



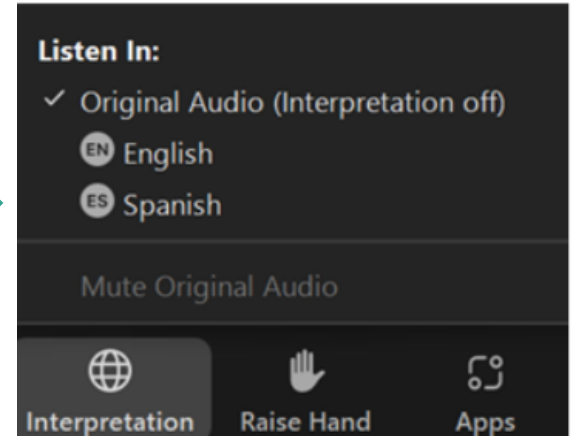
SB 1075 Technical Analysis Workshop

Public Workshop
February 25, 2025

Para Interpretación en Español/ For Spanish Interpretation

Para seleccionar interpretación en español

- Haga clic en el icono de interpretación (globo) en la barra de herramientas de Zoom en la parte inferior de la pantalla
- Seleccione español (Spanish)
- Seleccione "Silenciar audio original" (Mute Original Audio) para escuchar solo la interpretación en español y no en el lenguaje original al mismo tiempo




To select Spanish interpretation

- Click interpretation icon (globe) in Zoom toolbar at bottom of screen
- Select Spanish
- Select "Mute Original Audio" to only hear Spanish interpretation and not original speaker at same time
- Globe icon will appear after instructions provided in Spanish

Select English in the interpretation menu to enable hearing simultaneous English interpretation of any comments provided in Spanish. If you are listening in English, do not select Mute Original Audio.

Participation

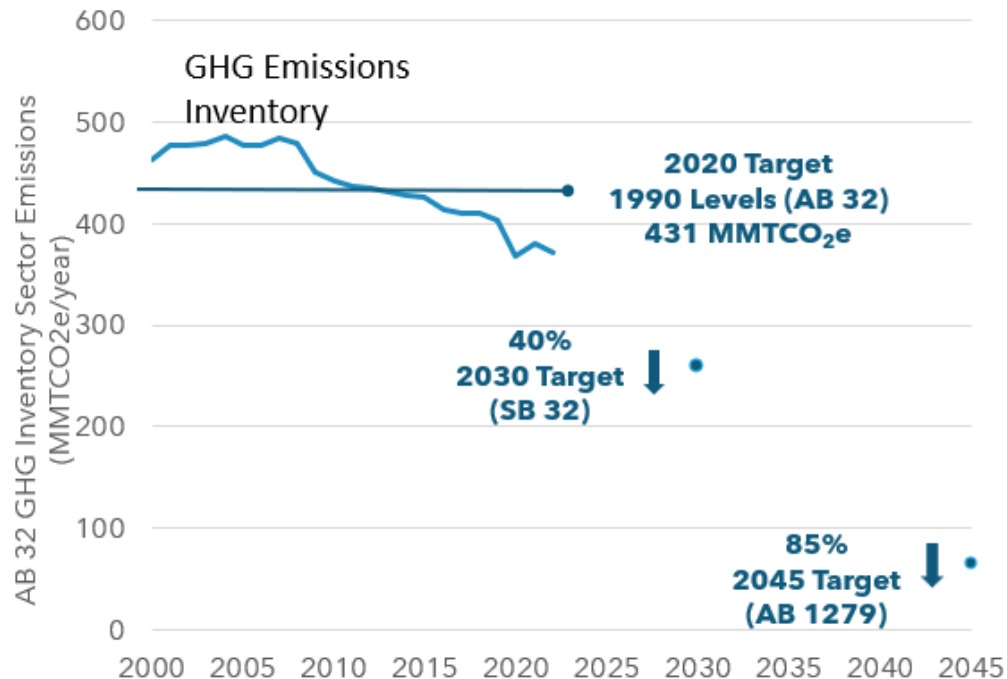
- This meeting is being recorded  Recording...
- Questions will be taken during the Public Comment Session after the presentation.
- Written feedback can be submitted by March 18, 2025 at <https://ww2.arb.ca.gov/public-comments/sb-1075-technical-analysis-workshop>

Workshop Agenda

- Welcome and Workshop Introduction
 - Overview of Scoping Plan and SB 1075
- Presentation by Energy and Environmental Economics, Inc (E3)
- Public Comment
- Closing Remarks

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 Climate 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

Driving Hydrogen Demand

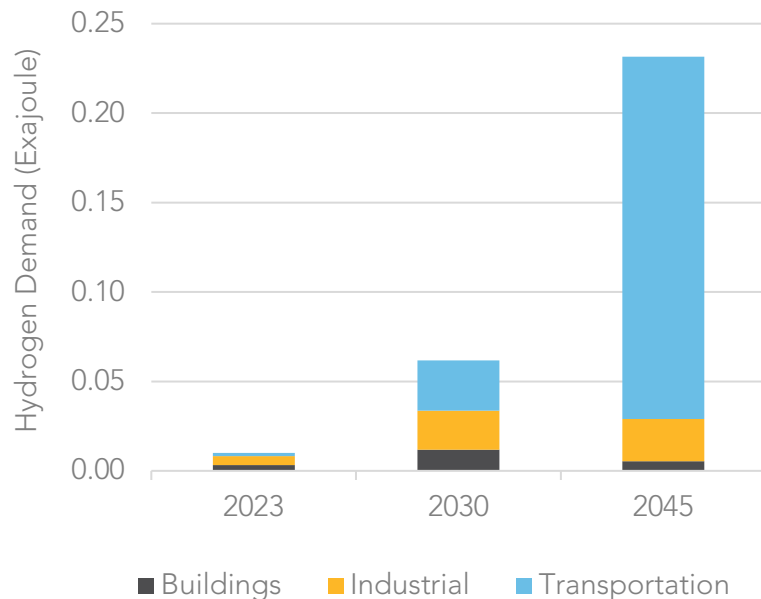
CARB rules advance zero-emission vehicle deployment:

- 100% light-duty new sales requirements by 2035
- Requirements to increase sales of zero-emission trucks

Incentives and other programs to help fleets adopt cleaner technology

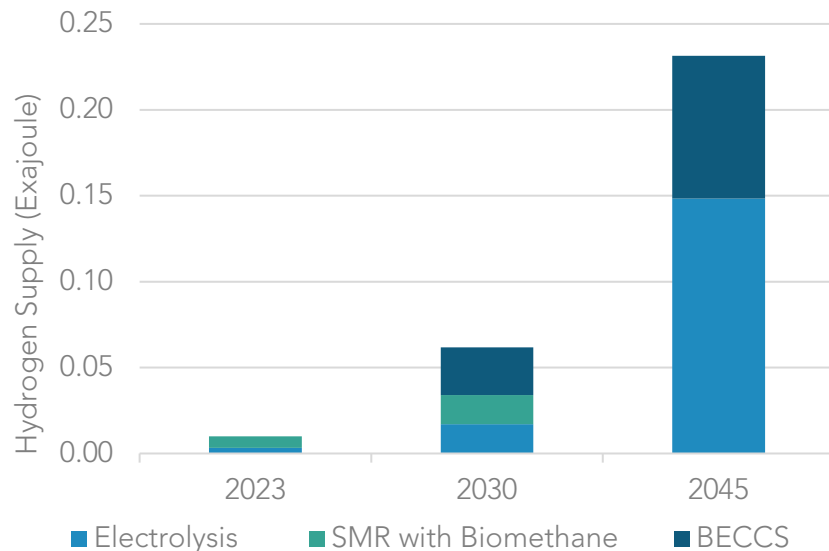


Hydrogen Use by Sector in the Scoping Plan



- 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



- 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

SMR: Steam Methane Reformation

BECCS: Bioenergy with Carbon Capture and Storage

Hydrogen Policy Landscape



California is pursuing state actions

- Hydrogen Market Development Strategy
- ARCHES public-private hydrogen hub consortium
- Programs and rules increase ZEV and hydrogen deployment
- Additional analysis and recommendations under SB 1075



- Other regional/local initiatives happening (e.g. Angeles Link, Lancaster Hydrogen City)



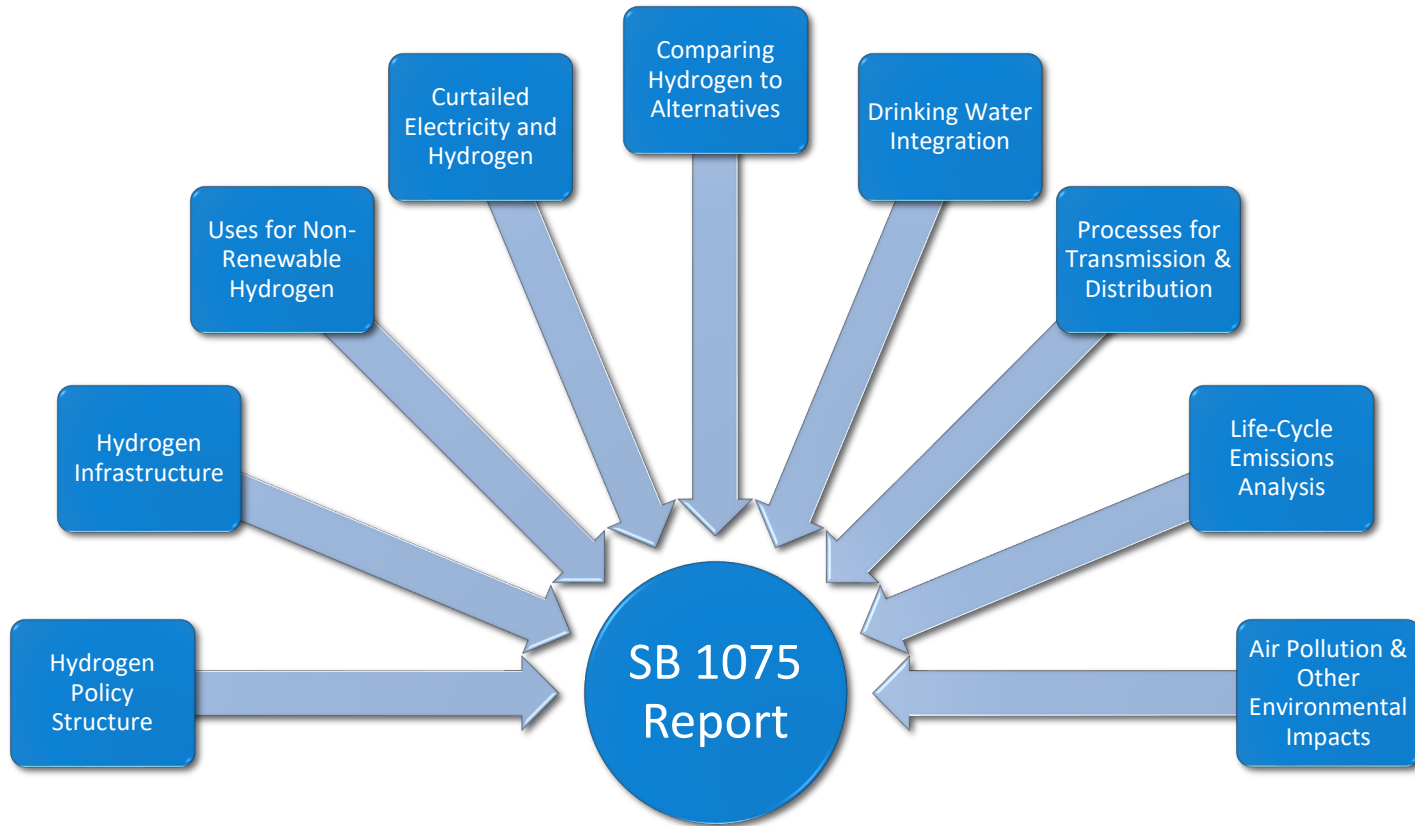
- DOE Regional Clean Hydrogen Hubs Program has awarded money to 5 hydrogen hubs, including 1 in California
- IRS released guidance for 45V Hydrogen Production Tax Credit on Jan 3rd

Legislative Direction: SB 1075 Analysis

- 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



Legislative Direction: SB 1075 Analysis



Questions for Feedback

- Please provide information on promising end uses for hydrogen that contribute to California's climate goals beyond those identified in the Scoping Plan.
- How do you expect the hydrogen supply and end use demand to change over the next decade?
- The SB 1075 Technology and State-level Assessments will evaluate environmental impacts including water consumption, land use, air quality, and safety associated with hydrogen production, distribution, storage, and end use. Can you suggest any specific metrics or analysis to consider when comparing impacts?
- What methods for measuring and/or mitigating potential hydrogen leakage from production, distribution, storage, and end use should this report consider?
- What concerns do communities have regarding the production, distribution, storage, and end use of hydrogen?

Public Engagement

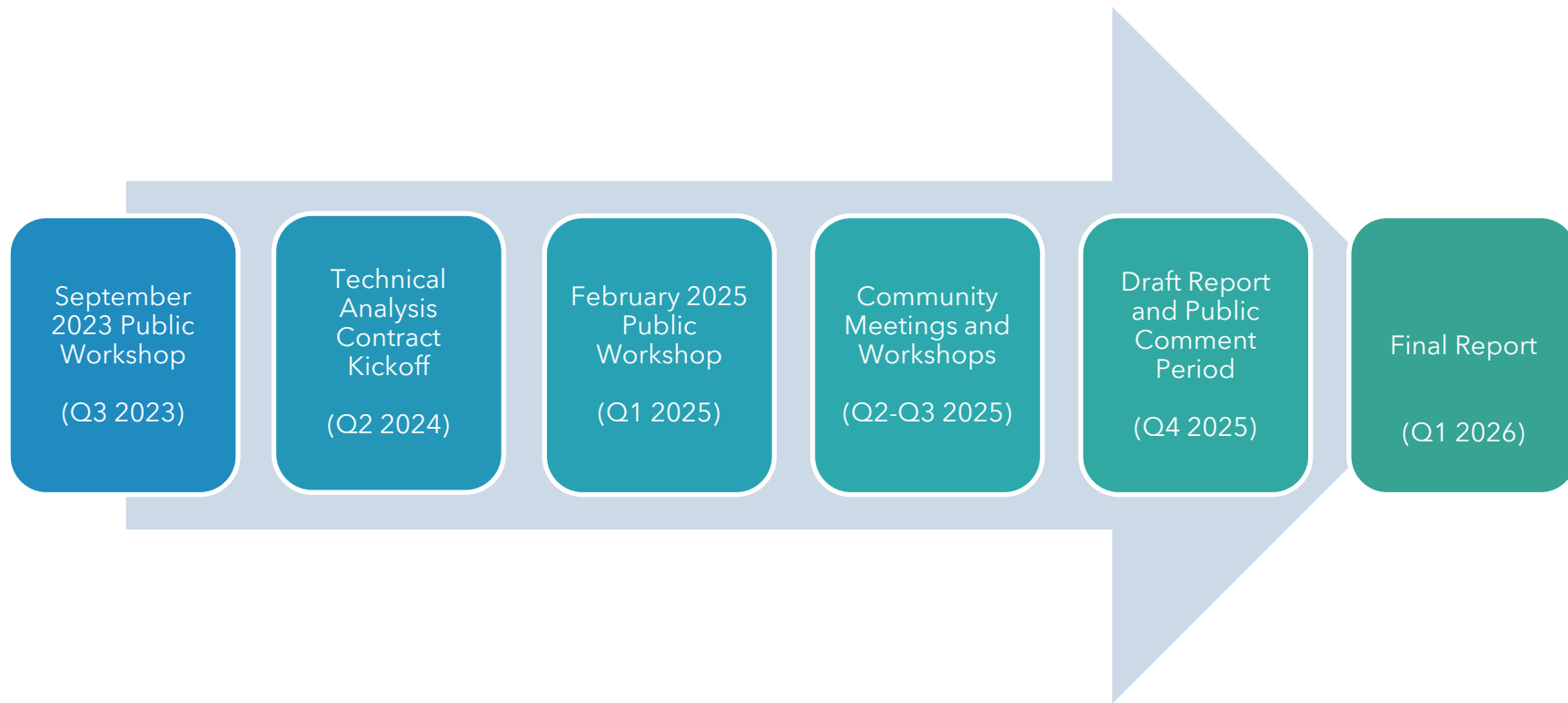
Workshops

- 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 Timeline



Feedback and Additional Information

- We welcome your input as we move forward in this process
 - Written feedback is requested by March 18, 2025
 - Submit feedback: <https://ww2.arb.ca.gov/public-comments/sb-1075-technical-analysis-workshop>
- For additional information, visit: <https://ww2.arb.ca.gov/our-work/programs/sb-1075-hydrogen>
- Contact us at: hydrogen@arb.ca.gov

References

- [California Greenhouse Gas Emissions from 2000 to 2022: Trends of Emissions and Other Indicators](#)
- [2022 Scoping Plan for Achieving Carbon Neutrality](#)
- [Appendix H: AB 32 GHG Inventory Sector Modeling](#)
- [AB 32 GHG Inventory Sectors Modeling Data Spreadsheet](#)

- All 2022 Scoping Plan Update documents may be found here:
<https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>



THANK YOU!