



2022 Power Strategic Long-Term Resource Plan (SLTRP)

Roadmap to 100% Carbon Free by 2035

**SLTRP Advisory Group Kick-off Meeting #1
September 23, 2021**

Meeting Agenda

Joan Isaacson, Kearns & West

- Welcome & Introductions
- Agenda Review
- Advisory Group Protocols, Process & Introductions
- LADWP Overview & Progress
- LA100 Components
- 2022 SLTRP Orientation
- Discussion and Polling
- Wrap Up



Guides for Productive Virtual Meetings



Use Chat for input OR Raise Hand to join the conversation

Help to make sure everyone gets equal time to give input

Keep input concise so others have time to participate

Actively listen to others, seek to understand perspectives

Offer ideas to address questions and concerns raised by others

Protocols and Operating Principles for Advisory Group

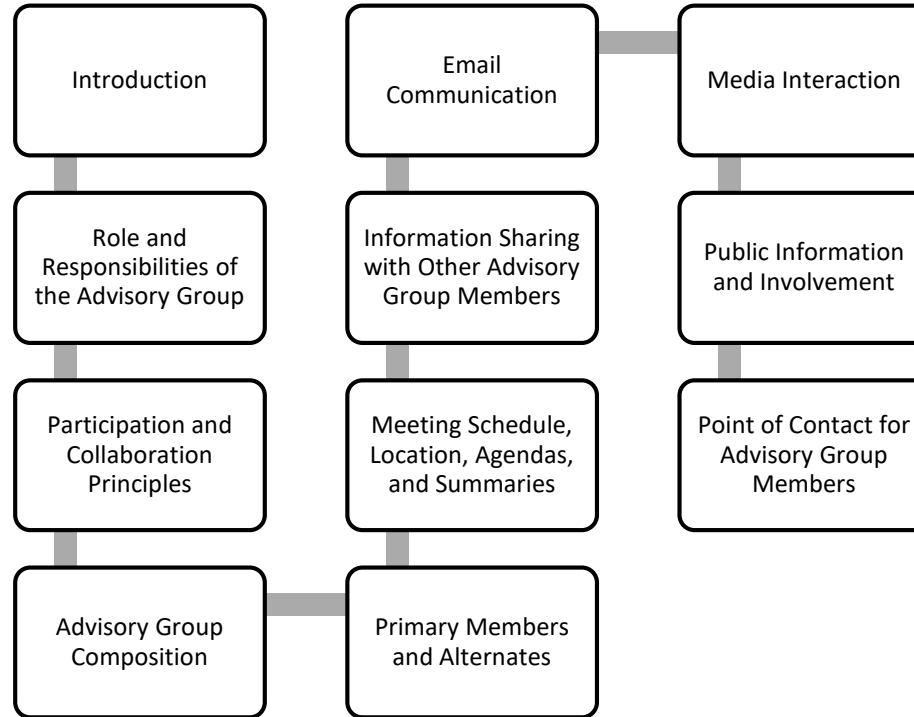
What

A document that establishes: 1) the role of Advisory Group in the SLTRP, 2) general parameters for Advisory Group communication, meetings, etc.

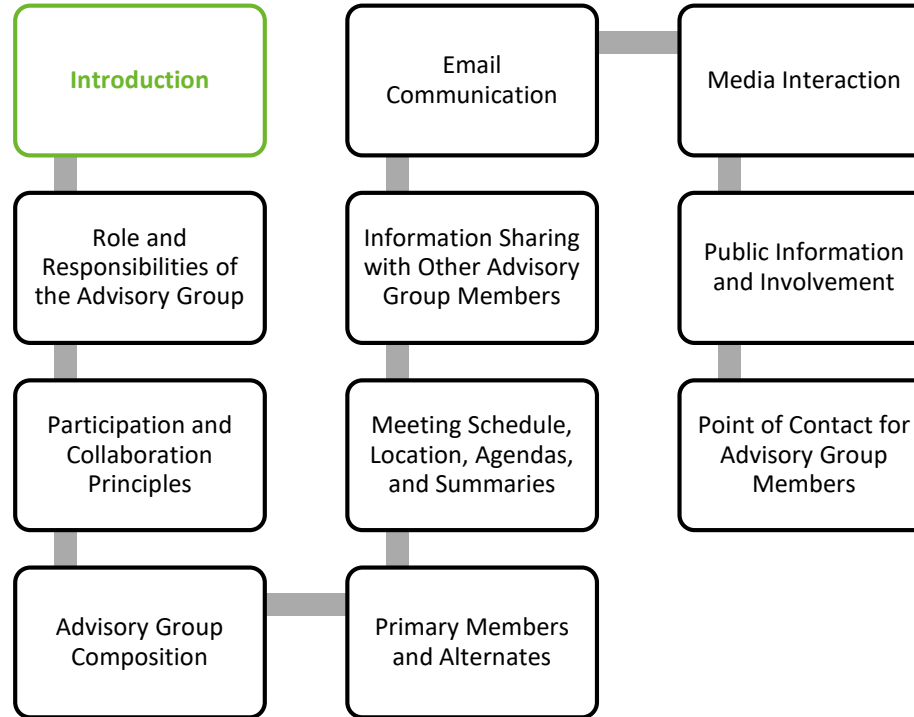
Why

To provide a “road map” for members in order to anticipate involvement and contributions, and to ensure that meetings and overall process are productive for all members.

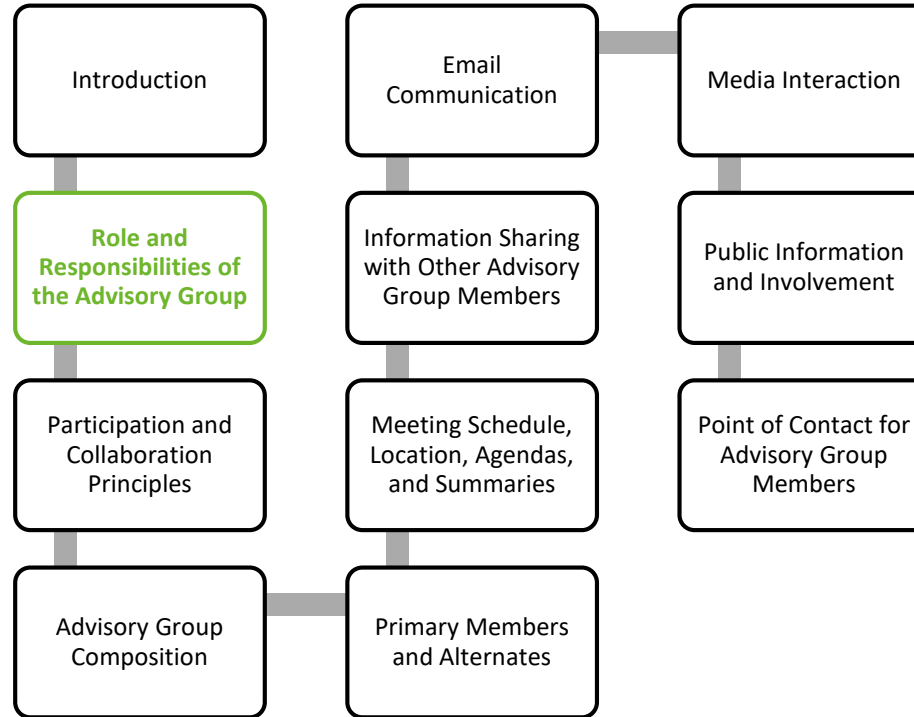
Protocols and Operating Principles for Advisory Group



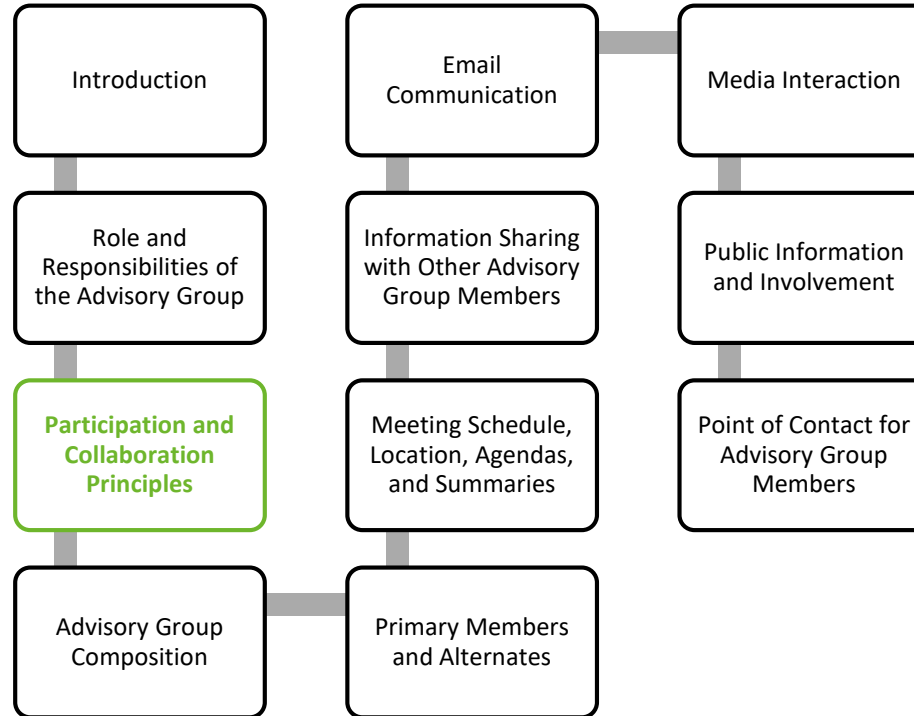
Protocols and Operating Principles for Advisory Group



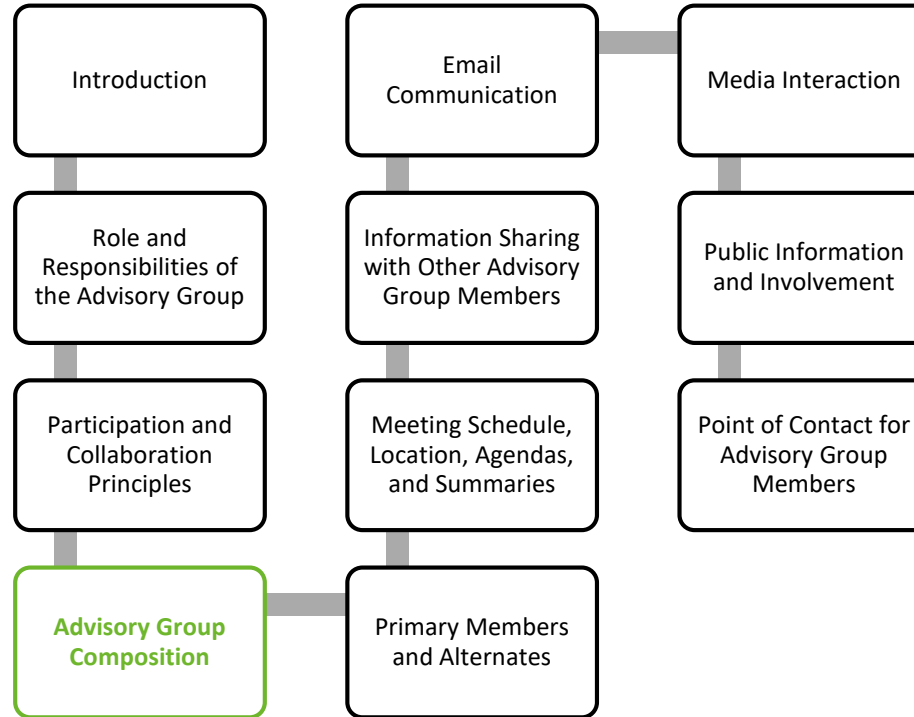
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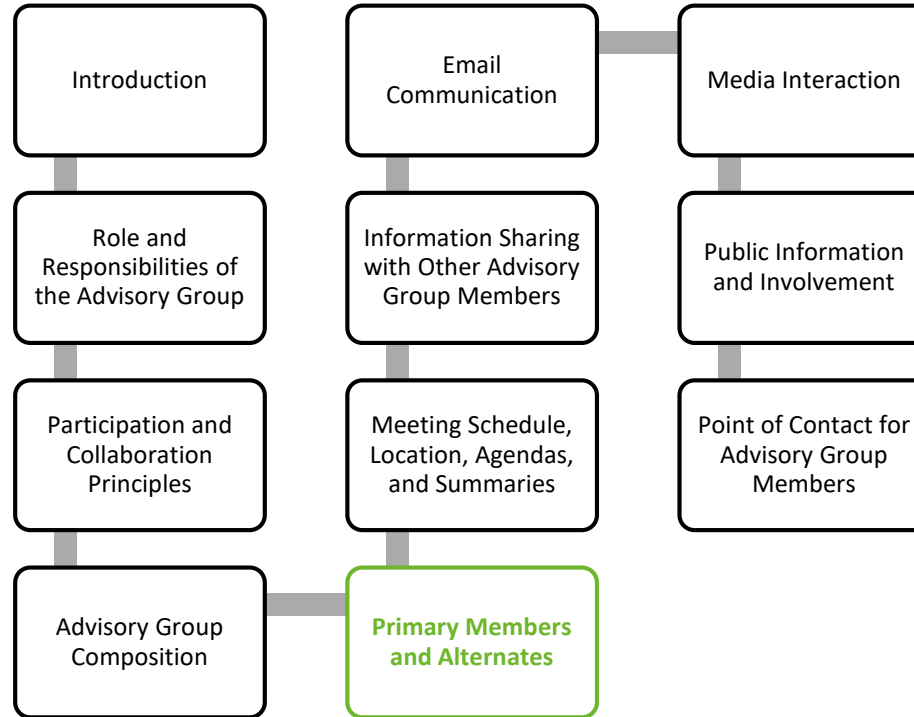
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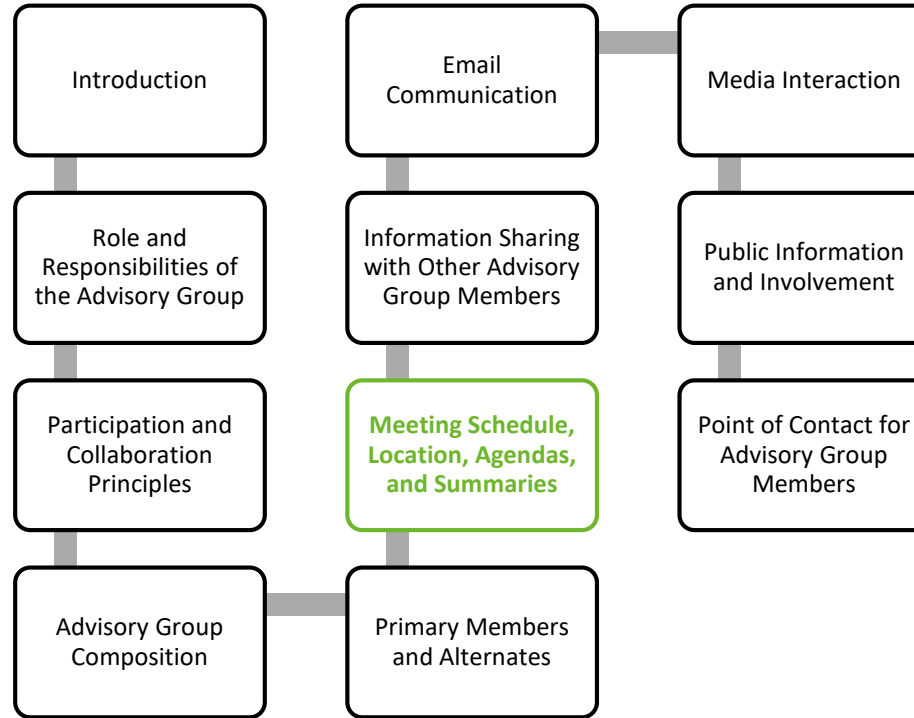
Protocols and Operating Principles for Advisory Group



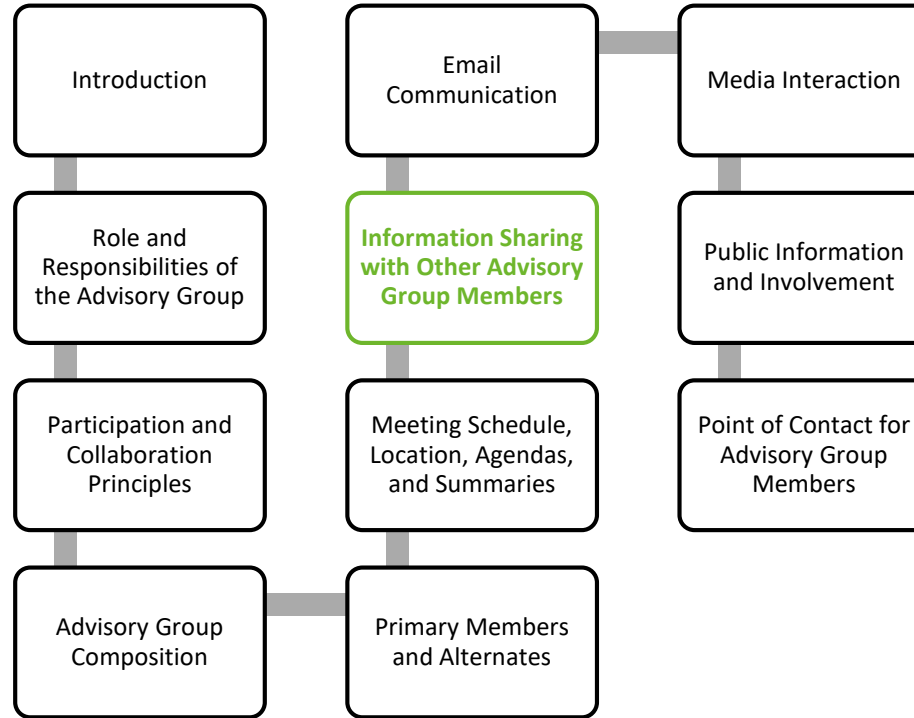
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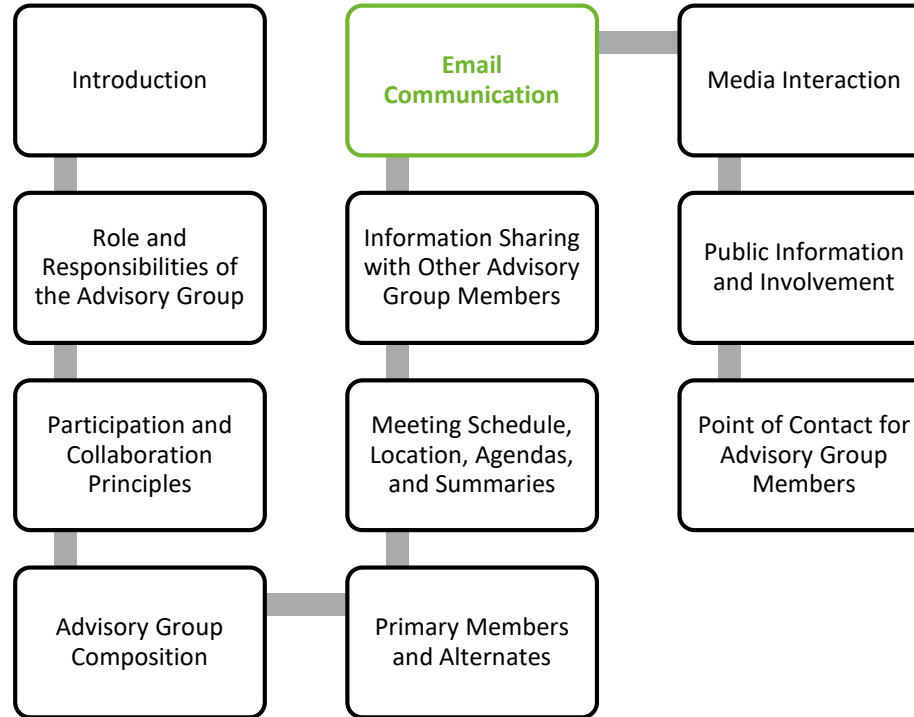
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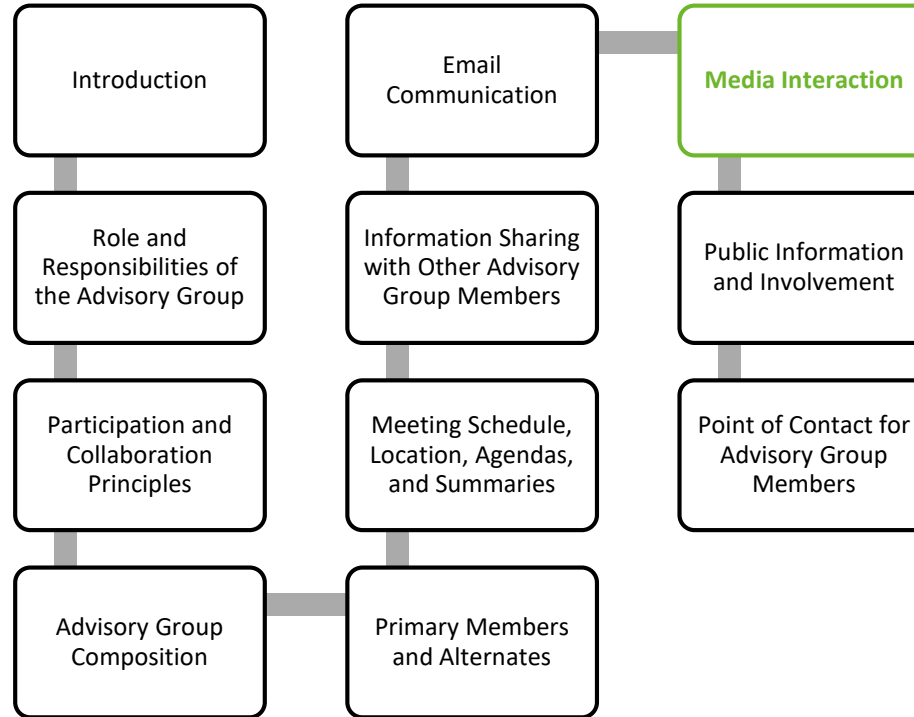
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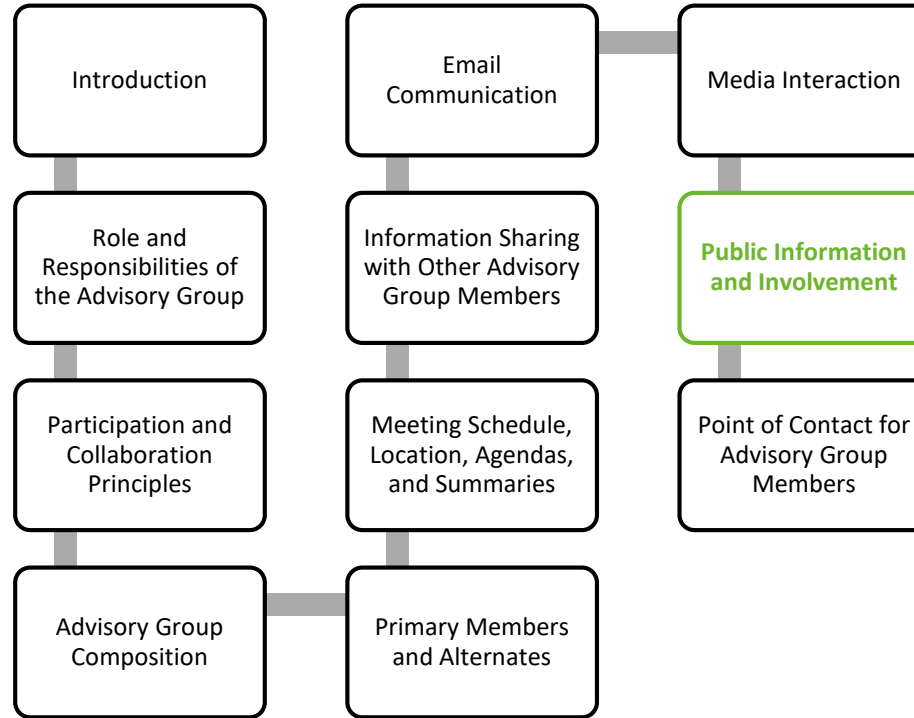
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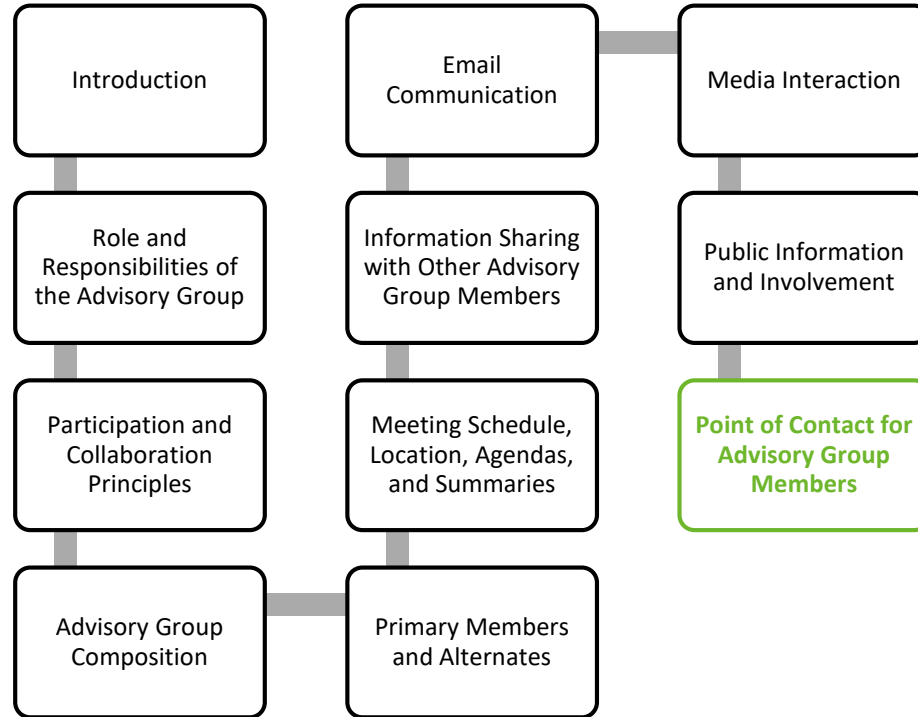
Protocols and Operating Principles for Advisory Group



Protocols and Operating Principles for Advisory Group



Protocols and Operating Principles for Advisory Group



SLTRP Advisory Group Members

California State University, Northridge
California Energy Storage Alliance
Center for Energy Efficiency and Renewable Technologies
Central City Association
City Attorney
City Council Districts
Climate Emergency Management Office
DWP Advocacy Committee
DWP MOU Oversight Committee
Food and Water Watch
IBEW – Local 18
Los Angeles Business Council
Los Angeles Chamber of Commerce
Los Angeles Unified School District

Metropolitan Transportation Agency
Natural Resources Defense Council
Neighborhood Council Sustainability Alliance
Office of Public Accountability (Rate Payer Advocate)
Office of the Mayor
Pacoima Beautiful
Port of Los Angeles
RePowerLA (LAANE)
Sierra Club
Southern California Public Power Authority
University of California, Los Angeles
University of Southern California
Valley Industry Commerce Association
Water and Power Associates

LADWP Overview & Progress

Jason Rondou, LADWP Director of Resource Planning, Development, and Programs



LADWP's Power System

Nation's Largest Municipal Utility

Vertically Integrated

1.5 Million Customers

\$4.2 Billion Annual Budget

Peak Demand: 6,502 MW

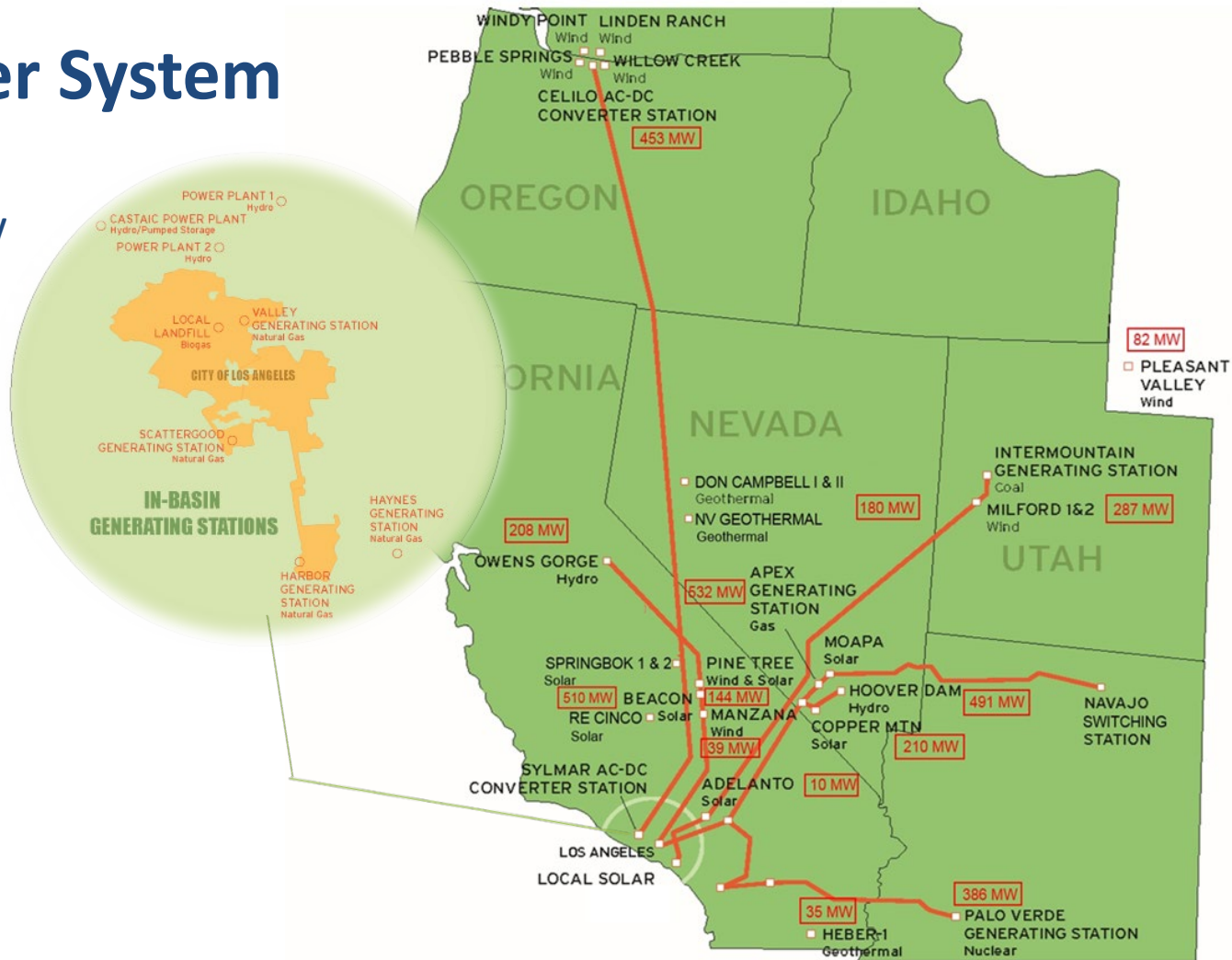
on 8/31/2017

37% Renewable Energy (2020)

55% Carbon-Free Energy (2020)

Balancing Authority for L.A.,

Glendale & Burbank



Clean Energy Progress

#1 Solar City in U.S., 3 years straight
Recently approved major renewable projects
Reduced greenhouse gas to 56% below 1990 level,
14 years ahead of the State's target

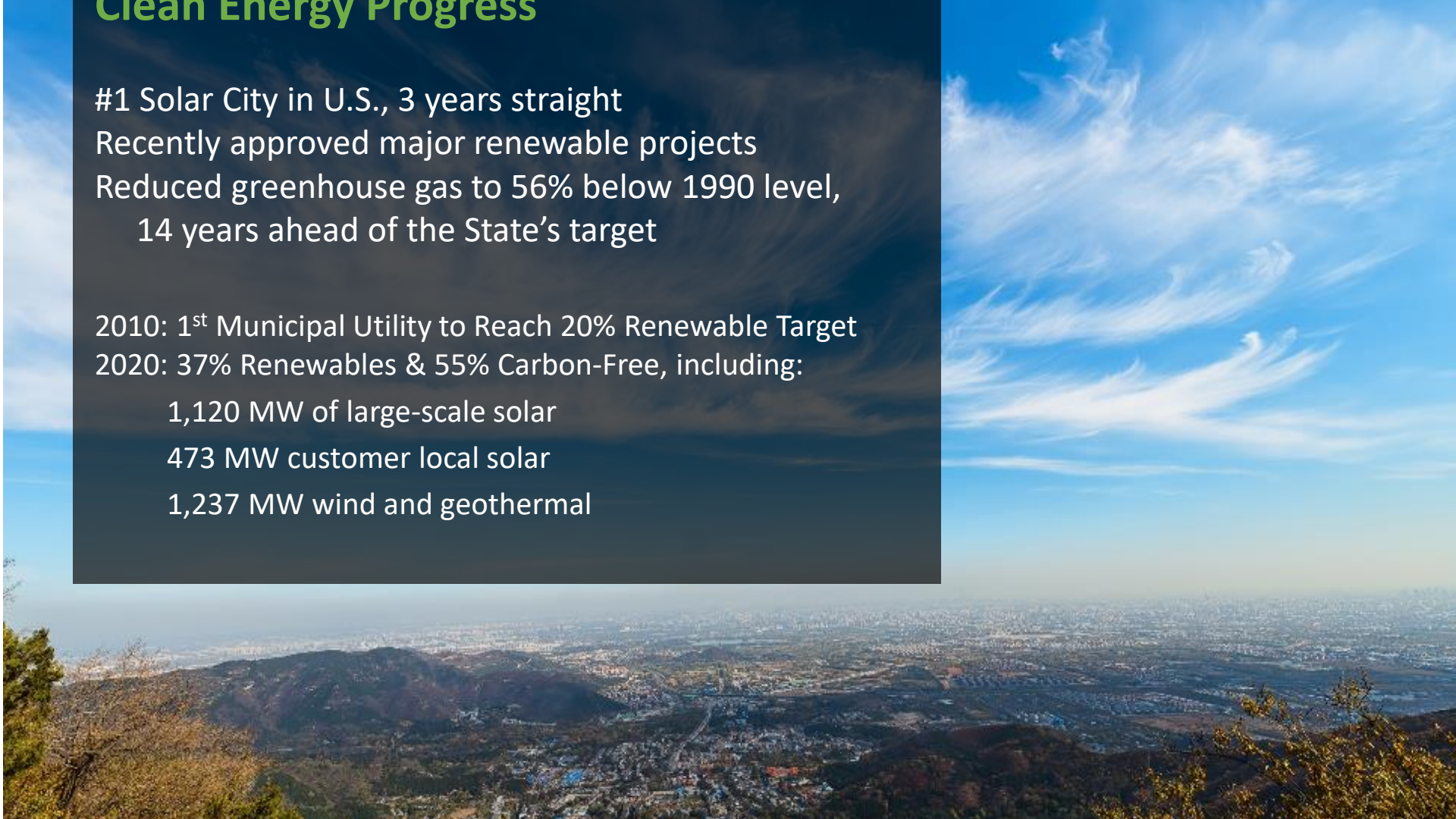
2010: 1st Municipal Utility to Reach 20% Renewable Target

2020: 37% Renewables & 55% Carbon-Free, including:

1,120 MW of large-scale solar

473 MW customer local solar

1,237 MW wind and geothermal



Recent Accomplishments

- **Eland Solar + Storage Center** -Largest combined solar + battery in U.S.; deliver renewables after the sun sets
- **Red Cloud Wind Project** - 331 MW; uses Navajo transmission assets
- **FiT-Plus & Virtual Net Metering** - Expanding local solar to underserved communities
- **Electric Vehicles** - Installed or supported 10,000+ chargers
- **IPP Renewed** - Replacing last coal plant with green hydrogen
- **Green Hydrogen RFI** – Exploring potential for green hydrogen power plants & storage within L.A. Basin

LA100

ACHIEVING 100% RENEWABLE ENERGY IN LOS ANGELES

100% Study

Complete

Identified pathways to get to 100% renewable & carbon-free energy, along with job creation, environmental benefits, equity implications, and costs & rate impacts.

LA100 Next Steps

In Progress

Initiates the common investments identified in the LA100 study that must begin now and be completed in the next 10 years to achieve 100% renewable & carbon-free energy.

2022 Strategic Long-Term Resource Plan

Kickoff September 2021

Complete September 2022

LADWP's 25-year plan to achieve 100% renewable energy, including transmission, renewable, distribution, technology, staffing, etc. and to include:

- *Integrated HR Plan*
- *Implementation & Constructability*
- *Procurement Risk*
- *Operations & Maintenance*
- *Supply Chain Risk*

LA100: Equity Strategies

Kickoff in September 2021

Complete by September 2023

Analyze how to achieve specific, energy-just, stakeholder-driven outcomes, contributing factors to historical inequities and strategies to achieve community-driven equitable outcomes as Los Angeles transitions to 100% renewables & carbon-free future.


LA100 Study Outcomes

LA100 Study was completed and final report was released on March 24, 2021.

- 100% renewable energy is achievable through multiple pathways
- Building and transportation electrification key to affordability
- Investment of approx. \$57-87B **in addition to existing obligations** (e.g. PSRP)
- Significant job creation (9,500 jobs)
- We can achieve 100% by 2035

- **There are common investments across all pathways to 100%**





**New City of L.A. Goal:
100% Carbon-Free
Energy by 2035**

Mayor's Directive
State of the City - May 2021

City Council Motion Approved
September 2021

City Council Motions

1. Prepare an SLTRP that achieves 100% carbon-free energy by 2035

- Report on “no-regrets” projects common to all LA100 paths, and “shovel-ready” projects
- Prioritize equity for EJ communities
- Report every 6 months to ECCEJR Committee with updates

2. Develop a long-term hiring and workforce plan

- Coincides with LA100 pathway
- Partner with Labor
- Increase hiring from L.A. neighborhoods in disadvantaged communities

Discussion and Q&A



Power Strategic Long-Term Resource Plan (SLTRP)

Jay Lim, LADWP Manager of Resource Planning



What Is LADWP's SLTRP?

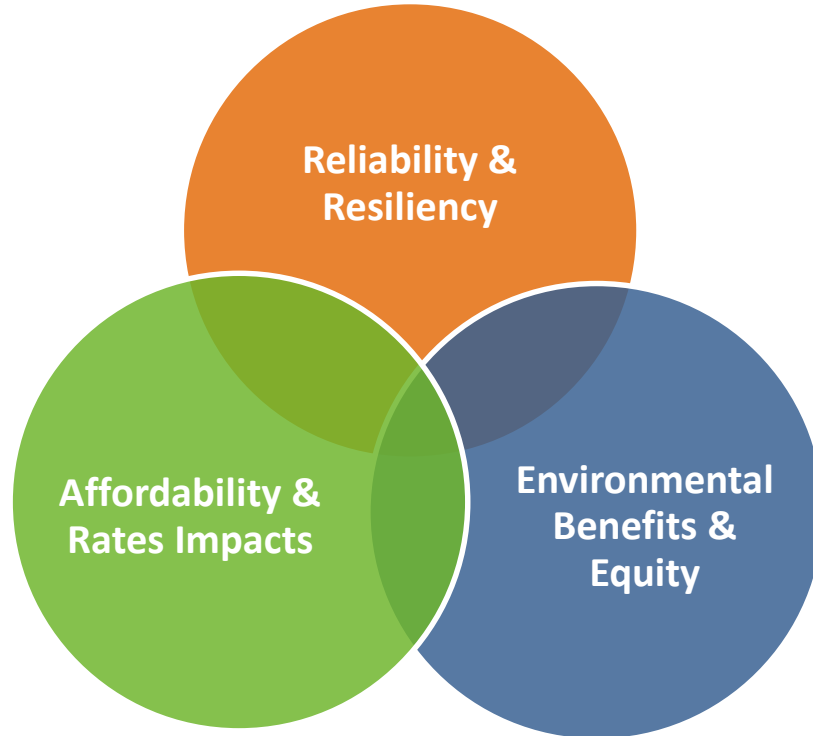
The Strategic Long-Term Resource Plan (SLTRP) is a **roadmap** to meet L.A.'s future energy needs and regulatory mandates while maintaining reliable service and reduce emissions in a cost-effective manner.

Outcome: Develop a recommended scenario that guides our near-term actions and future energy planning **through 2045.**



Core Principles

Corporate Strategic Plan and Long-Term Resource Plan



History of LADWP's Resource Planning

LADWP has engaged in comprehensive planning for our energy future since the 2000 Integrated Resource Plan (IRP) to chart the course for a cleaner, more reliable power future.

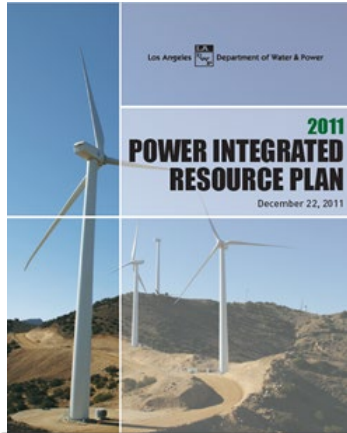
In 2017, SLTRP replaced LADWP's traditional IRP, which is now a regulatory requirement and submitted to the California Energy Commission once every 5 years to comply with Senate Bill 350.

Data is updated yearly; extensive public outreach conducted every 2 years.

Paused after 2017 until completion of LA100 Study.



IRP/SLTRP Recommended Cases



2000 IRP

- Add 30 MW RPS by 2001, 100 MW by 2005, and 150 MW by 2010
- Divest of Mohave Coal Generating Station

2007 IRP:

- 20% RPS by 2010 and 35% by 2020;
- Divest/Replace Navajo coal by 2019, IPP 2027;
- Plan repowering of in-basin OTC units

2010 IRP:

- State mandate 20% RPS by 2010; 33% by 2020;
- Repower 1,661 MW of OTC units per EPA Clean Water Act

2011 / 2012 IRP: Divest/Replace Navajo coal 2015, IPP coal by 2027

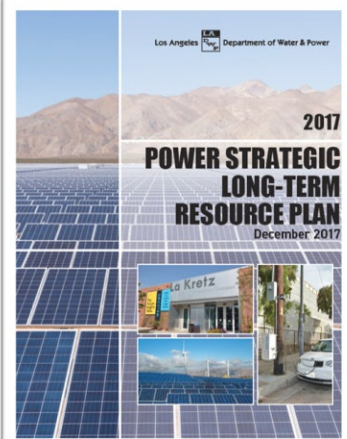
2013 IRP: Eliminate coal from IPP by 2025

2014 IRP: Accelerated RPS to 33% by 2020; 800 MW local solar by 2023

2015 IRP: Divest/Replace Navajo by 2016, IPP by 2025, added electrification

2016 IRP: Accelerated RPS to 50% by 2025, 55% by 2030, 65% by 2036

2017 SLTRP: Additional 15% energy efficiency from 2017-2027



2022 SLTRP: Key Considerations



Public Engagement:

- Advisory Group input
- Equity Strategies engagement
- Community & stakeholder outreach

Planning Elements:

- Future resource mix
- Legislative and Regulatory Mandates
- Future Resource Mix
- Resource Adequacy
- Greenhouse Gas Emissions
- Program Revenue Requirements
- Rate Impacts
- Equity
- Resiliency

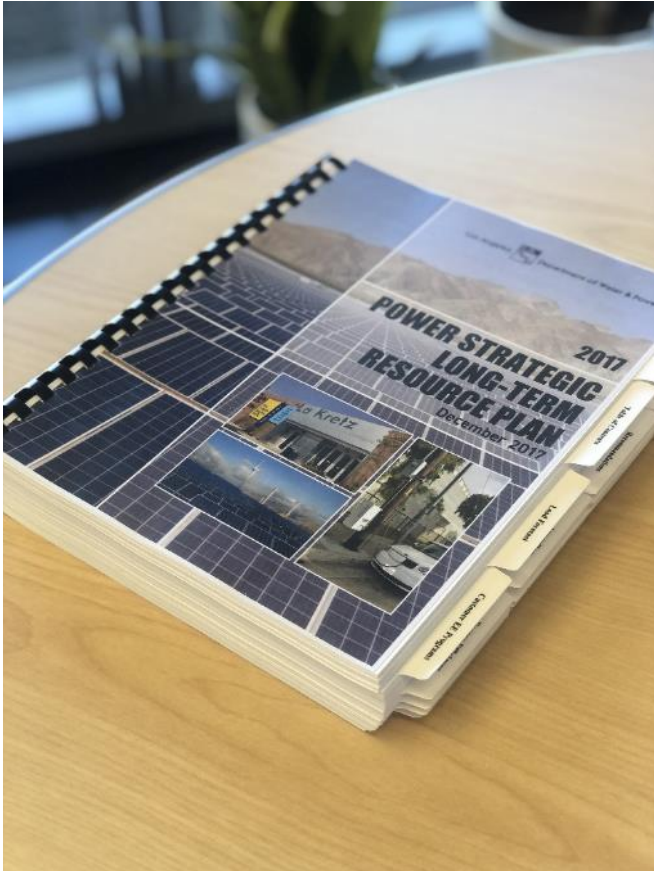


2022 SLTRP Analysis: Key Considerations

- How long do projects take to build?
 - California Environmental Quality Act (CEQA) timeline
- How much power do we need for local neighborhoods?
- Understanding emerging technologies and maturity (e.g. green hydrogen, energy storage)
- Deadlines for retiring ocean-cooled generating units (Scattergood, Haynes & Harbor)



2022 SLTRP



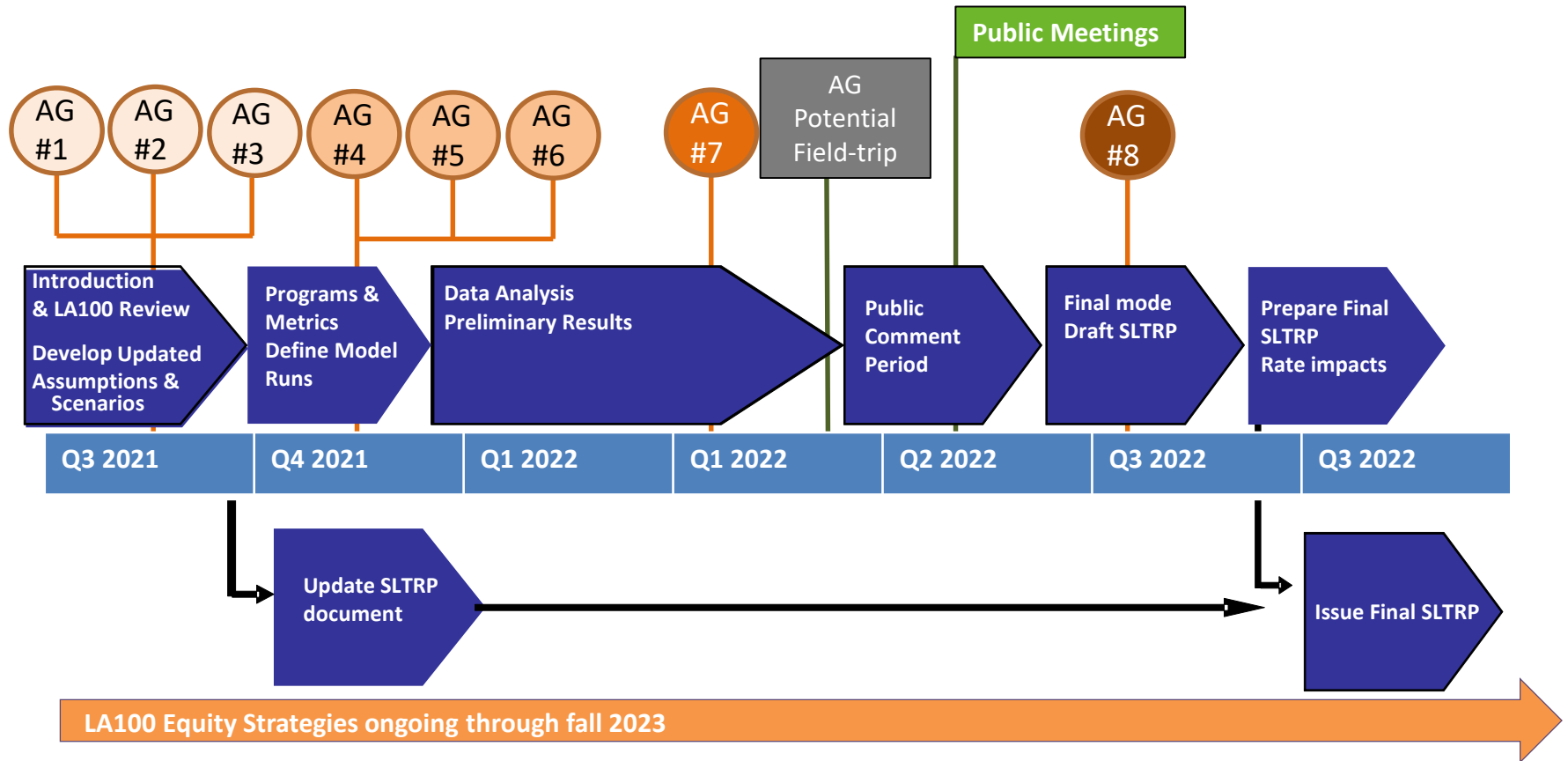
SLTRP incorporates Power System efforts, including:

- Load Projections
- Supply Side Resources (Renewables, Energy Storage, Fuel Procurement, Local Capacity Needs)
- Demand Side Resources (Distributed Generation, Electric Vehicles, Distributed Automation)
- 10-Year Transmission Plan
- Power System Reliability Program
- LA100 Next Steps

2022 SLTRP will also be supported by:

- Integrated Human Resources Plan
- Implementation & Constructability Assessment
- Procurement Risk Assessment
- Operations & Maintenance Assessment
- Supply Chain Risk Assessment

2022 SLTRP Process Schedule



Advisory Group Meeting Plan

Phase 1 Q3 2021 Launch & Laying Foundation	Phase 2 Q3 2021 Scenario Development	Phase 3 Q4 2021 Modeling	Phase 4 Q1 2022 Results	Phase 5 Q2-3 2022 Outreach
<p>#1 September 23</p> <ul style="list-style-type: none"> Advisory Group Launch LADWP Overview LA100 (Achieving 100% Renewable Energy) 2022 SLTRP Orientation Advisory Group Protocols & Operating Principles 	<p>#4 October 21</p> <ul style="list-style-type: none"> Customer-Focused Program Development <ul style="list-style-type: none"> -Energy Efficiency, Electrification Solar -Other topics suggested by members Draft Scenario Matrix 	<p>November-January</p> <ul style="list-style-type: none"> Internal Modeling Analysis of Scenarios 	<p>#7 February TBD Preliminary Results</p>	<p>#8 July TBD Public Outreach Results</p>
<p>#2 September 30</p> <ul style="list-style-type: none"> <i>LA100 Study Review (NREL) at 9 am</i> LA100 Equity Strategies (NREL) LA100 Rates Analysis (OPA) LA100 Next Steps (LADWP) LA100 Assumptions (PSRP) Consider Topics for October 21 Consideration of Scenario Definition 	<p>#5 October 28</p> <ul style="list-style-type: none"> Metrics & Evaluation Process Scenario Considerations <ul style="list-style-type: none"> -Implementation & Feasibility -Supply Chain Impacts -Human Resources Plan -Energy Burden Refine Scenario Matrix 	<p>Modeling Underway</p>	<p>March – April TBD Potential field</p>	<p>August Review Draft 2022 SLTRP</p>
<p>#3 October 07</p> <ul style="list-style-type: none"> SLTRP Deep Dive SB100 Review (LADWP) 100% Carbon-Free by 2035 Requirements (NREL) Green Hydrogen in LA (LADWP) 2022 SLTRP Key Considerations and Potential Scenarios 	<p>#6 November 18</p> <ul style="list-style-type: none"> Develop Scenarios Final Scenario Matrix 	<p>Modeling Underway</p>	<p>May – June TBD Community Outreach Meetings</p>	<p>September Submit Final 2022 SLTRP for approval</p>

Discussion and Q&A



SLTRP Polling & Discussion

(Kearns & West)



10-minute questionnaire for all
Advisory Group members
Thank you for your input!

Wrap Up & Next Meeting

Next Meeting:

September 30, 2021

- **LA100 Review for new members (9:00 am)**
- **Regular Meeting (10 am - 12 pm)**

Future Meeting:

October 7, 2021 (10 am - 12 pm)

Website: www.ladwp.com/SLTRP

Email: powerSLTRP@ladwp.com