

LA100

ACHIEVING 100% RENEWABLE ENERGY IN LOS ANGELES



Roadmap Towards 100% Carbon Free by 2035

September 19, 2024



Agenda

1

2024 SLTRP Schedule

2

Integrated Resource Planning Process

3

2024 SLTRP Objectives and Modeling Updates

4

Next Steps

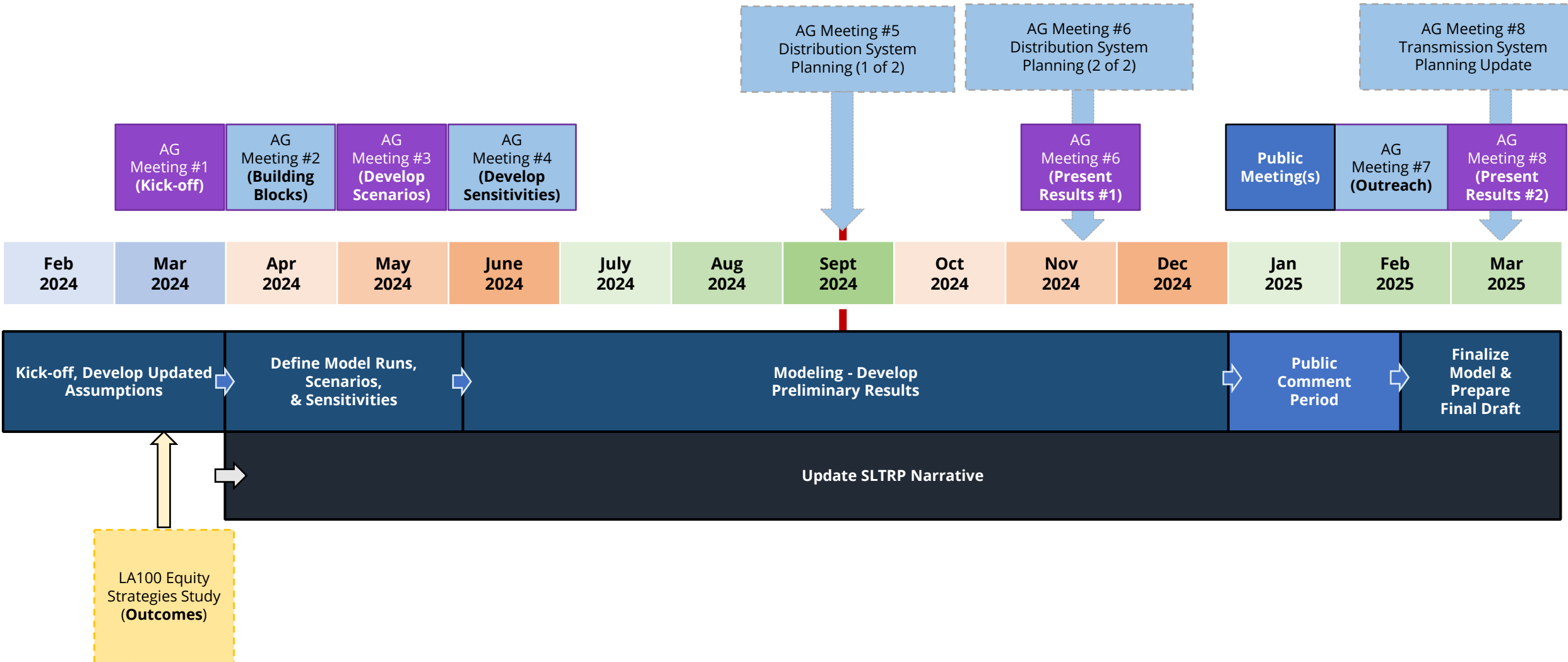
5

Q&A

In-person Meeting

Virtual Meeting

2024 SLTRP Schedule

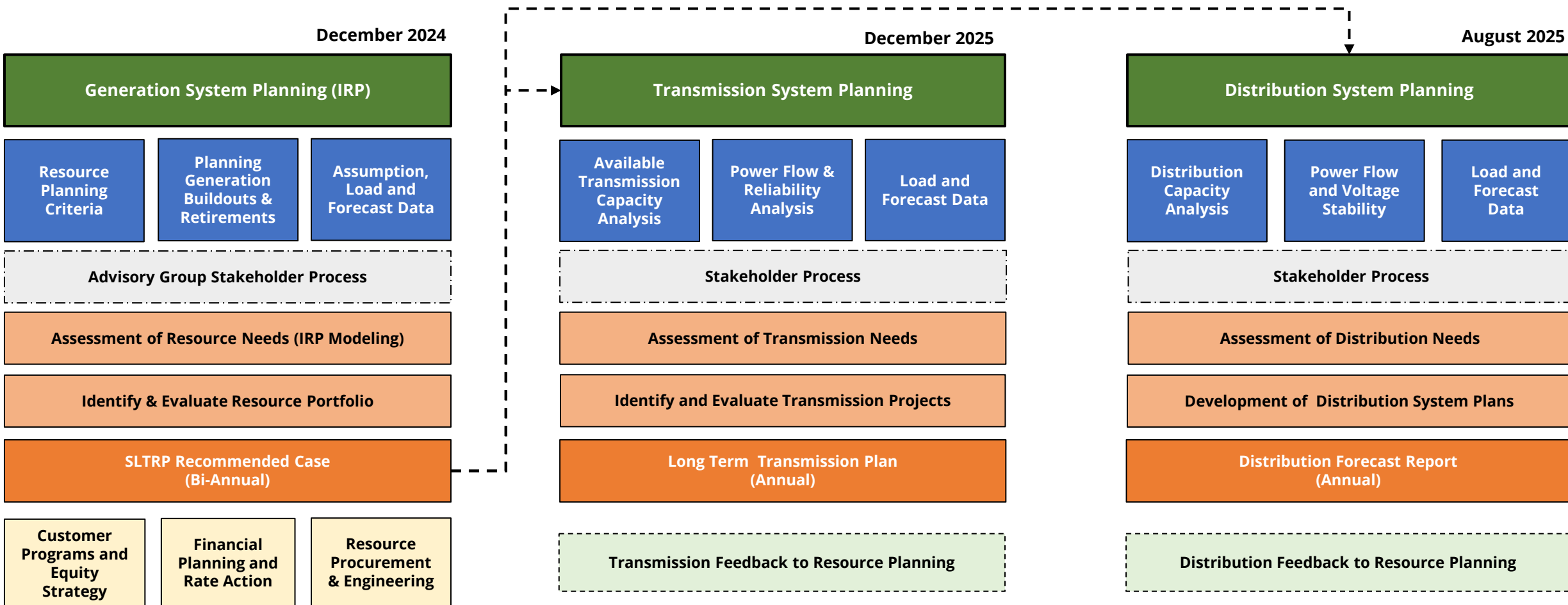


Note: Specific dates and meetings are subject to change.

Power Integrated System Planning

Draft

Regulatory Requirements & Public Policy Goals



LA100 - City Goals

Achieve LA100 Goal in Reliable, Affordable, Sustainable, and Equitable Manner

- **100% Carbon-Free.** Case 1 meets the LA City Council Motion for 100% carbon-free energy by **2035** and builds upon assumptions from the LA100 Study.
- **80% RPS.** Case 1 achieves the 80% RPS by **2030**, a balance between the regional and local resources.

Case Breakdown	
RPS % by 2030	80%
Carbon-free % by 2035	100%
DERs	High
Electrification & Energy Efficiency	High
Transmission	Upgrade to Existing and Buildout of New Lines
Natural Gas Phase Out	2035
Energy Storage	Balance Between Daily and Seasonal Energy Mismatch



2024 SLTRP Objectives

100% Carbon Free by 2035

A

Continued Alignment with 2035 Goals

Update The Power System Roadmap and Investments Needed to Achieve 100% Carbon Free By 2035

B

Update Technical Assumptions

Low/Medium/High Load and Market Pricing Forecasts/Sensitivities, Regulatory Framework, Emergence and Readiness of Technologies, Enhance Distributed Energy Resources, Loans and Grants Opportunities, Peak Load Reduction Strategy, Etc.)

C

Assess Sensitivities

Include Risk Assessments (Sensitivities) and Opportunity Analysis (Scenarios) of Various Pathways (Hydrogen Fuel Supply and Technology Risks, Higher DER, No Combustion, Pricing Risks, Climate Risks, Etc.)

D

Technologies Evaluations

Evaluate Technology (Energy Storage, Pumped Hydro, Offshore Wind, Green Hydrogen, Etc.). Considerations for readiness, cost, feasibility, limitations, etc.

Financial Forecasts

Energy Burden

Non-Energy Benefits

Affordability

Build & Adoption Rates

Contingency Planning

LCOE / Total Costs

Reliability Scoring

Technology Performance

Loss of Load

Peak Load Coverage

GHG Emissions

2024 SLTRP Modeling

Reliable, Affordable, Sustainable, and Equitable Pathway to 100% Carbon Free Energy



Electrification
Efficiency
Demand Response
>2,000 MW



Distributed
Energy
Resources
+>3000 MW



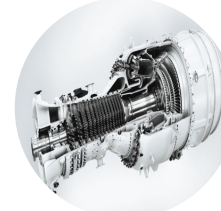
Renewable Energy
Solar: +>5,700 MW
Wind: +>4,300 MW



Storage
+>3,000 MW



Transmission &
Distribution
+>100s of projects



Dispatchable
Resource
+>2,600 MW

Local Policy – 100% Carbon Free by 2035 (Case 1 Update)

Optimization

SB100
Reference

High In-Basin
DER

No In-Basin
Combustion

No Hydrogen
Supply

Implementation Risk	Description	Applied 100% by 2035 Case
Technology Readiness	Evaluate Technology Readiness and Feasibility	Emerging Technology Readiness (TRL) and Implementation Feasibility
Demand Side Resources	Demand Response Local Solar and Storage Energy Efficiency	Reaching only half of LADWP's DER targets due to low customer adoption
Low Load	Transportation/Building Electrification	Reduces projected load due to slow adoption.
Resource Constraint	Shortfall of resources due to challenges	Unable to reach projected build rates and hire required human resources. Supply chain constraints.
Climate Change	Impacts of climate change on resources	High peak loads, lower generation output. Future temperature rise, escalated heat storms, prolonged and increases incidents of wildfire, prolonged drought.
Price Volatility	Renewables, Energy Storage, Hydrogen, Carbon	Low/Expected/High
Cost/Rates	Cost impact of each option/risk	Cost breakdown for each resource type, risk, and optimization.

2024 SLTRP MODELING PROGRESS

Balancing Future Demand with Future Resources



Model Buildout

- Assessment of existing, planned and potential renewables (solar, wind, geothermal)
- Technology performance characteristics and cost
- Transmission available corridors and capacities
- Climate change impacts to reliability



Production Cost Modeling

- System Reliability (LOLE)
- Operational performance and cost
- Buildout rates
- Emissions Reduction



Assumptions



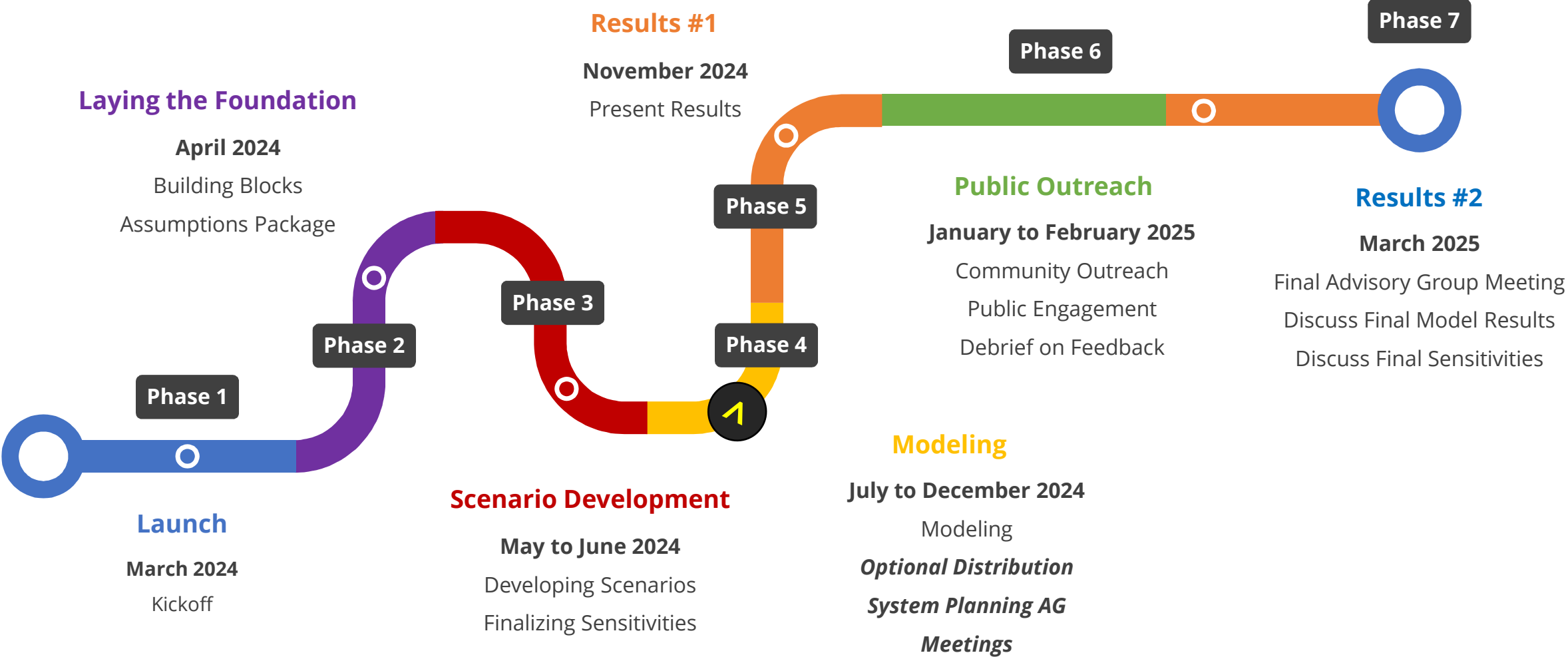
- Load Growth
- Energy Conservation Measures
- Pricing Projections
- Technology Considerations

Capacity Expansion



- Candidate resource (offshore and land wind, solar, batteries, flow energy storage, enhanced geothermal, etc.)
- RPS Goals
- Planning Reserves

NEXT STEPS – MEETING MAP



2024 SLTRP Advisory Group Draft Meeting Plan
 Please note that dates are tentative and subject to change based on needs of the SLTRP process.

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Q&A