DOCKETED	
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2025 SB 100 Report Vision

2021 SB 100 Report Findings

SB 100 is technically achievable through multiple pathways.

Report Scoping: Outreach

- Fall 2022: The joint SB 100 agencies held six scoping roundtables with public participants.
- Feedback themes:
  - Report Goals and Content
    - Compare impacts across pathways
    - Evaluate the role of the gas fleet and need for firm resources
    - Address infrastructure needs across pathways
  - Report Process
    - Consider informal working groups for specific technical areas
    - Recommend community engagement
  - Analytical Recommendations
    - Work with LSEs/POUs/BAs on system specific information, including planned procurement
    - Include electric demand from hydrogen production and direct air capture
    - Be more inclusive of costs than average supply cost per kWh

Report Scoping: Tribal Listening Sessions

- Spring 2023: The CEC hosted two report scoping listening sessions for California Native American Tribes.
- Feedback themes:
  - Report Content
    - Support for including a chapter on tribal energy sovereignty.
    - Affordability and reliability are important factors to evaluate.
    - Discuss distribution planning and microgrids.
  - Report Process
    - Meaningful and ongoing consultation with tribes is essential.
    - Recommend regional in-person meetings.
  - Analytical Recommendations
    - The report should align with other state processes (e.g., 30x30).
    - The land use evaluation should consider cultural resources, tribal cultural resources, and areas of cultural significance to tribes.

Overarching 2025 Report Question

What are the tradeoffs of different pathways to achieving SB 100?

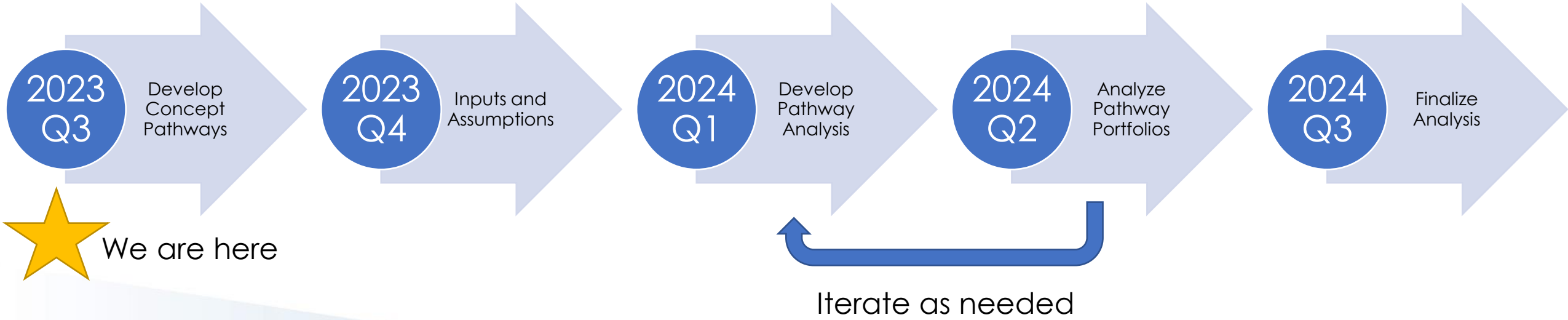
SB 100 Pathway Definition

A distinct set of assumptions that create a possible future scenario for the electricity grid, including a developed resource portfolio.

Pathway Analysis

Each SB100 pathway will be evaluated to explore multiple factors including reliability, affordability, non-energy benefits, social costs, and land use. The pathway analysis will highlight tradeoffs, commonalities, and other factors.

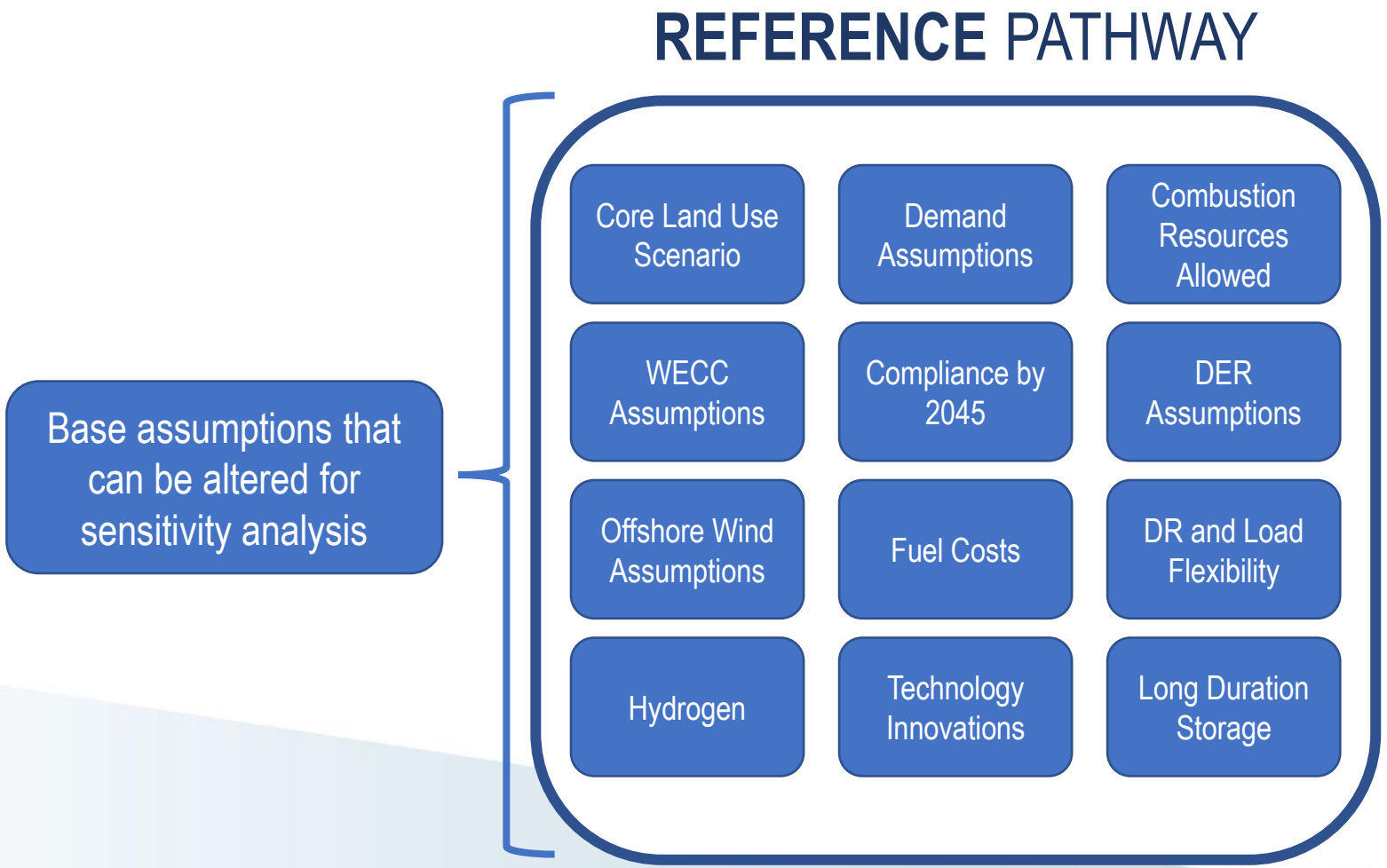
2025 Report Process



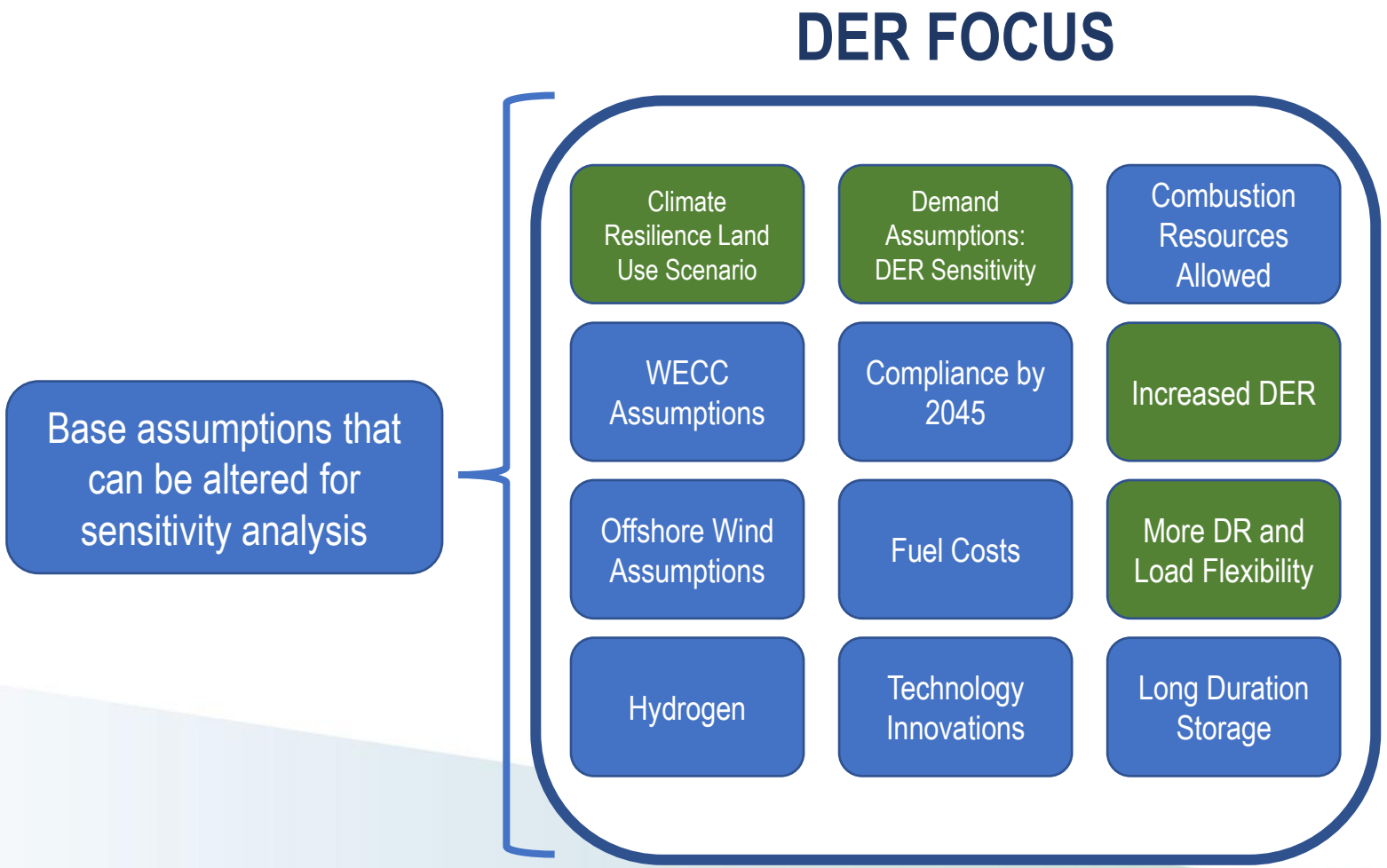
Proposed Pathways

Reference	SB 100 target is met with minimal changes to how electricity is planned for and sourced.
DER Focus	Higher levels of local resources, including distributed energy and community solar.
Resource Diversification	Procurement and technology advancements for a variety of existing and emerging zero-carbon resources are used to meet SB 100 targets
Geographic Diversification	Expanded regional transmission allowing for greater energy exchanges between California and the rest of the WECC.
Combustion Resource Retirement	Transition from combustion power plants to only non-combustion power plants.

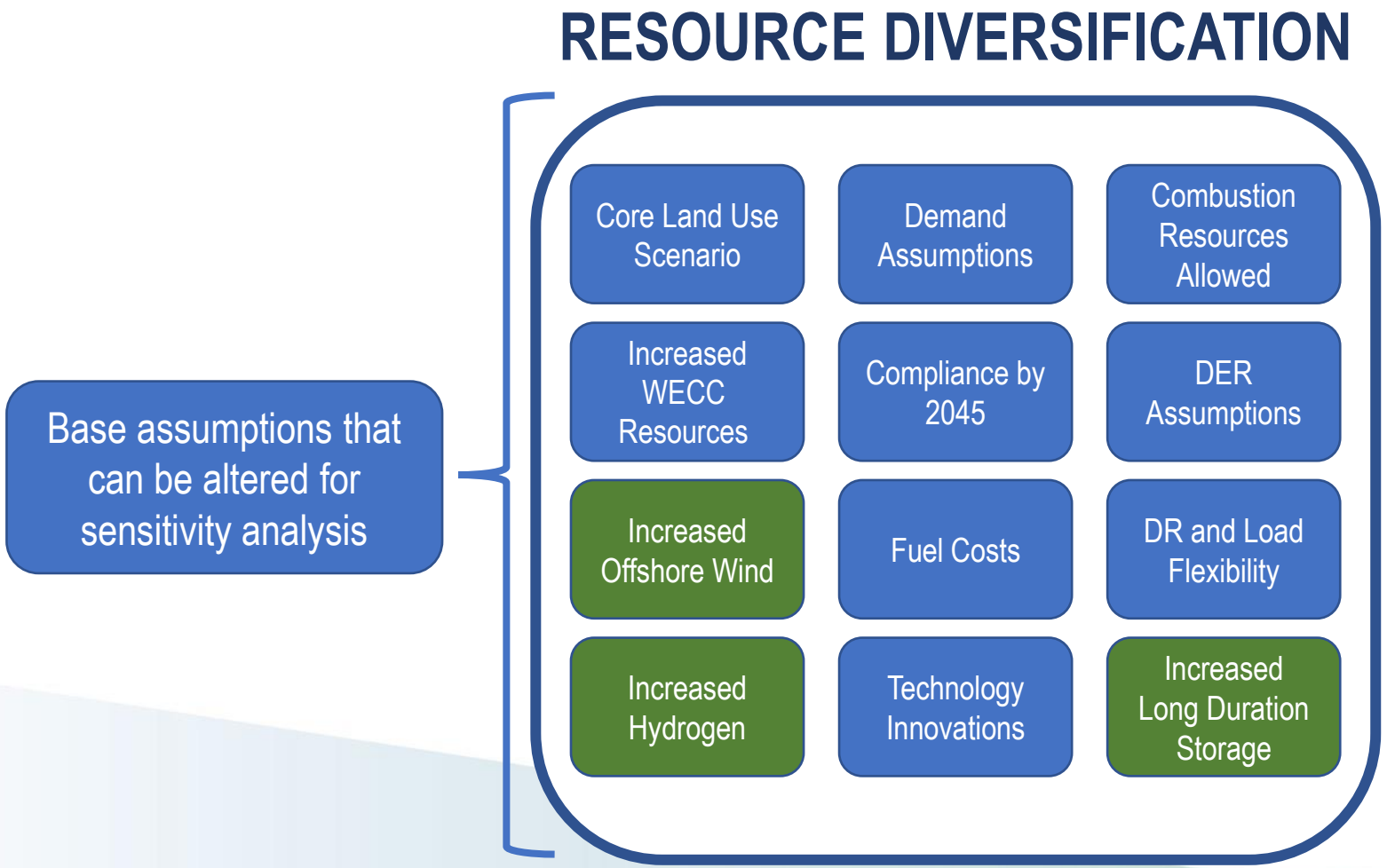
Pathway Concept



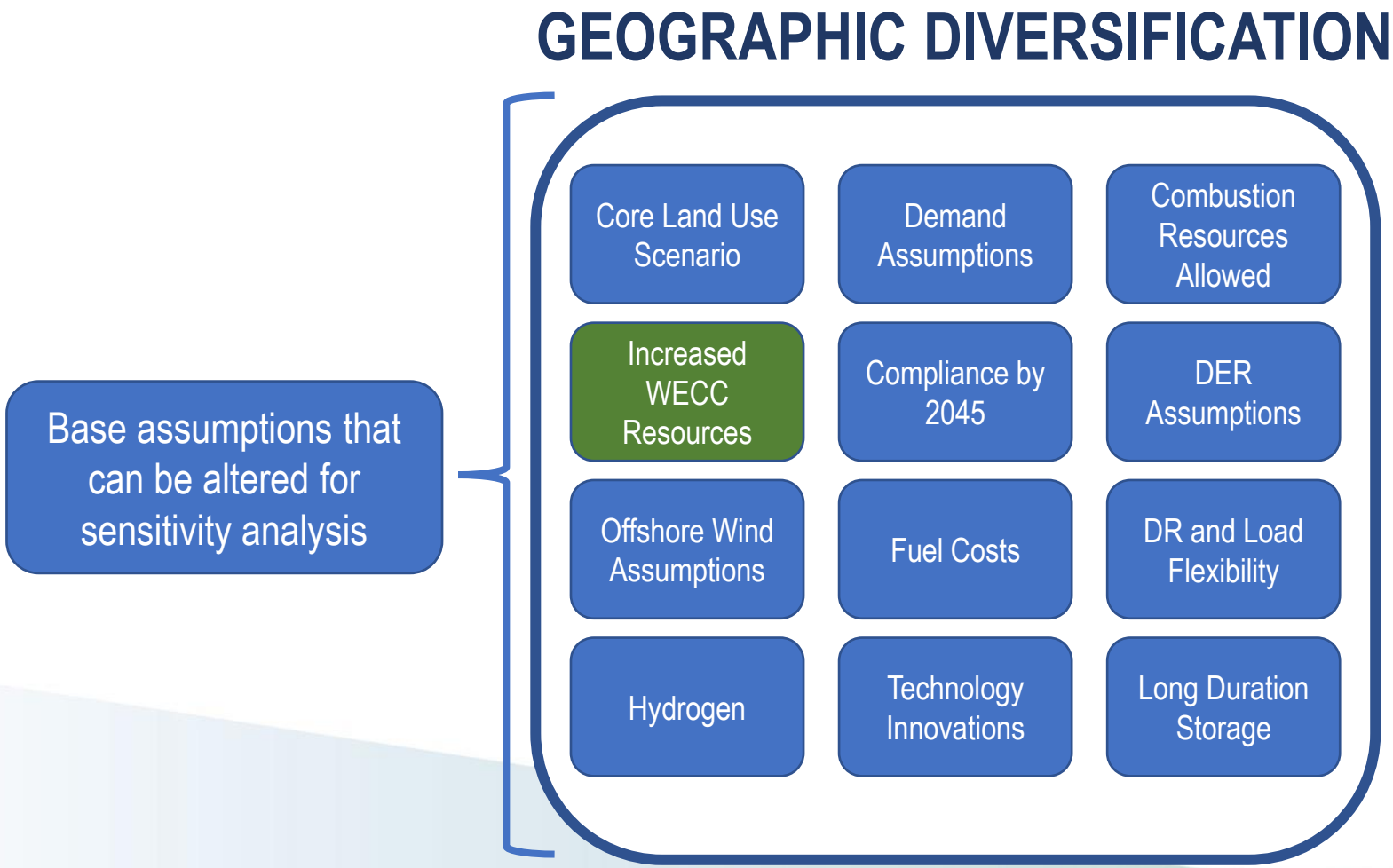
Pathway Concept: DER Focus



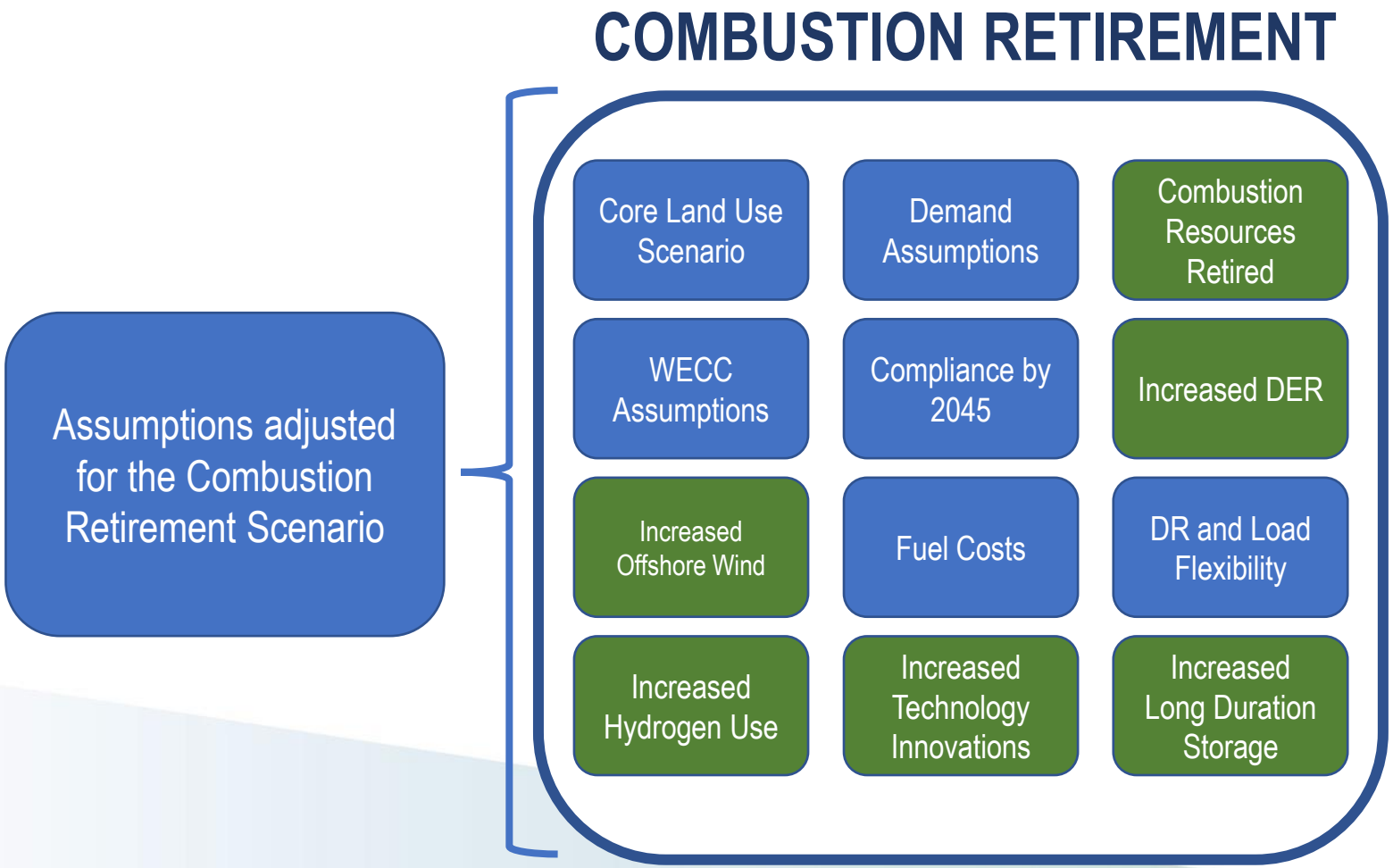
Pathway Concept: Resource Diversification



Pathway Concept: Geographic Diversification



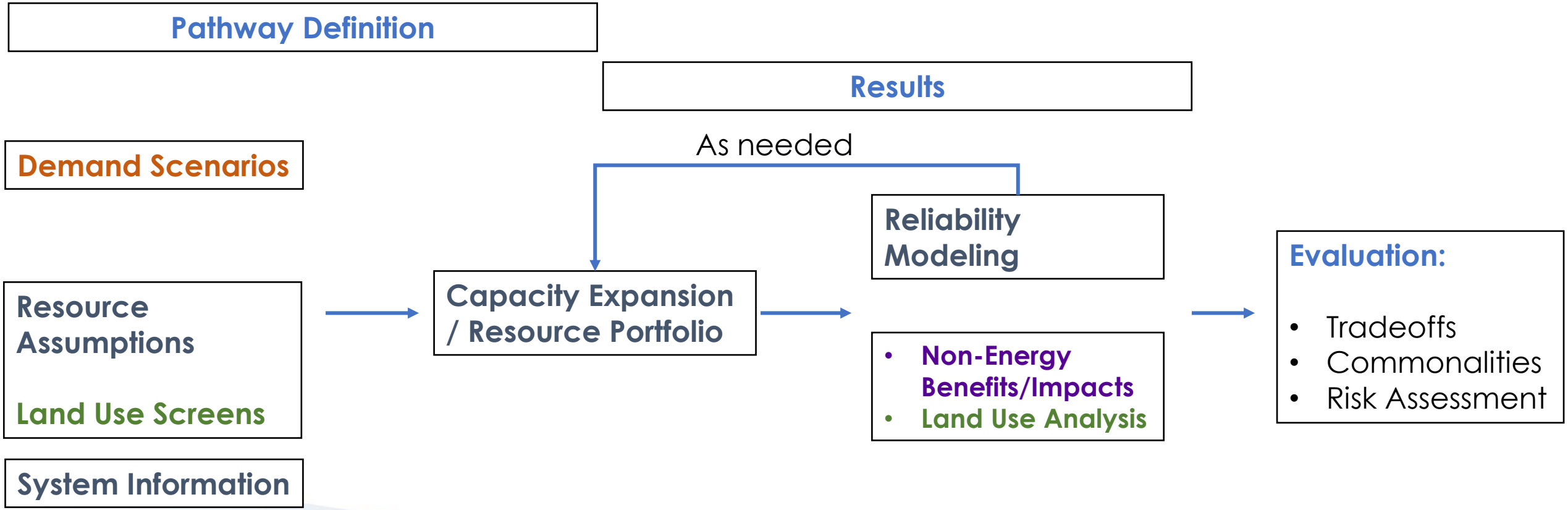
Pathway Concept: Combustion Retirement



Pathways will be Evaluated Across Multiple Variables

- Reliability
- Affordability
- Non-energy benefits/impacts
- Social Costs
- Land use impacts

Pathway Analysis



Capacity Expansion

- **Objective:** Develop the resource portfolio associated with each concept pathway
- **Tools:** EPRI's REGEN model for high level information, PLEXOS Long Term model for detailed additions.
- **Key inputs:**
  - CEC's updated Demand Scenarios
  - CEC's updated land-use screens
  - Aligned with CPUC's IRP adopted resource portfolio

Reliability and Production Cost Models

- **Objective:** Evaluate pathway portfolio's ability to meet reliability standards and stressed supply conditions.
- **Tools:** PLEXOS production cost model
- **Key inputs:**
  - Concept pathway portfolios developed in capacity expansion
  - Stochastic demand and renewable shapes

Stakeholder Questions:

- What system data would be useful to include in the results?
- What types of future analysis or planning could these modeling results inform?

Affordability

- **Objective:** Evaluate the affordability of the resource portfolios associated with concept pathways.[1]
- **Key inputs:**
  - Concept pathway portfolios developed in capacity expansion
  - Production cost modeling results

Stakeholder Questions:
- What scope of costs associated with pathways should be represented in the affordability analysis?
- What metrics should be considered to assess affordability?

[1]This analysis will not project future rates.

Non-Energy Benefits/Impacts and Social Costs

- **Objective:** Evaluate benefits, impacts, and social costs of the pathway portfolios
  - Factors that may be evaluated include land-use, public health and air quality, water supply and quality, economics, and resilience.
  - Avoided social cost of carbon and estimated health impacts for milestone years and cumulative.
- **Tools:** Economic and public health analyses
- **Key inputs:**
  - Concept pathway portfolios developed in capacity expansion

Stakeholder Questions:

- What additional social costs, metrics, or preferred approaches should inform the scoping of the NEB analysis beyond the broad categories listed above?

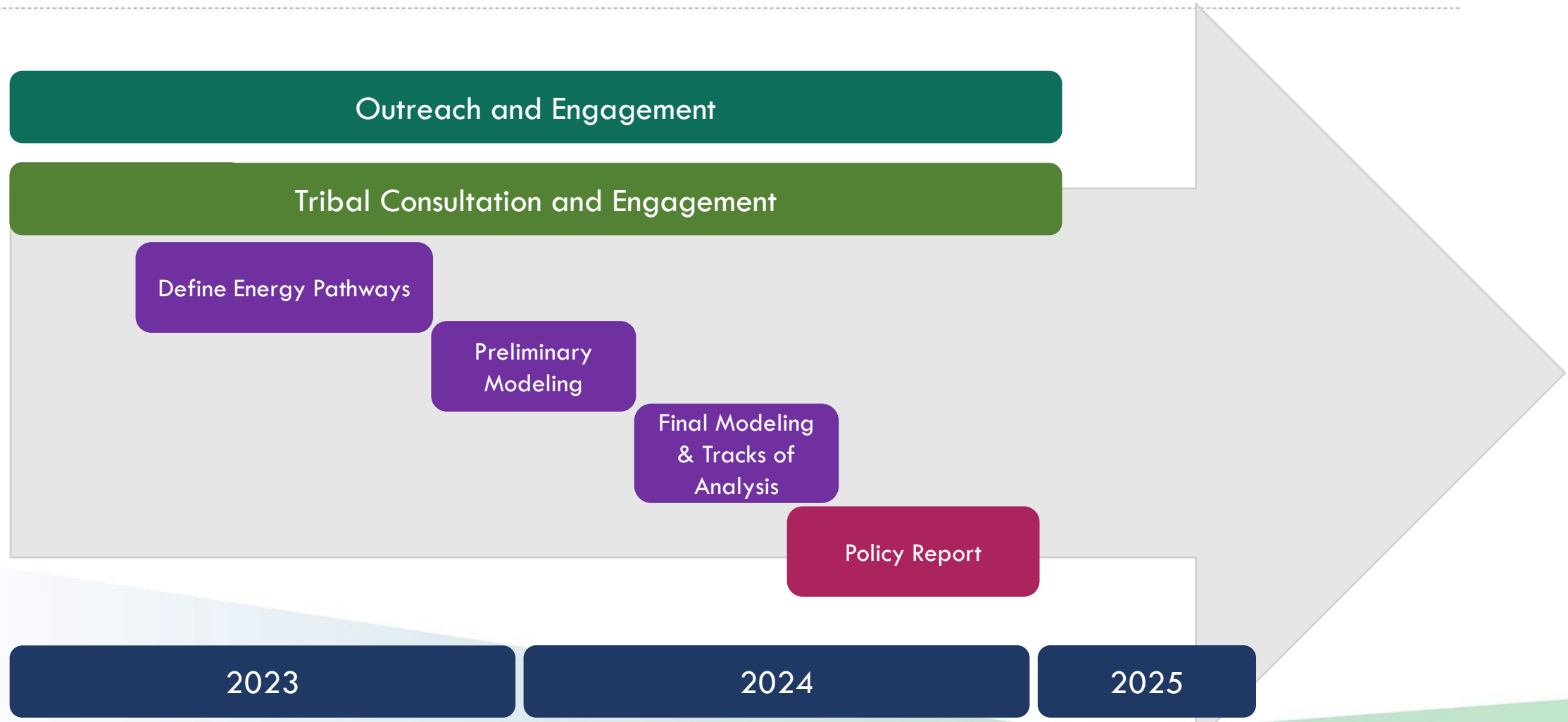
Land Use Impacts

- **Objective:** Analyze projected land-use impacts of the pathway portfolios and opportunities to reduce environmental impacts.
- **Tools:** Geospatial analysis
- **Key inputs:**
  - Concept pathway portfolios developed in capacity expansion
  - CEC's updated land-use screens

Stakeholder Questions:

- How might the CEC structure the land-use and environmental evaluation to be able to evaluate tradeoffs across multiple land-use objectives?
- What land-use and environmental metrics could be reported for each pathway?

Timeline


Outreach and Engagement
Tribal Consultation and Engagement
Define Energy Pathways
Preliminary Modeling
Final Modeling & Tracks of Analysis
Policy Report
2023
2024
2025