA100 Equity Strategies Distributional Justice Modeling, Analysis, and Strategy Development

NREL will build on the extensive research and analysis from LA100 to model community-informed strategies and interim deployment metrics to achieve a just distribution of clean energy technologies and benefits in the transition to 100% clean electricity by 2035. The following strategy development pathways reflect Steering Committee and community input received to date. Additional strategy development pathways will be led by UCLA and considered in greater detail separately. Not all strategy development pathways can be accomplished in the time and budget available. Please rank the following equity strategy development pathways and associated outcomes you believe will have the greatest impact in ensuring a just clean energy transition.

We ask that only one entry be submitted per Steering Committee member organization.

#### \* 1. Contact Information

Name	<input type="text"/>
Organization	<input type="text"/>
Email Address	<input type="text"/>

\* 2. Please rank the following equity strategy development pathways and associated outcomes you believe will have the greatest impact in ensuring a just clean energy transition. **Please rank each of the following items in order of importance with #1 being the most important to #13 being the least important.**

You can rank items by dragging and dropping them in order from most important to least important.

<input type="checkbox"/>	<b>Low-income Energy Bill Stability</b> <i>Associated Outcomes:</i> Community-, renter/owner-, and income-specific suites of technology, efficiency, and billing interventions to stabilize low-income household energy bills, with deployment metrics and costs through 2035.
<input type="checkbox"/>	<b>Building Weatherization, Thermal Storage, and Resilience to Extreme Events</b> <i>Associated Outcomes:</i> Optimized weatherization interventions to increase resilience to extreme events by housing type, income, and renter/owner and associated deployment metrics, costs, and strategies.
<input type="checkbox"/>	<b>Access to Public and Community Cooling</b> <i>Associated Outcomes:</i> Location-specific interventions required to provide public heating/cooling access and reduce morbidity from extreme temperatures.
<input type="checkbox"/>	<b>Universal Access to Home Cooling</b> <i>Associated Outcomes:</i> Lowest-cost/lowest bill increase pathways and building-type, income-level, neighborhood, and renter/owner specific technology deployment pathways to provide universal cooling access in homes.
<input type="checkbox"/>	<b>Low-income Access to Demand Flexibility Programs</b> <i>Associated Outcomes:</i> Increase technological readiness of low-income households (renter- and owner-occupied), small businesses, and schools to participate in direct and indirect demand response programs to lower bills and/or access payments.
<input type="checkbox"/>	<b>Tariff Options for Solar Affordability</b> <i>Associated Outcomes:</i> Develop more equitable retail tariff options to facilitate solar affordability in disadvantaged communities.
<input type="checkbox"/>	<b>Resiliency in Disadvantaged Neighborhoods through Solar-plus-storage Siting</b> <i>Associated Outcomes:</i> Optimized solar+storage siting for resiliency and energy burden reductions in disadvantaged communities.
<input type="checkbox"/>	<b>Improve Access to Solar/Storage and Energy Efficiency in Multifamily and/or Renter-Occupied Buildings</b> <i>Associated Outcomes:</i> Optimized strategies and deployment metrics to deliver solar, storage, and energy-efficiency cost savings and benefits to renters and residents and of multifamily





An aerial photograph of a city, likely Los Angeles, showing a dense urban landscape with various buildings, streets, and green spaces. In the background, a range of mountains is visible under a clear sky. A prominent green banner with the word "Questions?" in white text is overlaid across the middle of the image.

**Questions?**

# Air Quality & Health

## Mitigation of Medium- & Heavy-Duty Vehicle Health Impacts

- Prioritized classes of medium- and heavy-duty vehicles that could provide the greatest health benefits in disadvantaged communities to inform infrastructure investment decisions and sequencing. Compare medium- and heavy-duty vehicle electrification to light-duty vehicle electrification health benefits in disadvantaged communities to inform equitable investment prioritization.



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# Buildings

## Universal Access to Home Cooling

- Lowest-cost/lowest bill increase pathways and building-type, income-level, neighborhood, and renter/owner specific technology deployment pathways to provide universal cooling access in homes



# Buildings

## Low-Income Access to Demand Flexibility Programs

- Increase technological readiness of low-income households (renter- and owner-occupied), small businesses, and schools to participate in direct and indirect demand response programs to lower bills and/or access payments

## Improve Access to Solar/Storage and Energy Efficiency in Multifamily and/or Renter-Occupied Buildings

- Develop optimized strategies and deployment metrics to deliver solar, storage, and energy-efficiency cost savings and benefits to renters and low-income multifamily building residents



# Rates/Energy Bills

## Low-Income Energy Bill Stability

- Community-, renter/owner-, and income-specific suites of technology, efficiency, and billing interventions to stabilize low-income household energy bills, with deployment metrics and costs through 2035

## Rate/Bill Options for Solar Affordability

- Develop more equitable retail rate options to facilitate solar affordability in disadvantaged communities



# Local Solar & Storage

## Targeted Community Solar Siting

- Optimized pathways for location-specific community solar in disadvantaged communities to deliver cost savings and localized resilience benefits with deployment metrics required to achieve LA100 clean electricity by 2035



# Transportation

## Equitable Electric Vehicle (EV) & Charging Access

- Identify strategies to accelerate light duty EV and EV charging infrastructure access across communities to equitably achieve high EV adoption rates through:
  - Increased EV ownership or access
  - Siting or incentivizing of EV charging

## Reduced Transportation Energy Burdens

- Identify electrification strategies to increase multimodal electric mobility (bikes, scooters, car share, taxis, ride-hail) and measure their implications for reducing energy costs and grid demand



# Reliability & Resilience

## Building Weatherization, Thermal Storage, and Resilience to Extreme Events

- Optimized weatherization interventions to increase resilience to extreme events by housing type, income, and renter/owner and associated deployment metrics, costs, and strategies

## Access to Public and Community Cooling

- Location-specific interventions required to provide public heating/cooling access and reduce morbidity from extreme temperatures



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# Reliability & Resilience

## Resiliency in Disadvantaged Neighborhoods through Solar-plus-storage Siting

- Increase hours/days of electricity service in an outage situation through targeted solar and storage for distribution grid resilience in disadvantaged communities

## Improve Distribution System Reliability through Upgrades to Support Solar/Storage/EV Adoption in Disadvantaged Communities

- Infrastructure improvements, costs, and avoided costs to ensure equitable system reliability and technology deployment in underserved communities





# Potential Equity Strategy Development Pathways (UCLA)

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## Steering Committee Feedback and Guidance

- Energy Affordability and Policy Solutions Analysis
- Jobs and Workforce Development
- Air Quality and Community Health



# Energy Affordability and Policy Solutions Analysis

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Greg Pierce, PhD

Luskin Center for Innovation (LCI)



# Steering Committee Feedback

## Affordability is among the most key equity considerations, but is complicated

- The transition cost and its impact on rate (structures) is difficult to project
- The whole LADWP bill (up to 4 services) matters
- Opportunity & challenges with building and transport electrification costs folded into power expenditures

## Supporting long-term affordability policy

- 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

## Priority metrics and policies

- Enhancing bill discount programs
- Shutoff prevention or limitation
- Rooftop solar incentives and assistance
- Income-based rates



# Proposals to Address Affordability

*UCLA Luskin Center for Innovation*

## Structural Affordability Considerations

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

## Energy Affordability Metrics

- Identify and prioritize among 8+ goals and metrics to narrow down actionable plans

## Energy Affordability Policy Options

- Identify and prioritize among 15+ policy options to narrow down actionable plans

## Deliverables

- Full report (chapter), executive summary, and presentation with infographics for each and combined tasks



# Proposals to Address Affordability

*UCLA School of Law*

## High-Level Rate Structure, Revenue and Bill Impacts

- Create a high-level portfolio of rate design and utility financing strategies
- Analyze impacts of potential rate structures on bills using the energy atlas

*UCLA Latino Policy and Politics Initiative and Center for Neighborhood Knowledge*

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

- Engage small business organizations to inform data collection
- Design, test, and administer a survey to micro-businesses and self-employed individuals
- Assess current energy burden among LADWP's ethnic small business customers



# Discussion Questions

- What affordability data sources should we use in our analyses?
- What structural affordability considerations should we assess?
- Which metrics to track progress on affordability should we prioritize?
- Which policies to address affordability should we prioritize?





# Jobs and Workforce Development

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Abel Valenzuela, Jr., PhD  
Raúl Hinojosa-Ojeda, PhD  
Institute for Research on Labor & Employment



# Team History & Values

- History at UCLA (urban planning & Chicano and Central American Studies)/Los Angeles
- Research (Social Science for the public good and bridging transnational spaces)
- Empirical, data and policy driven research that empowers local communities and workers
- Community driven research from working on the ground with local, state, national and transnational organizations



# Relevant Current Projects

## Research Engagement in Green Jobs and Just Transitions

- IRLE/NAID, Green Jobs Calculator Tool Kit:
  - Allows for back tracking and projected Green and Non-Green Jobs (direct, Indirect and Induced) over various scenarios based on LA100 Energy Models.
  - Calculator Tool and Results will focus on a variety of equity variables including race/ethnic and income related to current and future workforce development and Just Transition challenges.
- Forthcoming data portal will allow for accessing data at the community level for Green Jobs Community Workforce engagement.
- Research on building community and stakeholder coalitions for green jobs workforce development funding and implementation strategies (Pilot Case Studies for funding mobilization – Wilmington/Port of L.A.).



# Discussion Questions

- In addition to Labor & Hiring Practices, Workforce Development Funding, and Targeted Education & Training, what are your jobs concerns?
- What are your top one or two job development priorities?



# Air Quality and Community Health

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Yifang Zhu, PhD  
Fielding School of Public Health



# Steering Committee Feedback

## Proposed Research Approach: Focus on the transportation sector in air quality study

### NREL

- Compare medium-and heavy-duty vehicle electrification to light-duty vehicle electrification health benefits in disadvantaged communities (DACs) to inform equitable investment prioritization.

### UCLA

- Project emission changes at the census-tract level based on the current light-duty zero-emission-vehicle (ZEV) adoption trends to better understand ZEV disparity and associated air quality and health effects among DACs.
- In addition to regional emission inventory used in the original LA100 study, UCLA will also use a personal trip-level transportation model to provide fine-scale emission change estimates for both modeling efforts in LA100 ES.





# Proposal to Address Air Quality & Health

## Scenarios Development

- ZEV Disparity Scenario
- ZEV Equity Scenario (light-duty)
- ZEV Equity Scenario (medium- & heavy-duty)

## Air Quality Modeling

- Model ambient PM2.5 and O3 in 2035 using WRF-Chem (high resolution of about 1 km by 1 km)
- Model near-roadway air quality (NREL)

## Health Assessment

- Racial/ethnic specific baseline mortality rates
- Mortality due to PM2.5
- Mortality due to O3
- Monetized health benefits at a community level



# Scenario Development to Inform Policy

## ZEV Disparity


- **Light-duty** only
- Emission reduction **not** equally distributed due to ZEV disparities

## ZEV Equity (light-duty)

- **Light-duty** only
- Emission reduction equally distributed assuming no disparities

## ZEV Equity (medium- & heavy-duty)

- **Plan A:**
  - **Light-, medium- and heavy-duty**
- **Plan B:**
  - **Medium- and heavy-duty** only (without making light-duty zero emission)
- Emission reduction equally distributed

- 
1. Emission reduction to ambient quality not linear ( $1 + 1 \neq 2$ )
  2. The cost of infrastructure investment for 1 light-duty vehicle  $\neq$  1 heavy-duty vehicle



# Discussion Questions

- Which freeways/roadways and communities should we focus on?
- Which scenario will best inform future policies on equitable ZEV?



# Wrap Up and Next Steps

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# Going Forward

*Tentative*

## Steering Committee Meetings

April 20, 2022

Virtual

- Review/input on draft modeling, analysis, strategy development planning
- Summary of what we heard at community meetings

May 18, 2022

Virtual

- Summary of what we heard at listening sessions
- How LA100 equity is guiding SLTRP (*Tentative*)

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!**

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