



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



Los Angeles Department of Water & Power (LADWP)

Project Leads



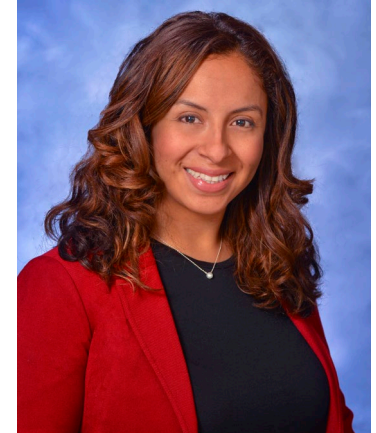
Simon Zewdu
Director
Transmission Planning,
Regulatory, and Innovation Division



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

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">• <i>Rates</i>• <i>Buildings</i>• <i>Local Solar & Storage</i>• <i>Transportation</i>• <i>Reliability & Resilience</i>
11:05 a.m.	Feedback on Proposed Equity Strategy Development Pathways, continued from Steering Committee #4 (UCLA) <ul style="list-style-type: none">• <i>Policy design for affordability</i>• <i>Jobs & workforce development</i>• <i>Air quality, health, environment</i>
11:55 a.m.	Wrap Up and Next Steps



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)

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)

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
LA100 2035 100% Clean Energy Metrics	\$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
Community Engagement	<ul style="list-style-type: none"> - Prioritized equity outcomes & pathways - Policy and program knowledge & guidance - Procedural justice 						← Today's focus
LA100 Equity Strategies Modeling and Analysis	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
Metrics	Measurable, interim & final distributional justice metrics						
Outcomes	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

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"/>	<input type="checkbox"/>	Low-income Energy Bill Stability <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"/>	<input type="checkbox"/>	Building Weatherization, Thermal Storage, and Resilience to Extreme Events <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"/>	<input type="checkbox"/>	Access to Public and Community Cooling <i>Associated Outcomes:</i> Location-specific interventions required to provide public heating/cooling access and reduce morbidity from extreme temperatures.
<input type="checkbox"/>	<input type="checkbox"/>	Universal Access to Home Cooling <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"/>	<input type="checkbox"/>	Low-income Access to Demand Flexibility Programs <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"/>	<input type="checkbox"/>	Tariff Options for Solar Affordability <i>Associated Outcomes:</i> Develop more equitable retail tariff options to facilitate solar affordability in disadvantaged communities.
<input type="checkbox"/>	<input type="checkbox"/>	Resiliency in Disadvantaged Neighborhoods through Solar-plus-storage Siting <i>Associated Outcomes:</i> Optimized solar+storage siting for resiliency and energy burden reductions in disadvantaged communities.
<input type="checkbox"/>	<input type="checkbox"/>	Improve Access to Solar/Storage and Energy Efficiency in Multifamily and/or Renter-Occupied Buildings <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)

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

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

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

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

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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



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!
