

DOCKETED

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SB 100 Joint-Agency Report Overview

Terra Weeks
IEPR Commissioner Workshop on Offshore Wind
October 3, 2019

California's Climate Policies

Greenhouse Gas Emission Reductions

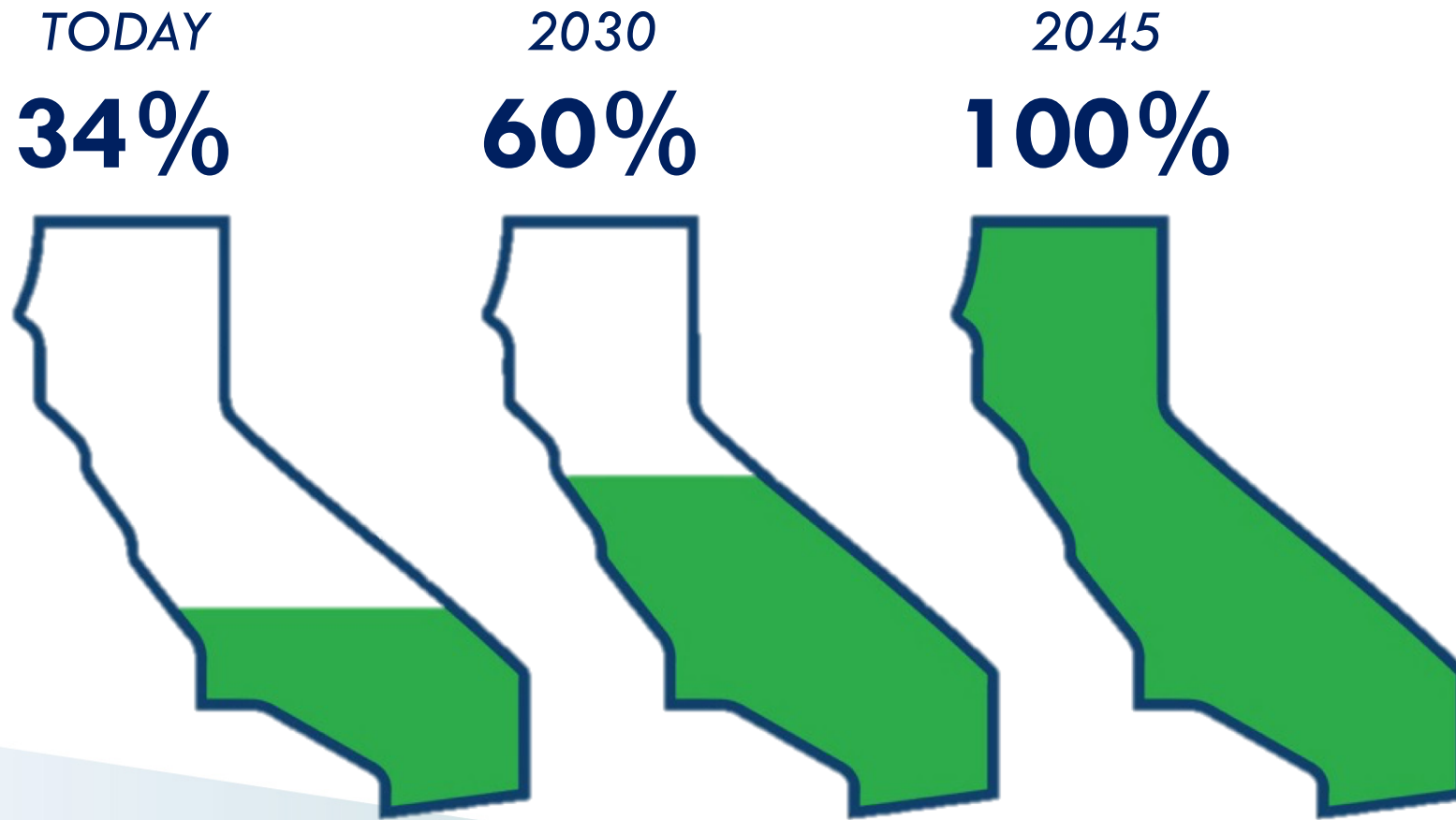
- 1990 levels by 2020
- 40% below 1990 levels by 2030
- 80% below 1990 levels by 2050
- Carbon Neutral by 2045 (Executive Order)

Renewable Energy

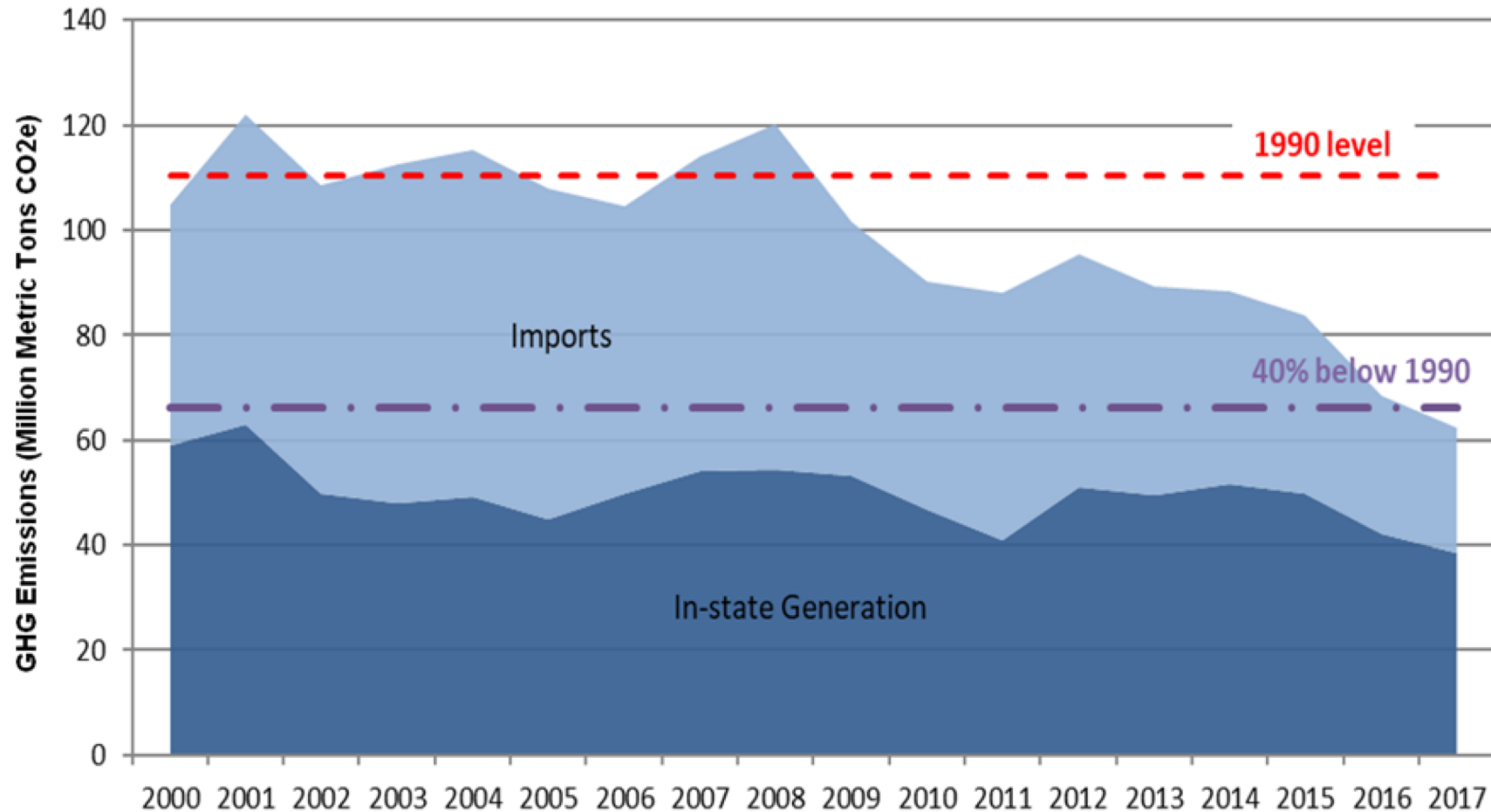
- 20% by 2017
- 33% by 2020
- 50% by 2026
- 60% by 2030
- 100% CARBON-FREE BY 2045



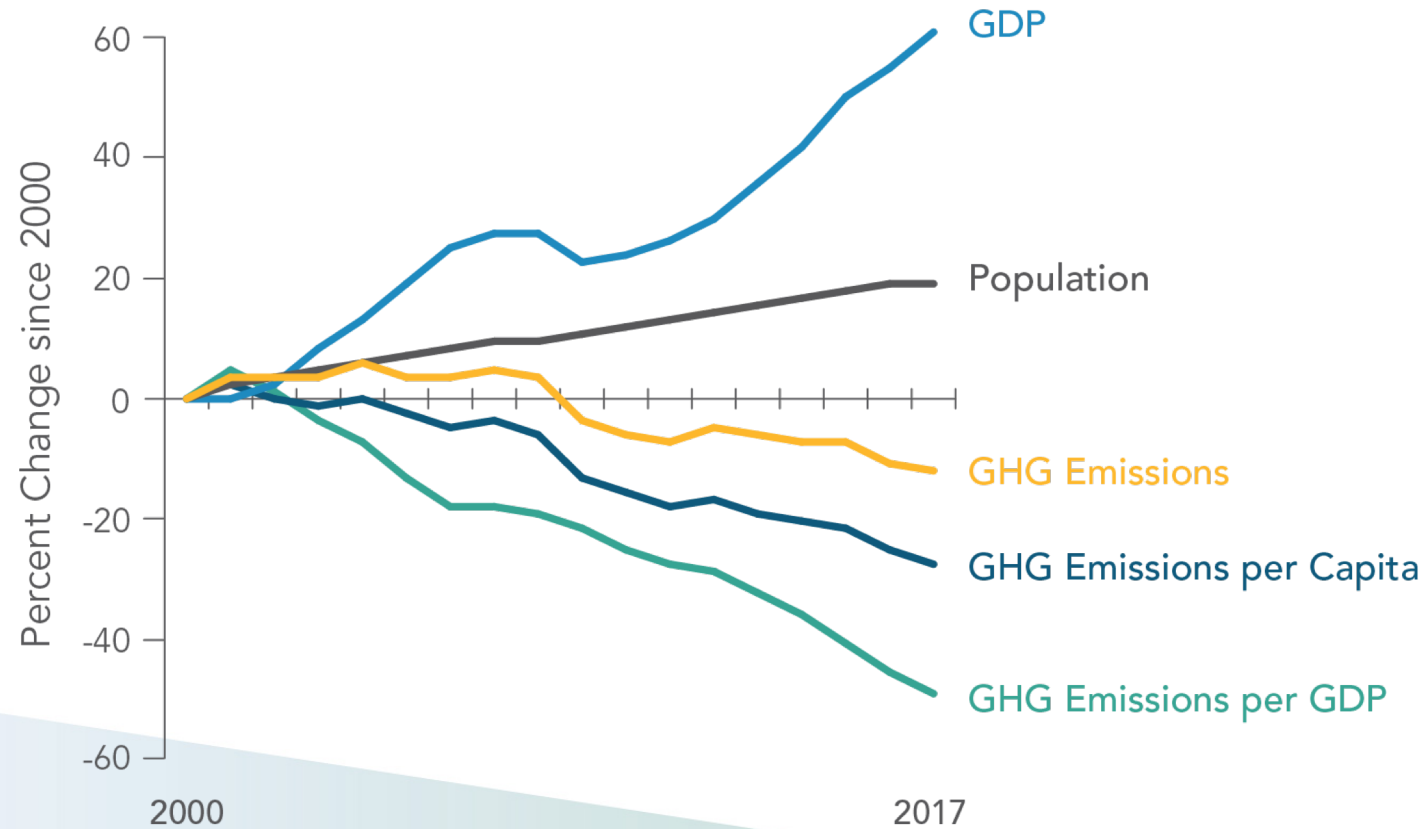
SB 100: 100% Clean Electricity by 2045



Ahead of Statewide GHG Reduction Target



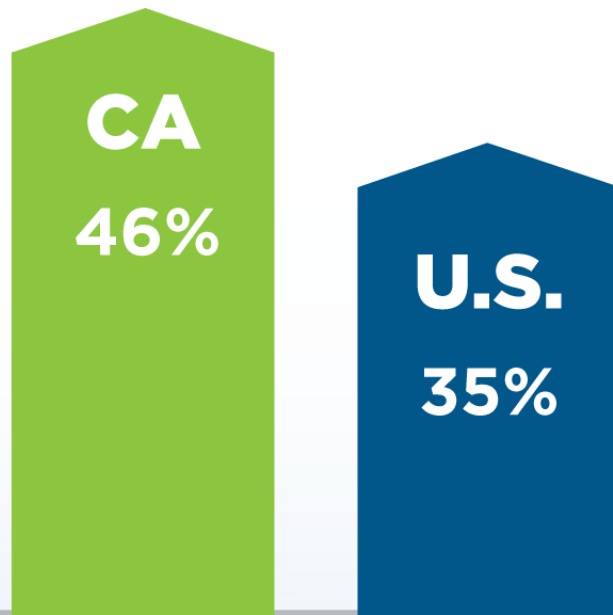
Decoupled GHG Emissions from GDP



Source: California Air Resources Board

World's 5th Largest Economy

GDP GROWTH SINCE 2000



1. USA
2. China
3. Japan
4. Germany
5. **California**

Source: California Department of Finance and U.S. Bureau of Economic Analysis

California Clean Jobs

California has

5x

more clean energy jobs
than fossil fuel jobs.

Nearly

4 in 10

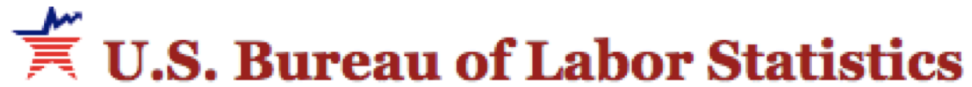
solar jobs in America
are in California.

Statewide, there were

512,934

jobs in the clean
energy industry in 2018.

US Clean Jobs



Fastest Growing Occupations

Fastest growing occupations: 20 occupations with the highest percent change of employment between 2018-28.

Click on an occupation name to see the full occupational profile.

OCCUPATION	GROWTH RATE, 2018-28
Solar photovoltaic installers	63%
Wind turbine service technicians	57%
Home health aides	37%
Personal care aides	36%

Nearly 30% of Americans Live in a Community Committed to 100% Clean Energy

91 Million People

28% of US population lives in a place committed to transitioning to 100% clean energy (over 1 in 4 people)

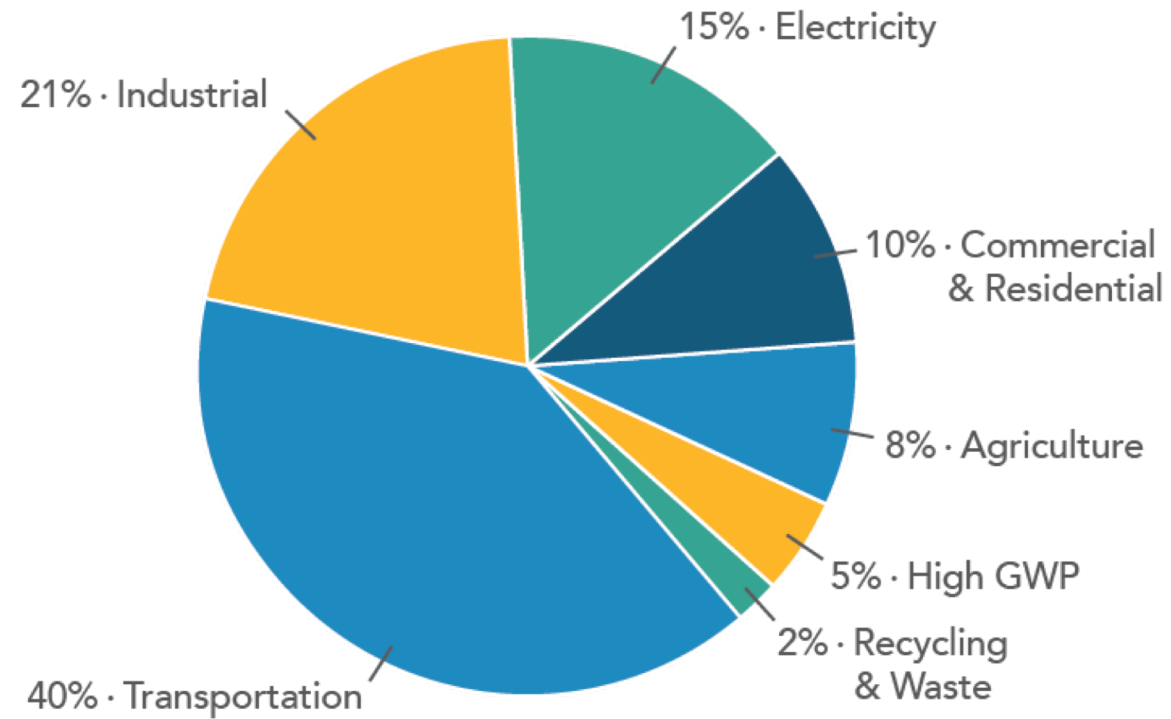


Equivalent to 260 million metric tons per year— as much as taking **55 million cars off the road**



Accounting for **20% of electricity consumption** (1 in 5 kilowatt hours)

Clean Energy Backbone



424.1 MMTCO₂e
2017 TOTAL CA EMISSIONS

Source: California Air Resources Board

Emerging Trends in Other Sectors

Transportation



Buildings



Source: City Ventures

SB 100: RPS and Zero-Carbon Resources

PUC 454.53 (a)

It is the policy of the state that **eligible renewable energy resources and zero-carbon resources** supply 100 percent of all retail sales of electricity to California end-use customers by December 31, 2045.



Joint Agency Report



In consultation with CA balancing authorities, through a public process, issue a joint agency report by January 1, 2021 and at least every four years after that includes:

- **Technical review of the policy**
- **Potential benefits and impacts on system/local reliability**
- **Nature of anticipated financial cost and benefits to utilities**
- **Barriers and benefits of achieving the policy**
- **Alternative scenarios to achieve the policy**

Interagency Coordination



CPUC

Principal: Commissioner Randolph



CEC

Principal: Chair Hochschild



CARB

Principal: Chair Nichols

Workshops and Stakeholder Input

SB 100 Report

Joint Agency Report Goals



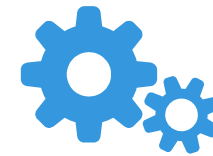
Meet report statutory requirements



Provide direction to the electricity market

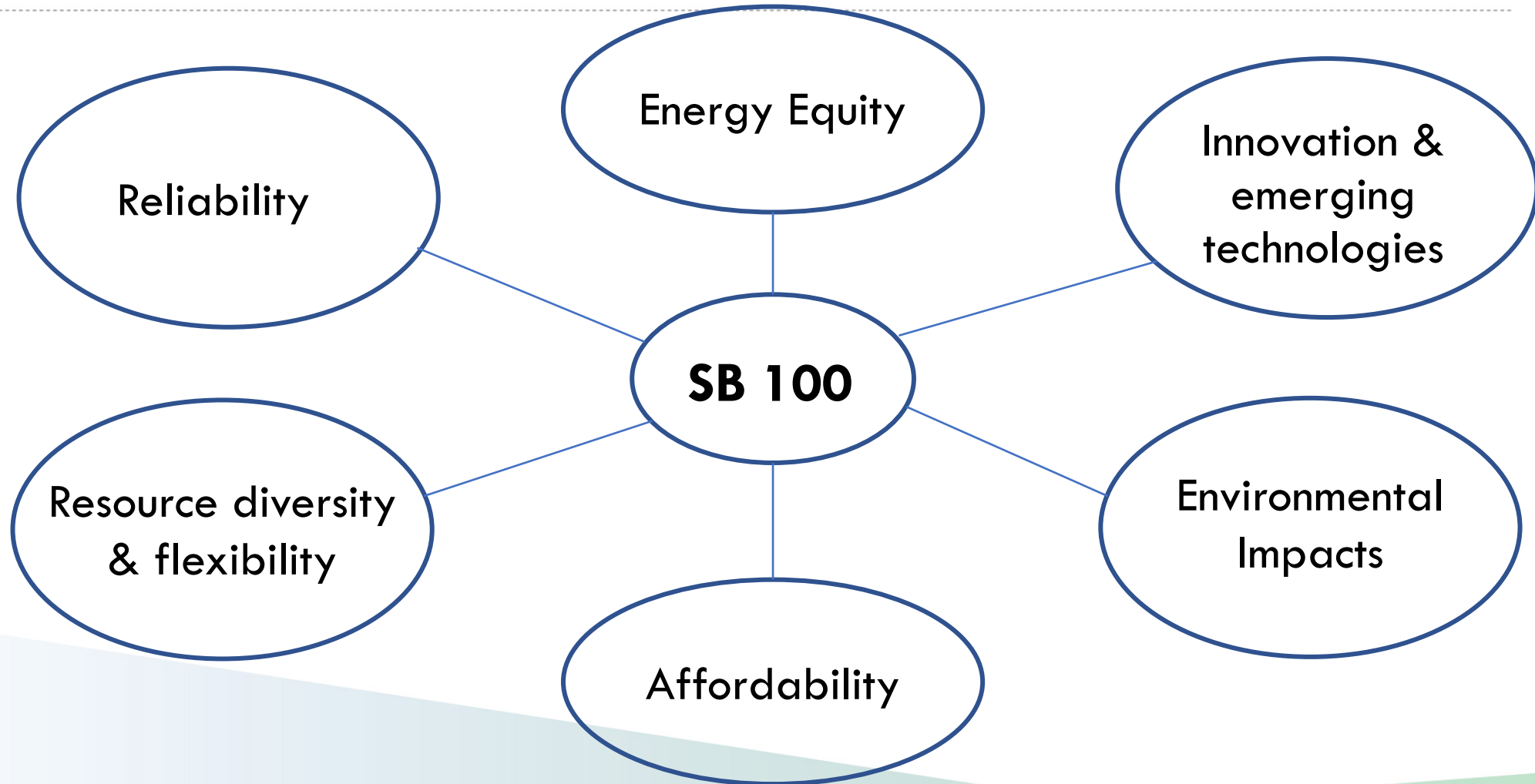


Coordinate planning processes of the State Agencies



Form consensus on interpretation of statute

Key Considerations



SB 100: RPS and Zero-Carbon Resources

RPS-eligible

Solar
Wind
Geothermal
Small Hydro
RPS Biomass

Zero-Carbon (Under Consideration)

Existing Contracts
-Large Hydro
-Nuclear
???

Comments to date

“Don’t be prescriptive”
“Maximize optionality”
“Be technology inclusive”

Timeline

- **Fall 2019**: Scoping Workshops
- **Spring 2020**: Finish SB 100 workshops/feedback from stakeholders
- **Summer 2020**: Draft report available for comment
- **Fall 2020**: Approval by CEC, CPUC, CARB
- **January 1, 2021**: Report due to the CA Legislature

Tentative SB 100 Workshop Topics

Fall 2019-Spring 2020

- Scenarios and Technologies for a Clean Energy Future
- Equity
- Affordability
- Reliability Needs
- Environmental Protection
- Electricity System Modeling
- Infrastructure and System Management Needs
- System Resilience

SB 100 Engagement

- Submit comments to CEC Docket 19-SB-100
- Visit the SB 100 Joint Agency Report webpage:
<https://www.energy.ca.gov/sb100>
- Terra.weeks@energy.ca.gov

New CEC Solicitation for Offshore Wind

\$3M for projects focused on:

- Remote monitoring and control systems
- Research on impacts to sensitive species and habitats

Pre-Application Workshop:

September 10, 2019

Applications Due:

December 13, 2019



September 30, 2019

Grant Funding Opportunity - GFO-19-302 - Advance to Next-Generation Wind Energy Technology (Next Wind)

Date Released: September 30, 2019.

PURPOSE OF SOLICITATION

Solicitation is to fund applied research and development projects that facilitate the development of next-generation wind energy technologies and result in increased competitiveness, performance, and reliability, while lowering the cost and the environmental and wildlife impacts of

Thank You



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