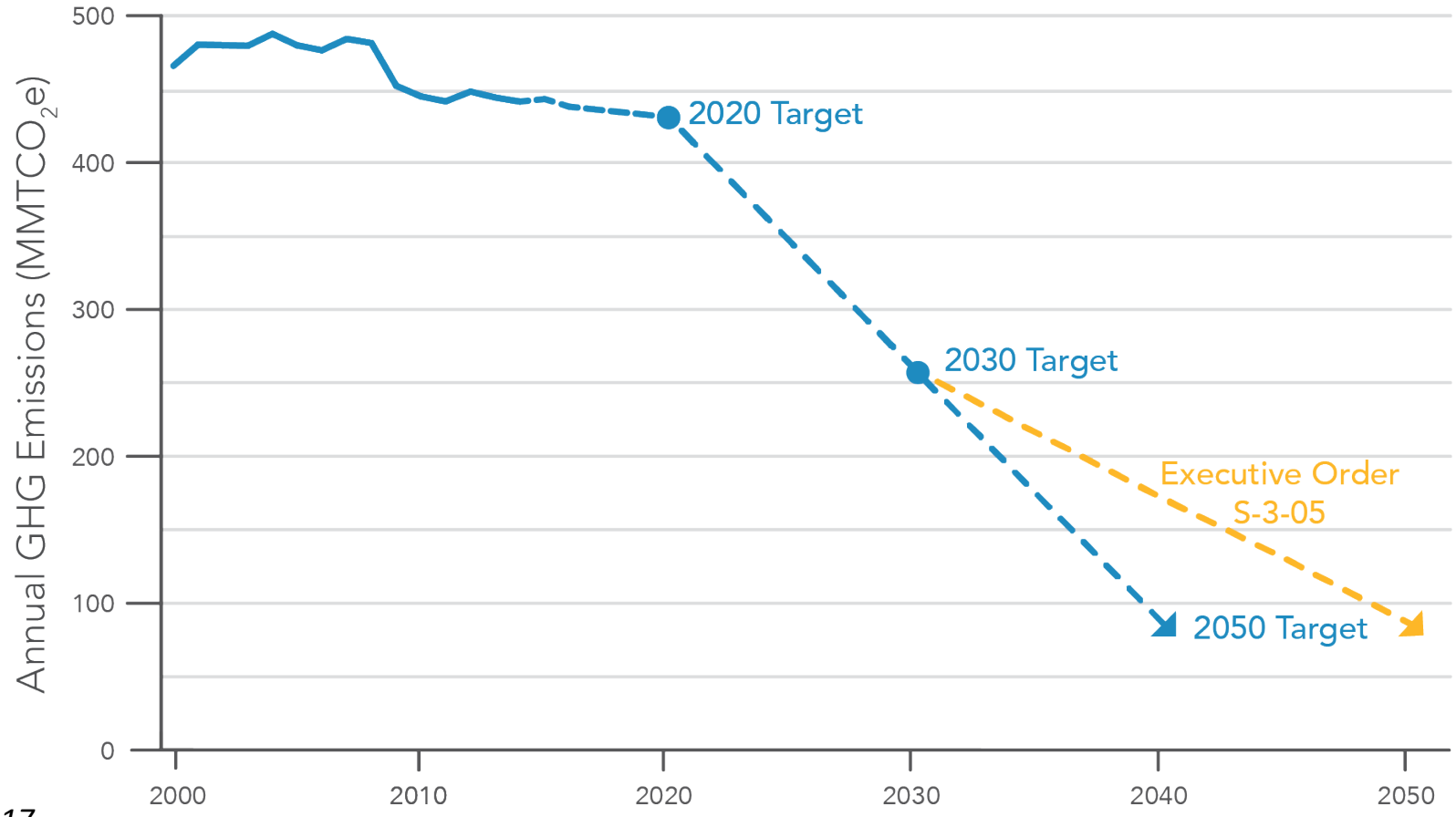
# Implementation Update: 2017 Scoping Plan

CALIFORNIA
AIR RESOURCES BOARD

# California GHG Emissions Reduction Targets




*Source: CARB, 2017*

# Climate Policy in a Changing Environment

***CARB must be flexible and adapt its programs to ever changing factors***

- Latest scientific findings
  - Health, air quality, climate, etc.
- Increasing impacts of climate change
- Latest technological developments
- Economic conditions
  - Smooth transitioning to a sustainable future while balancing affordability and jobs for all Californians today
  - Economic stimulus can support sustainable future

# 2017 Scoping Plan Portfolio

- Double building efficiency
- 50% renewable power **
- More clean, renewable fuels
- Cleaner zero or near-zero emission cars, trucks, and buses
- Walkable/bikeable communities with transit
- Cleaner freight and goods movement
- Slash potent "super-pollutants" from dairies, landfills and refrigerants
- Cap emissions from transportation, industry, natural gas, and electricity
- Invest in communities to reduce emissions
- Protect and manage natural and working lands

**In 2018, SB 100 increased the Renewables Portfolio Standard to 60% by 2030

# Scoping Plan: Implementation is Critical

***To achieve the GHG targets and air quality co-benefits, we must invest the resources and remain committed to ensuring the Scoping Plan policies are successfully implemented***

*2019 Highlights*

- 100% compliance in the Cap & Trade and the Low Carbon Fuel Standard (LCFS) programs
- LCFS incentivized displacement of over 2.5 billion gallons of petroleum fuel
  - Estimated Reductions >450 tons Diesel PM, >600 tons NOx
- Large investor-owned utilities are over-complying with the Renewables Portfolio Standard
- Over 100 dairy biogas capture projects funded by CDFA through CA Climate Investments
- California Climate Investments to support Low Carbon Transportation Programs

# Lessons Learned

Thoughtfully designed programs have pushed clean technology and fuels

Exportable programs are necessary to address global emissions

Revenues from carbon pricing continue to be important for addressing environmental justice and equity concerns

Retirement and public funds (i.e. economic recovery and stimulus packages) need to be leveraged to support a sustainable future

Reductions in fossil transportation fuels and VMT remain a challenge. Current situation may provide data on how to implement existing programs

# Protecting our Future

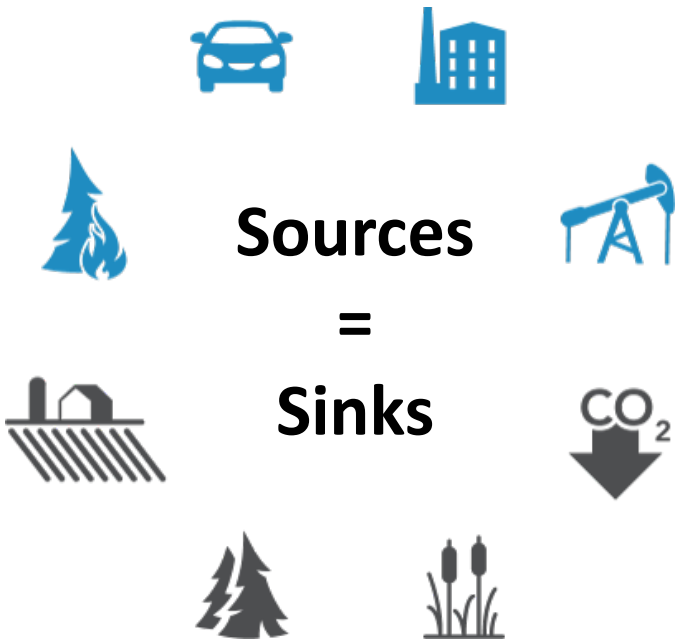
# Mid-Century Carbon Neutrality (CO2e)

**Step 1: Strive for zero emissions from all sources**

Fossil Energy

Industrial Processes

Natural and working lands



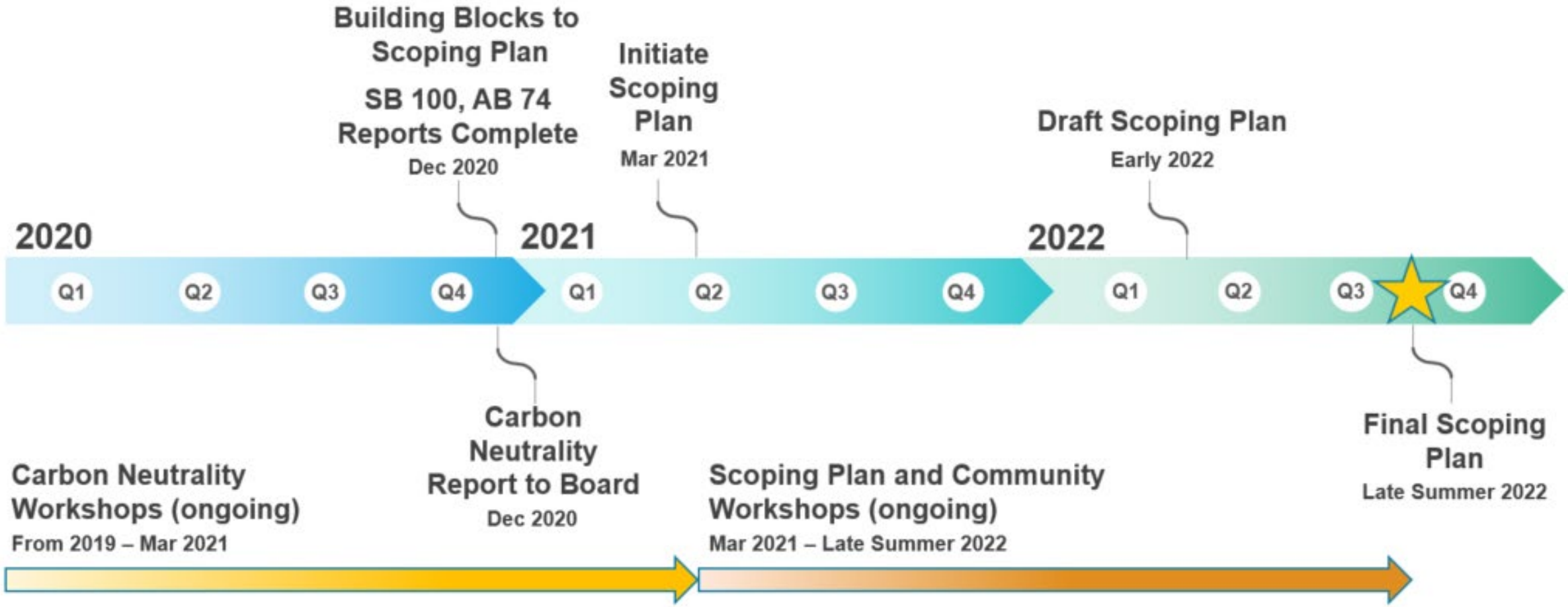

**Step 2: Maximize Sequestration**

Carbon capture and sequestration

Direct air capture

Natural and working lands

# Charting the Path to Carbon Neutrality



# Ongoing Multi-Agency Efforts

*CARB interagency collaborations*

- AB 74 - Transportation Carbon Neutrality
  - Studies will evaluate how to reduce demand for fossil fuels in the sector and how to manage the subsequent decline for supply
- SB 100 - Zero Carbon Electricity Retail Sales by 2045
- SB 1440 – Consideration of annual biomethane procurement targets for each gas corporation
- Continued efforts to reduce emissions from Natural and Working Lands

# *Focus on Transportation Sector:* Critical New Paradigm Necessary

Aggressive strategies needed to meet health-based air quality standards, SB 32 GHG requirements, and *carbon neutrality in 2045*

By 2045: Goal is zero-emission transportation sector through transformative action

ZEVs, coupled with infrastructure that increases climate resiliency

Sustainable communities that improve travel choices and reduce VMT

# Options for Sequestration (sinks) to Complement Mitigation

- Natural and working lands
  - Emit greenhouse gases, must be managed to emit less and store more carbon over time
- Carbon capture and sequestration (CCS)
  - Capture and store carbon from large emitters (cement, refineries)
- Direct air capture
  - Capture and store carbon from the atmosphere

# Focus on Natural and Working Lands

- Reaching carbon neutrality will require reduced emissions and increased sequestration on California lands
- A few key policy questions moving forward:
  - What existing mechanisms can be expanded to increase the pace and scale of climate actions on our natural and working lands?
  - What new mechanisms can be employed to increase these actions?
  - What are the key interactions between sectors that should assessed with relation to natural and working lands?

# Key Considerations

- Strive for zero emissions from every sector (transportation, industry)
  - Technologically feasible, cost-effective, minimal impacts to households and jobs
  - What can maximize air-quality benefits for most vulnerable communities
- Reduce and replace fossil fuels
- Potential limits to electrification, best use of RNG and renewable hydrogen
- Maximum potential for sequestration in natural and working lands
- Lessons learned from current public health and economic situation to inform strategies and implementation of emissions reductions efforts
- As part of economic recovery efforts, supporting investments and economic stimulus packages critical for a sustainable future and not back to status quo

# Next Steps

- Through 2020, continue public process on carbon neutrality
- Report to Board in late 2020 with key carbon neutrality findings
- Initiate Scoping Plan development process in Q1 2021
  - Convene the Environmental Justice Advisory Committee
- Through 2021, periodic updates to Board on Scoping Plan development progress
- 2022, workshops and release draft and final 2022 Scoping Plan Updates

# THANK YOU

CARB