

DOCKETED	
Docket Number:	25-IEPR-04
Project Title:	Hydrogen
TN #:	265048
Document Title:	Presentation - SB 1075 Analysis Overview
Description:	6A. Jea Boodry, CARB
Filer:	Raquel Kravitz
Organization:	CARB
Submitter Role:	Public
Submission Date:	7/28/2025 4:15:08 PM
Docketed Date:	7/28/2025



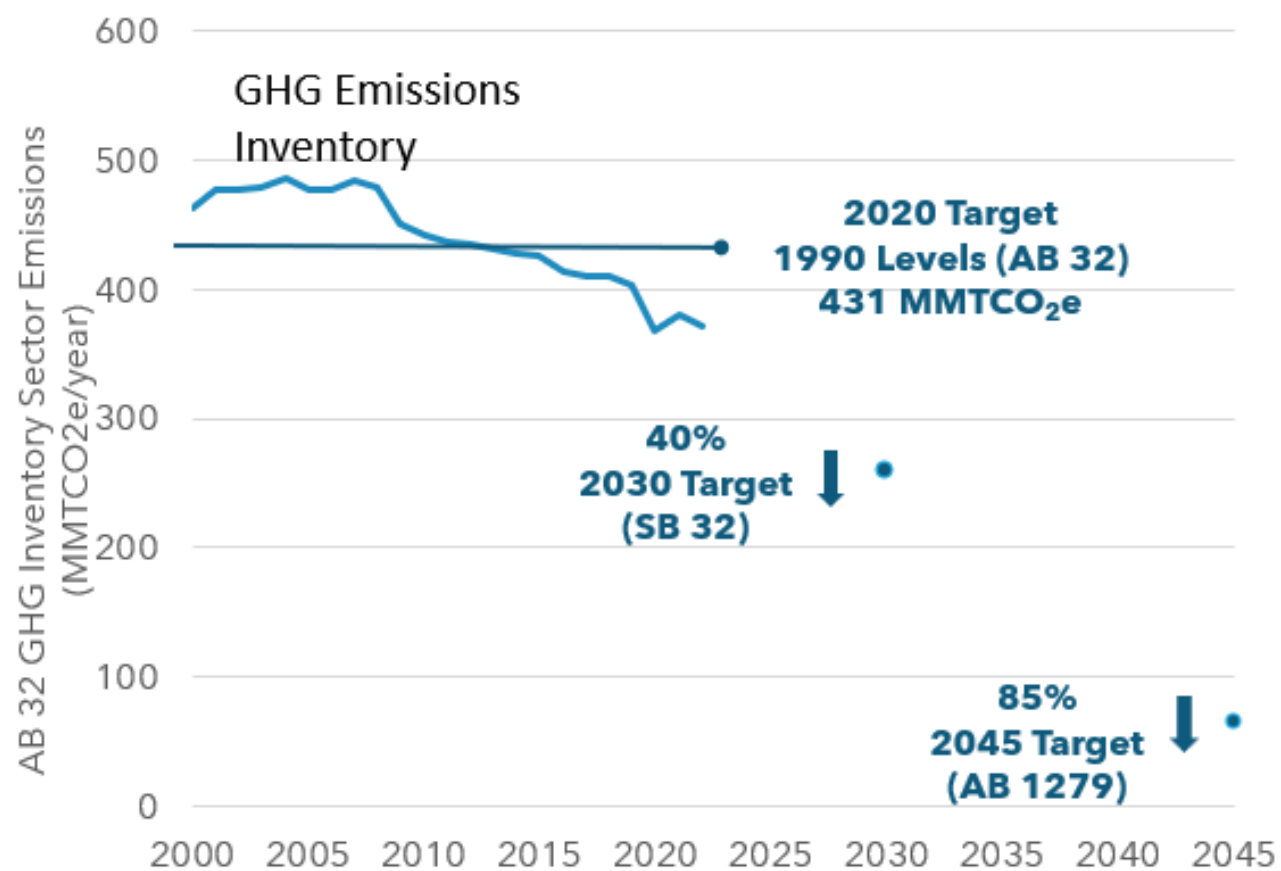
SB 1075 Analysis Overview

July 29th, 2025

Jéa Boodry, Air Resources Engineer

Legislative GHG Reduction Targets

Achieved AB 32 Target in 2014



ACHIEVING
CARBON
NEUTRALITY
BY **2045**

GHGs included in statute: Carbon dioxide (CO₂), Methane (CH₄), Nitrous oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulfur hexafluoride (SF₆), Nitrogen trifluoride (NF₃)

Ambitious Action Delivers Huge Benefits

Unprecedented Deployment of Clean Technology and Nature-Based Climate Solutions



37x total on-road ZEVs



6x electric appliances in residences



1700x hydrogen supply



4x installed wind/solar generation capacity



> 2.5 million acres of NWL climate action per year

Significant GHG Reductions



94% decrease in liquid petroleum fuel demand



91% decrease in fossil gas used in buildings



66% decrease in methane emissions from agriculture



10% reduction in wildfire emissions

In 2045 relative to 2022

Hydrogen in CA's Scoping Plan



Blending in pipelines



Aviation fuel



Ocean-going vessel fuel



Industrial high heat uses



Transportation fueling



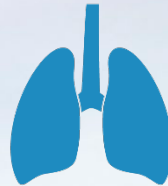
Focus on low-carbon sources, e.g. biomass or electrolytic



Capitalizing on federal funding for hydrogen hubs and low-CI hydrogen

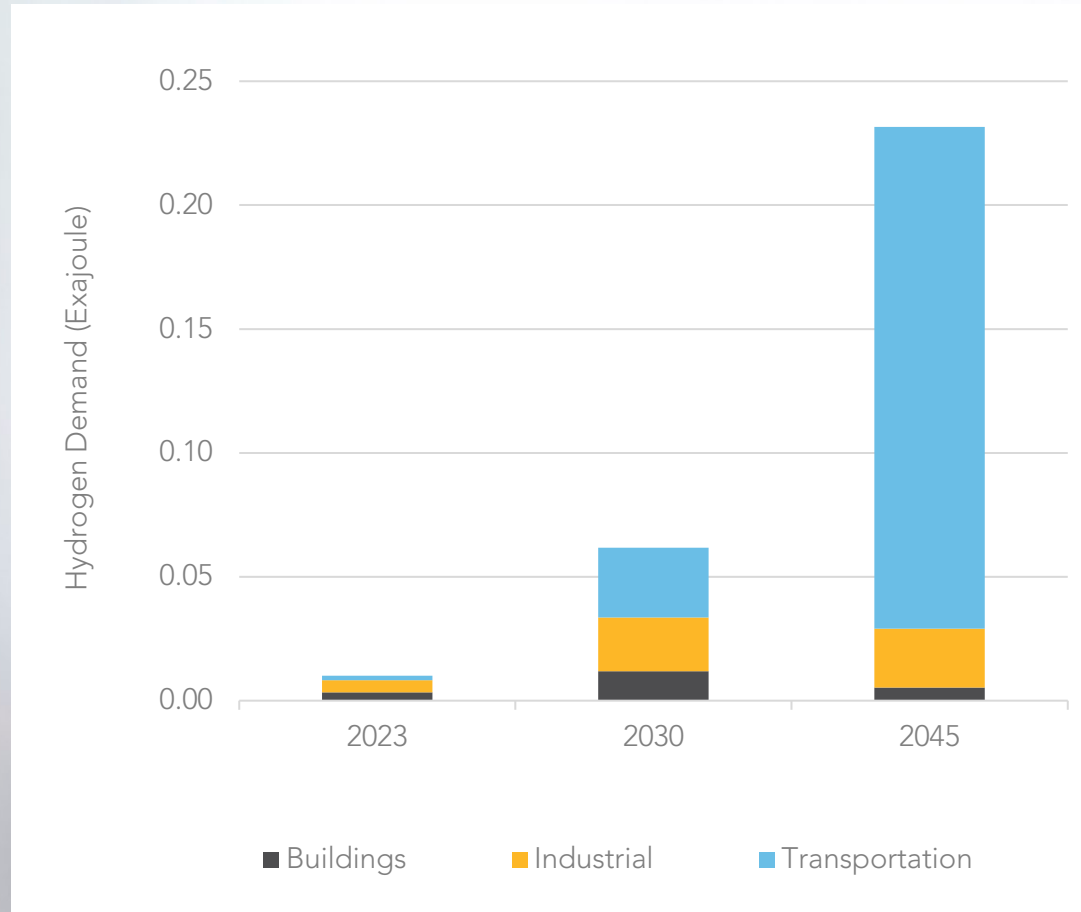


Significant reduction in overall GHG emissions by replacing methane end-uses with hydrogen



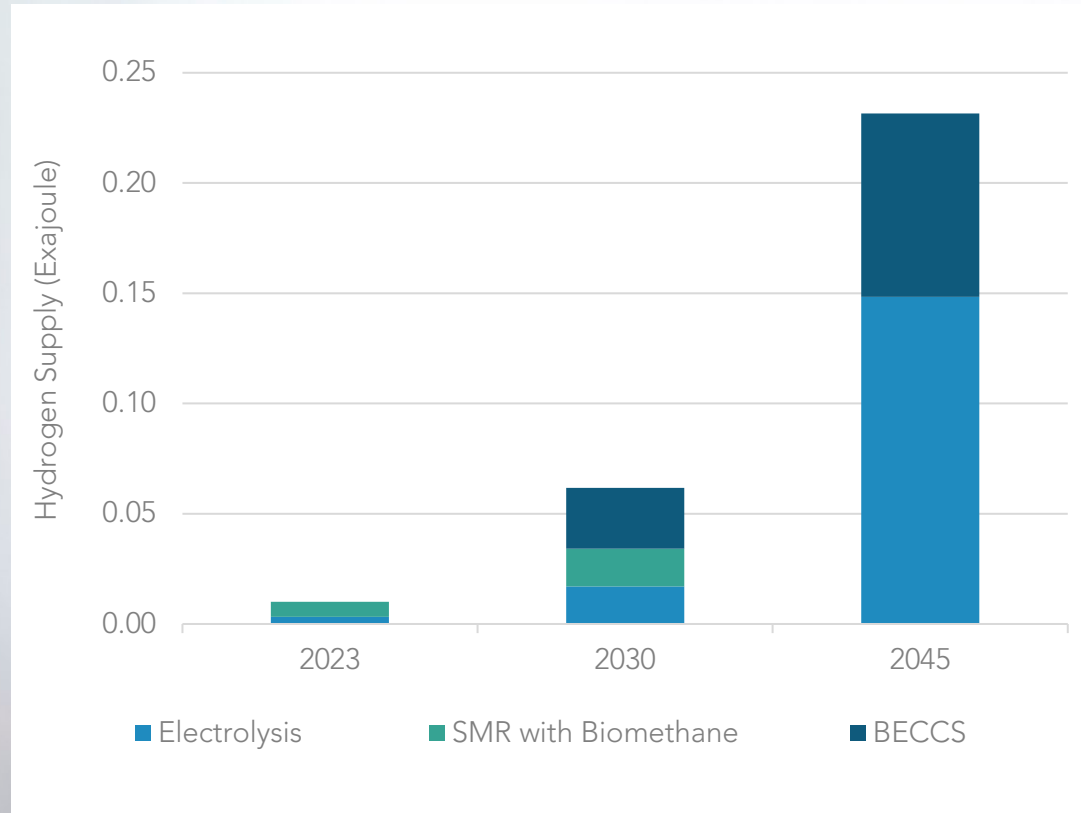
Prioritize non-combustion options

Hydrogen Use by Sector in the Scoping Plan



- Hydrogen demand largely driven by non-combustion uses in transportation sector:
- Fuel cells for light-, medium-, and heavy-duty vehicles, aviation, ocean-going vessels, freight and passenger rail
- Other end-uses with relatively smaller volumes include:
 - Gas replacement to reduce fossil gas use in buildings and industrial sectors
 - Hydrogen turbines in electric sector

Hydrogen Supply in the Scoping Plan



SMR: Steam Methane Reformation
BECCS: Bioenergy with Carbon Capture and Storage

- Hydrogen identified as important tool to displace fossil fuel use
- Assumed certain production methods for modeling purposes
- SB 1075 advances understanding of production options and scale to meet growing demand

Driving Hydrogen Demand

- CARB actions advance zero-emission vehicle deployment
 - State and local fleets in Advanced Clean Fleets regulation
 - Clean Truck Partnership
 - Market assessment and advancement
 - Innovative Clean Transit regulation
 - Education and incentive programs for fleets
- Growth in the availability of low-carbon hydrogen across the state will be a key enabler



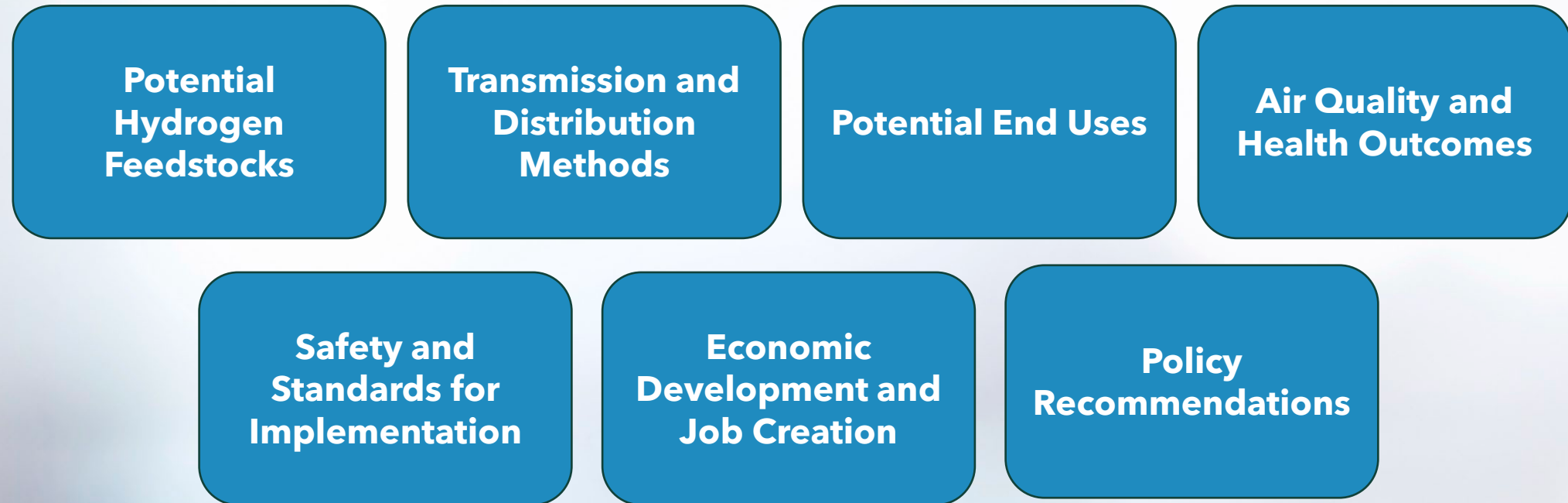
SB 1075 Analysis: Legislative Direction

- Requires CARB, in consultation with California Energy Commission, the California Public Utilities Commission, and the California Workforce and Development Board to produce a comprehensive report on hydrogen.



SB 1075 Analysis: Legislative Direction

To understand the potential future for hydrogen in California, our work will analyze:



Public Engagement

Workshops

- Daytime workshops
- Share preliminary results
- Discuss approach for future work
- Gather feedback and input

Community Meetings

- Evening meetings
- Feedback and input from community members

Report and Engagement Timeline



Thank You!