



# 2030 Target Scoping Plan Update

June 23, 2016



# Presentation Outline

- ▣ Scoping Plan development update / Scoping Plan Concept Paper
- ▣ 2030 Target Scoping Plan framework
- ▣ GHG Inventory update
- ▣ Draft Business-as-Usual scenario
- ▣ Achieving the target
- ▣ Next steps

# Executive Order B-30-15

- Reduce greenhouse gas emissions to 40% below 1990 levels by 2030
- Update the AB 32 Scoping Plan to incorporate the 2030 greenhouse gas target

# 2030 Target Plan Development

- ▣ Collaborate with State Agencies
- ▣ Engagement with Legislature
- ▣ Coordination with other plans (i.e. 111(d), Cap & Trade, SIP, Freight Strategy, etc.)
- ▣ Public Process: Workshops
- ▣ Economic Analysis with Expert Reviewers
- ▣ Environmental Justice Advisory Committee Engagement
- ▣ Environmental Analysis (CEQA)
- ▣ Draft Report / Final Report (targeted measures and estimated emission reductions)

# Coordination with Other Plans, Programs and Legislative Mandates

- Continuation of programs established to reach the 2020 GHG emission reduction target
  - Cap-and-Trade Program
  - Low Carbon Fuel Standard
  - Renewable Portfolio Standard
  - Advanced Clean Cars Program
  - ZEV Program
  - Sustainable Freight Strategy
  - Short-Lived Climate Pollutant Strategy
  - SB 375 Sustainable Communities Strategy
  - Energy efficiency programs
- Recently adopted measures (e.g., SB 350), potential new measures, expansion of existing measures

# Intergovernmental Collaboration

- Federal, State and local actions can be complementary
- Many regional and local governments are leading climate efforts and are critical partners
- Previous Scoping Plans emphasized importance of local government partnerships
- More clarity needed on addressing specific actions local governments could take to support statewide targets
  - Exploring benefit of regional or local targets to assist local agencies on climate, best practices, etc.

# Expert Review of Economic Analysis

- Economic reviewer process outlined in January 2016 public workshop
- Structure
  - 5 core experts in economics, modeling and technology, with insight from additional experts as needed
  - Coordination with ARB and Energy & Environmental Economics (E3)
  - Vetting of findings using public process
- Scope of Work
  - Review analytical methods and tools, assumptions and inputs to PATHWAYS and REMI PI+ models, modeling of carbon price, macroeconomic feedback, handling of uncertainty
- Deliverables
  - Review economic analysis of 2030 Target Scoping Plan
  - Public presentation of findings

# Environmental Justice Advisory Committee

- Environmental Justice Advisory Committee (EJAC) reconvened to advise on Scoping Plan
- Eight public meetings to date (Sacramento, Brawley, El Monte)
- EJAC finalizing draft initial recommendations for agency consideration
- Organizing community meetings for summer
  - Sacramento, Oakland, Modesto/Fresno/Bakersfield, San Bernardino, Coachella, South LA, South Bay, San Diego, Imperial
  - Goals: education/outreach, community needs and priorities, Scoping Plan content, build partnerships

# Public Process to Date

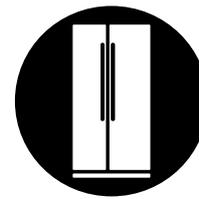
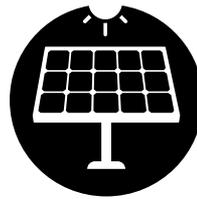
- ▣ Governor's Climate Change Strategy Pillar Workshops
  - ▣ July and August 2015
- ▣ 2030 Target Scoping Plan Update Kickoff Workshop
  - ▣ October 1, 2015
- ▣ Eight EJAC Public Meetings
  - ▣ December 2015 through June 2016
- ▣ Electricity/111(d) Public Workshops
  - ▣ December 14, 2015 and February 24, 2016
- ▣ GHG Modelling/Economic Analysis Public Workshop
  - ▣ January 15, 2016
- ▣ Sector Public Workshops on Natural & Working Lands and Ag
  - ▣ March 23, 2016 and April 27, 2016
- ▣ Scoping Plan Concept Paper
  - ▣ Released June 17, 2016
- ▣ Continued opportunity for robust public process

# Objectives for Scoping Plan

- ▣ Meet 2030 target
- ▣ Integrated system, acknowledging trade-offs
- ▣ Flexible framework for implementation
- ▣ Promote resilient economic growth
- ▣ Protect, enhance, innovate, and increase sequestration in the natural environment
- ▣ Improve public health
- ▣ Environmental justice
- ▣ Rely on sound science and research
- ▣ Set the path to 2050

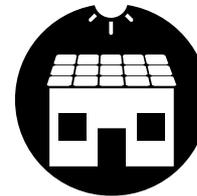
# Integrated Approach Example

Biomass Diversion  
& SLCP Reductions



Forest  
Management  
& Bioenergy

Land Protection  
& Avoided VMT;  
Urban Greening



Ag & Forest Waste  
Diversion to Biofuels

# GHG Emission Inventory

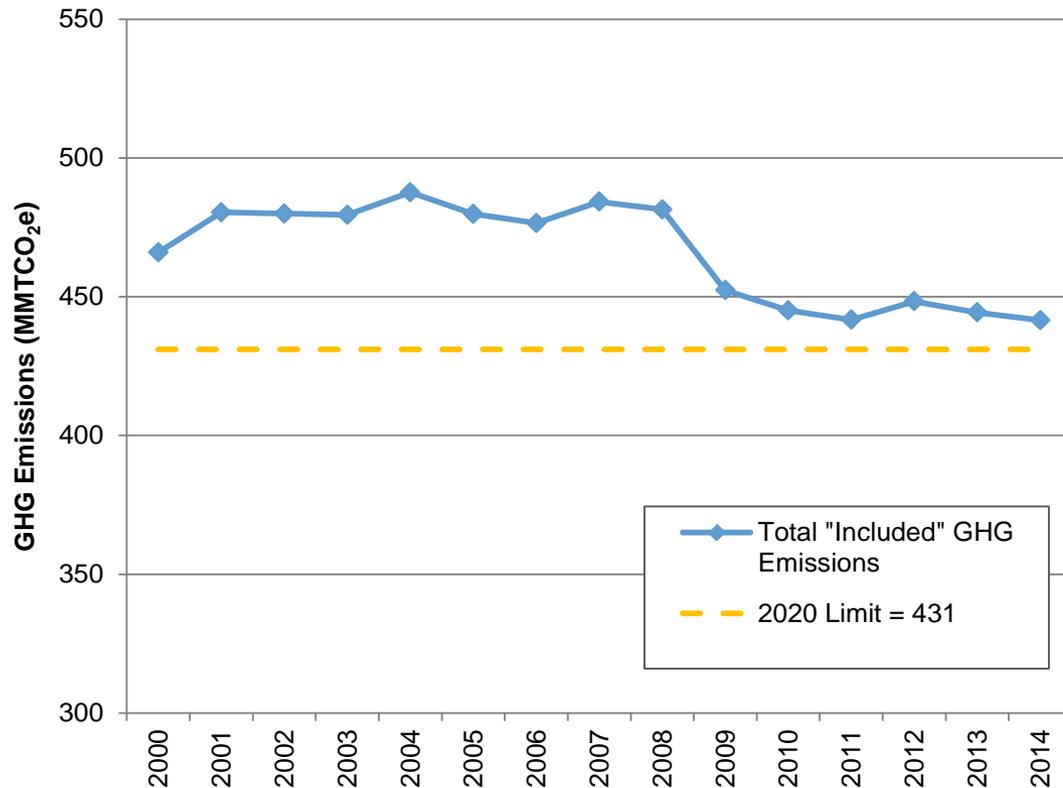
- Important tool for tracking GHG emission trends
- Critical in demonstrating progress towards 2020 target
- Follows Intergovernmental Panel on Climate Change (IPCC) Guidelines to ensure consistency and comparability with other national inventories
  - Provides estimates of amount of GHGs emitted to the atmosphere by human activities within CA
- AB 32 provided additional instruction to GHG Inventory compilation
  - Explicitly names 7 GHGs: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, NF<sub>3</sub>
  - Also include emissions from imported electricity
  - Establishment of 1990 emission level and 2020 emission limit

# Updates to 2016 Edition of GHG Inventory

- Classification of transportation biofuel emissions per IPCC Guidelines
  - Break out biodiesel, renewable diesel and biomethane into their own fuel category
  - Re-classify CO<sub>2</sub> from transportation biofuels as biogenic
  - Update entire time series from 2000 to 2014
- Re-classify natural petroleum seeps as excluded emissions
- Apply methodology update for previous years
- 2020 target unaffected by re-classifications due to negligible transportation biofuel volumes and very small natural petroleum seeps emissions in 1990

# California GHG Emissions Trends

## California GHG Emissions



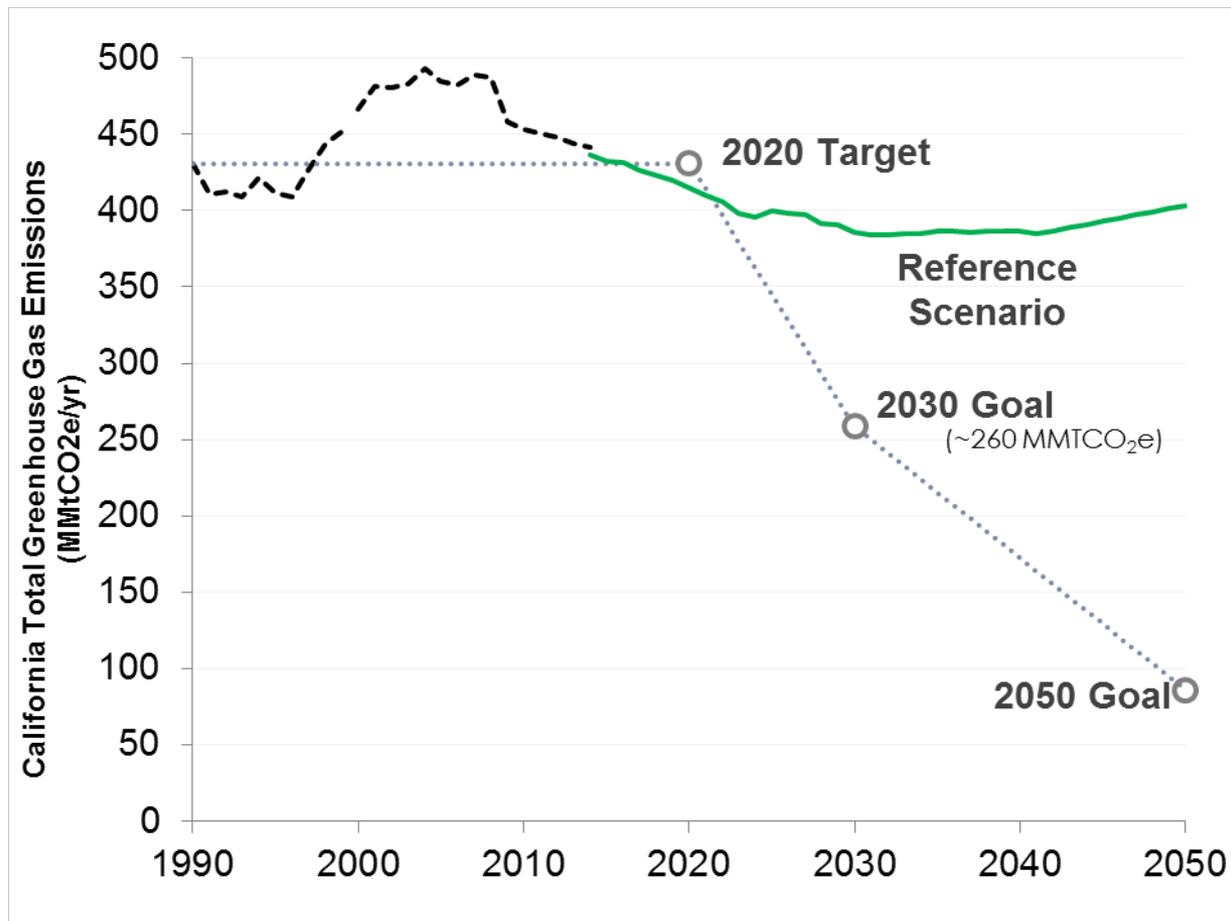
# Future Tracking of Impacts of AB 32 Programs

- Maintain a GHG inventory for purposes of time series and consistency with IPCC/US EPA GHG inventories
- Consider an additional framework to effectively track the broader GHG emission reductions of AB 32 programs
  - Land use impacts of Low Carbon Fuel Standard
  - International flows of Cap-and-Trade Program instruments
- Develop comprehensive inventory of GHG fluxes from CA natural and working lands

# Achieving the Target

- Need to understand amount of GHG reductions needed between now and 2030
- Draft reference case (“Business as Usual” or BAU)
  - Potential inputs and models discussed at January 15, 2016 public workshop
  - Extends existing actions to estimate GHGs in 2030
  - Draft reference scenario modeled, including updated methodology for estimating biofuel supplies

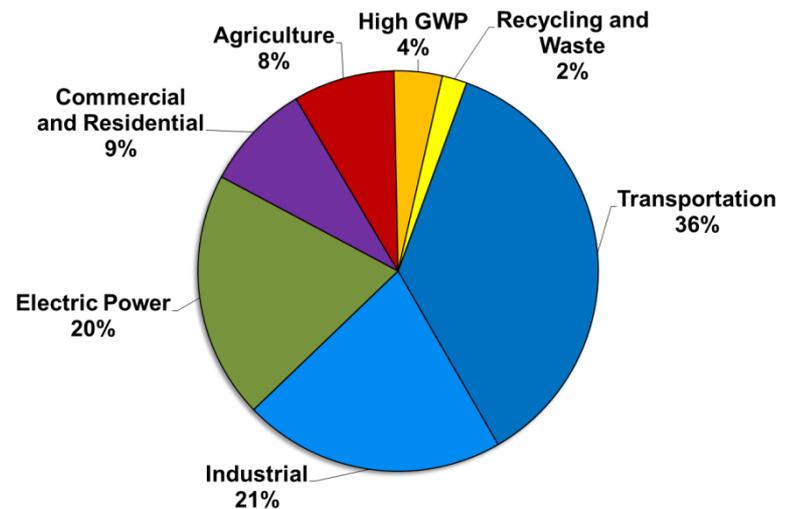
# Draft Reference Scenario



# Choosing a Path Forward

- Understand sources of emissions when considering opportunities for policies and programs
- Sector contribution changes over time
- Consider integrated nature of built and natural environments on policies

**2014 GHG Emissions by Sector**



# Closing the Gap

- ▣ Most of the policies that will be included in the 2030 Target Scoping Plan are already known
- ▣ Set of core complementary policies common across all scenarios
  - ▣ SB 350 by 2030
  - ▣ Mobile Source Strategy
  - ▣ Implement Draft Short-Lived Climate Pollutant Strategy,
  - ▣ SB 375 targets
  - ▣ Natural & Working Lands targets, etc.

# Closing the Gap, cont.

- ▣ Remaining “gap” is focus of scenario building and analytical work
- ▣ Potential options to fill gap:
  - ▣ Enhance and extend existing programs
  - ▣ New programs
  - ▣ Prescriptive regulations
  - ▣ Will be weighed against Scoping Plan objectives
- ▣ ARB staff preferred option includes post-2020 Cap-and-Trade Program

# Next Steps

- Hold regional public workshops on specific topics
  - Energy, Green Buildings, Transportation, Water, Waste, Industry
  - Input on closing the gap, scenario modeling, scope of Environmental Analysis, etc.
- Continue coordination with CA Dept. of Public Health on Scoping Plan Public Health Analysis
- Hold technical and economic workshops on economic analysis
- Coordinate with EJAC on regional community meetings
- Meet with stakeholders as requested

# Tentative Schedule

- ▣ Sector-specific public workshops – Summer 2016
- ▣ Technical and economic workshops – Summer 2016
- ▣ Release Draft 2030 Target Scoping Plan – Fall 2016
  - ▣ Include economic and environmental analyses
- ▣ Regional Workshops – Fall to Winter 2016
- ▣ Draft 2030 Target Scoping Plan presented to Board – November 2016
- ▣ Final 2030 Target Scoping Plan presented to Board – Spring 2017

# Public Comments

- Comment period on Concept Paper open through July 8, 2016 at 5:00 p.m.
- Links to submit both written comments and view all comments received available through ARB website:  
<http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>
- Additional opportunities to comment will be available at subsequent workshops