2025 SB 100 Report

Scoping Phase: Tribal Listening Session

March 16, 2023

Agenda

1. Review 2021 Report findings and recommendations
2. Land use considerations and evaluation
3. 2025 report timeline
4. Questions for discussion on report approach

Senate Bill 100

Officially titled "The 100 Percent Clean Energy Act of 2018," Senate Bill 100 (SB 100, De León):

1. Sets a 2045 goal of powering all retail electricity sold in California with renewable and zero-carbon resources.

2. Updates the state's Renewables Portfolio Standard to ensure that by 2030 at least 60 percent of California's electricity is renewable.

3. Requires the CEC, CPUC, and CARB to use programs under existing laws to achieve 100 percent clean electricity and issue a joint policy report on SB 100 by 2021 and every four years thereafter.

SB 100 Reports

California Energy Commission (CEC), California Public Utilities Commission (CPUC), and California Air Resource Board (CARB) to issue a joint-agency report every four years including the following:

A. **A review of the policy** (technical, safety, affordability, reliability)

B. **Reliability benefits and impacts**

C. **Financial costs/benefits**

D. **Barriers/Benefits of achieving the policy**

E. **Alternative scenarios and costs/benefits of each**

PUC 454.53 (d)

The 2021 SB 100 Report

- **Iterative and ongoing effort** to assess barriers and opportunities to achieving the 100 percent clean electricity policy
- This report provides **directional insights** into what a 2045 portfolio may look like, including resource requirements and costs
- The preliminary findings are **intended to inform state planning** and are not intended as a roadmap to 2045
- **Future work will delve deeper into critical topics** such as system reliability and land use and further address energy equity and workforce needs

Key Takeaways from Modeling

This initial analysis suggests SB 100 is technically achievable through multiple pathways.

Construction of clean electricity generation and storage facilities must be sustained at record-setting rates.

Diversity in energy resources and technologies lowers overall costs.

Retaining some natural gas power capacity may minimize costs while ensuring uninterrupted power supply during the transition to 100 percent clean energy.

Increased energy storage and advancements in zero-carbon technologies can reduce natural gas capacity needs.

Further analysis is needed.

Recommendations for Further Analysis

1. Verify that scenario results satisfy the state's grid reliability requirements.

2. Continue to evaluate the potential effects of emerging resources, such as offshore wind, long-duration energy storage, green hydrogen technologies, and demand flexibility.

3. Assess environmental, social, and economic costs and benefits of the additional clean electricity generation capacity and storage needed to implement SB 100.

4. Hold annual workshops to support alignment among the joint agencies and continuity between SB 100 reports.

Social Costs and Non-Energy Benefits

Public participants recommended the joint agencies integrate at least the following into SB 100 planning:

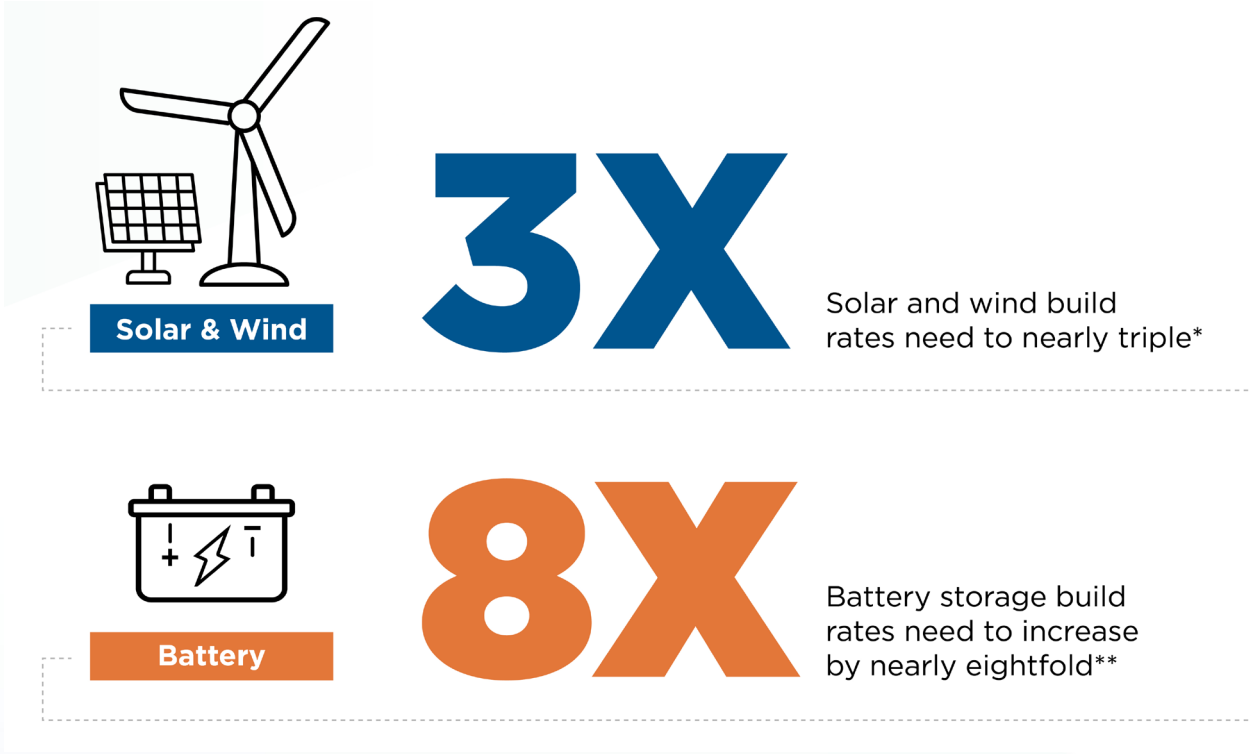
- Land Use Impacts
- Public Health and Air Quality
- Water Supply and Quality
- Economic Impacts
- Resilience

Process Recommendations

- Convene an annual joint agency SB 100 workshop in years between reports.
- Align future SB 100 planning with findings and outcomes from relevant state efforts.
  - The CEC's energy demand forecasts, including electrification trends and updates for extreme climate event planning.
  - Transmission planning and development.
  - Reliability planning, including possible updates to resource adequacy requirements.
  - Electric system resilience planning.
  - Assessments from CPUC's Integrated Resource Planning, CEC's Integrated Energy Policy Report, and CARB's Scoping Plan.
- Consult with advisory groups to guide equitable planning and implementation.
- Retain and expand upon best practices for community outreach and accessibility

SB 100 and Land Use

2021 Report: Resource Build Rates

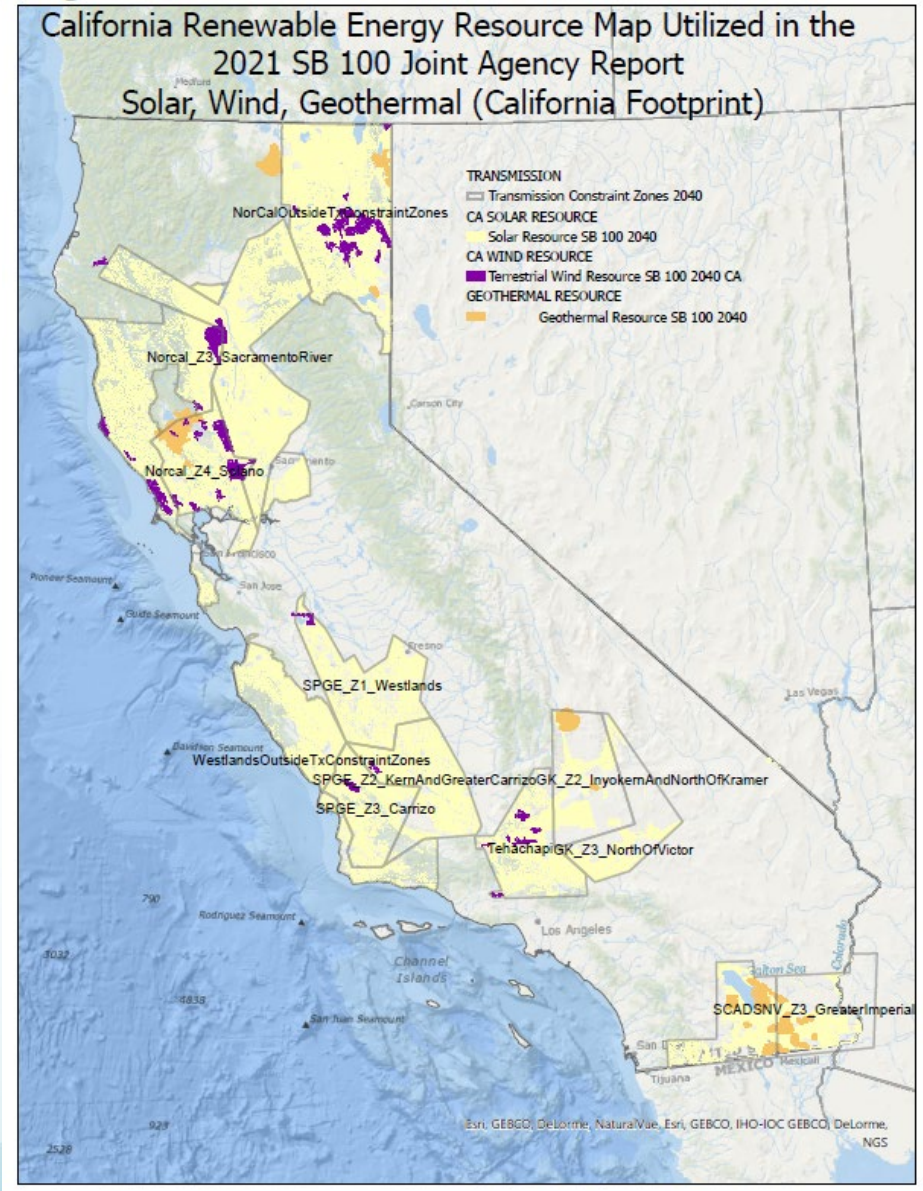


Resource build definition: A set of generating, transmission and integration resources identified to meet future policy and reliability goals.

2025 Report: Land Use

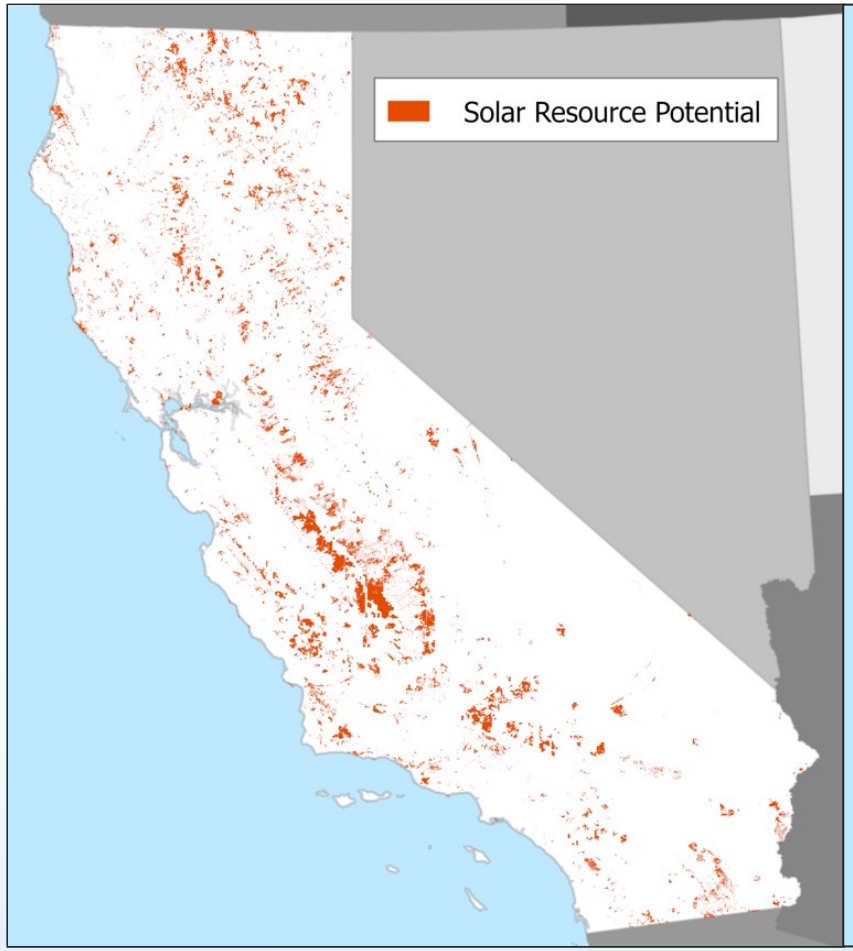
- In the 2025 Report, the CEC will evaluate the potential land-use impacts of the scenarios (the mix of generation and storge projects), the social costs and non-energy benefits, and opportunities to reduce impacts.
- To do this evaluation, we are seeking feedback on the potential land-use impacts of different types of energy generation and storage.

2021 Report – Energy Resource Map

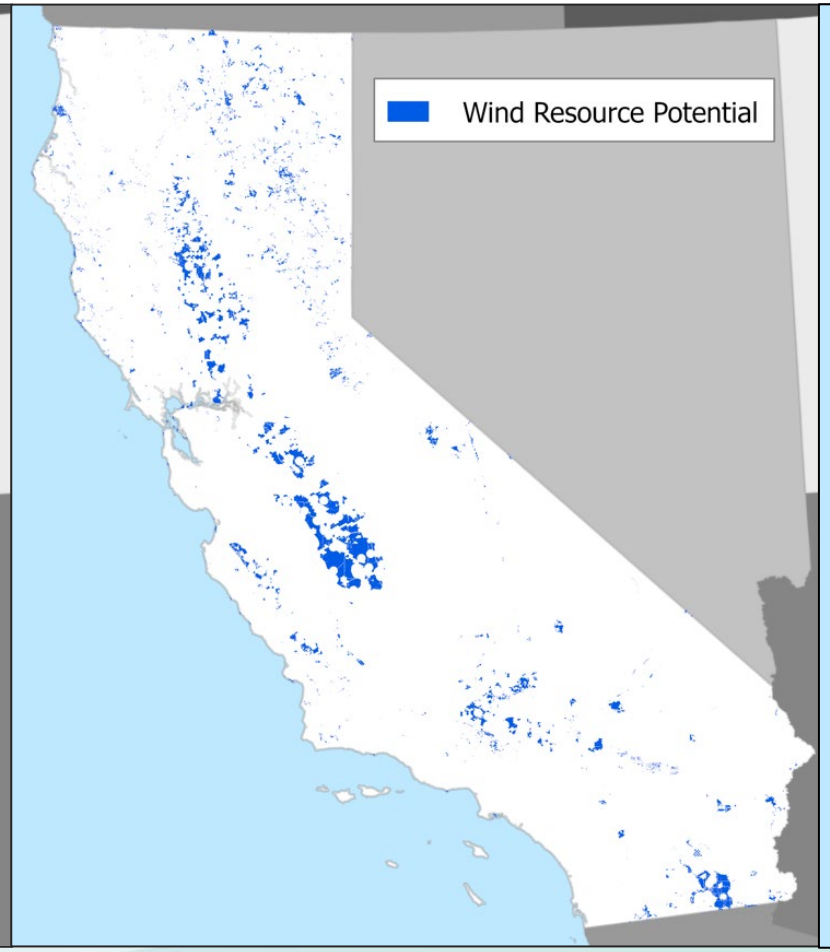


2025 Report – In-Development Draft Resource Maps

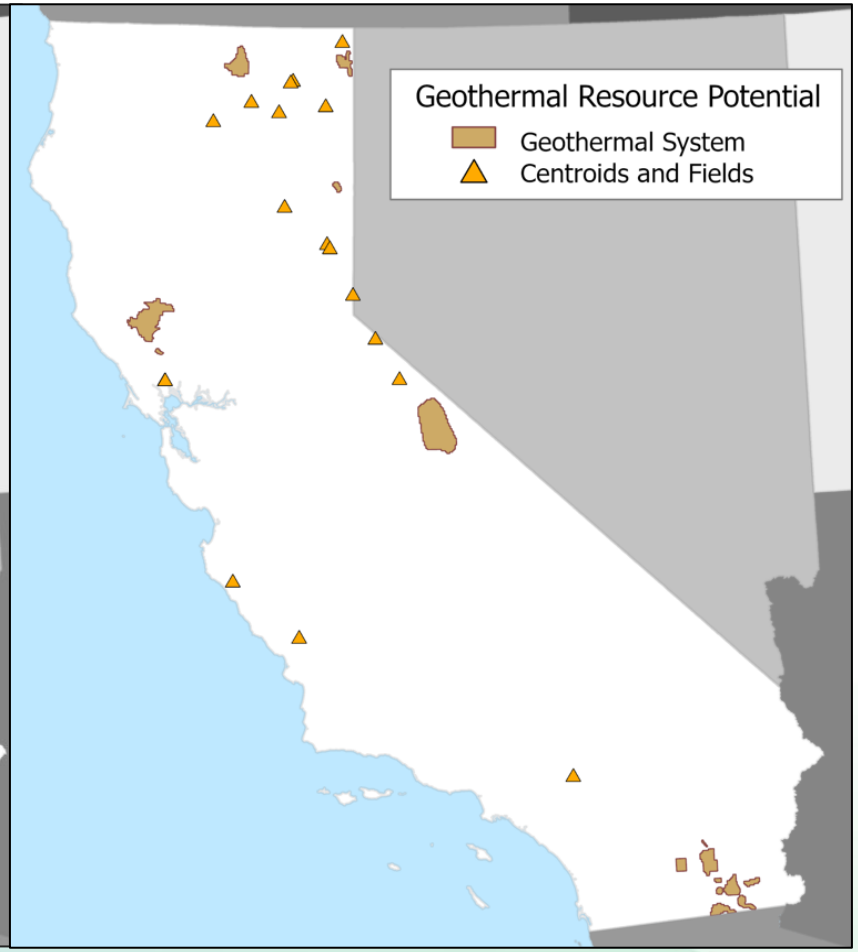
Solar



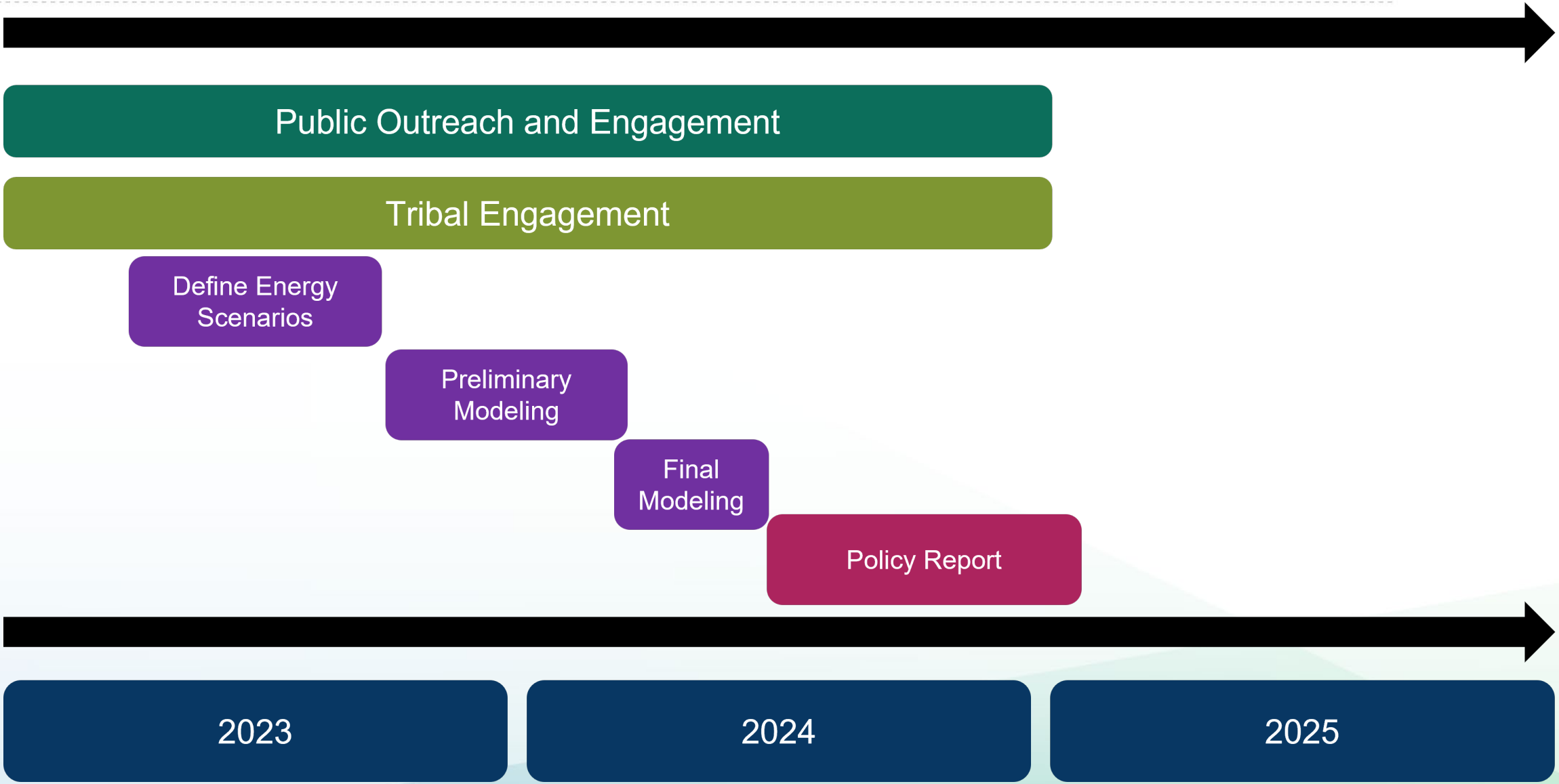
Wind



Geothermal



2025 SB 100 Joint Agency Report Timeline



Discussion Questions

- Do you have questions about SB 100?
- What are tribal priorities as the energy agencies evaluate pathways to achieving SB 100 goals?
- What should state agencies know about your priorities and values on the topics of affordability, equity, and reliability as they develop pathways to reaching the 2045 SB 100 goals?

Discussion Questions (continued)

- How should the energy agencies reflect renewable energy potential and projects on tribal lands in statewide planning?
- How should the energy agencies include considerations for cultural and tribal cultural resources in evaluating the pathways to achieve SB 100?
- How can the agencies best engage tribes during development of the 2025 analysis and report?

Contact Information

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Thank You