



Report on the Climate Change Scoping Plan Update

January 27, 2017



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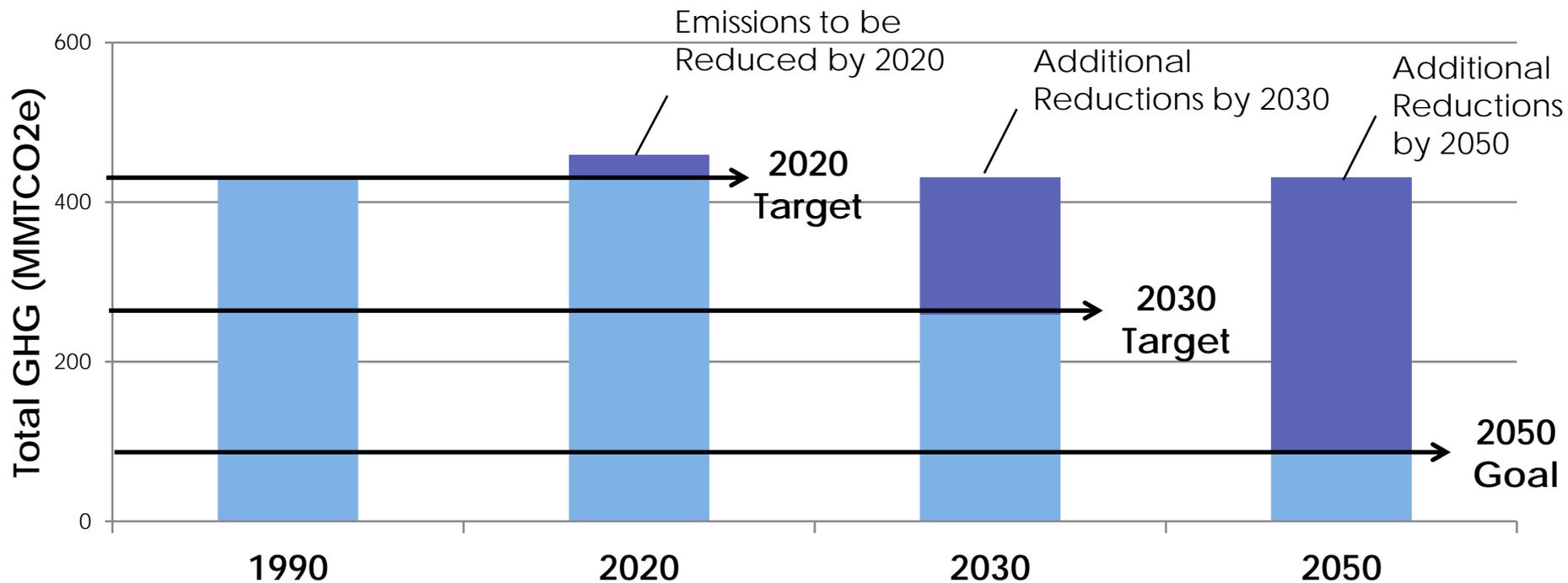
Background

- Most aggressive climate target in North America: 40% reduction in GHGs by 2030 compared to 1990 levels
 - Builds on California's success reducing GHGs
 - Aligns California with the rest of the world in climate change fight
- Proposed Plan draws on the successes and the lessons learned from the previous plans
- Proposes continuing major successful programs that have served as a model for other states and jurisdictions around the world
- Proposed Plan achieves GHG reduction target and continues to make our communities and economy more resilient and equitable at the same time

New Directives and Legislation

- ▣ Executive Order B-30-15
 - ▣ Reduce GHG emissions 40% below 1990 levels by 2030
 - ▣ Update Scoping Plan to incorporate 2030 GHG target
- ▣ Senate Bill 32 (SB 32) codifies 2030 GHG target
- ▣ AB 197
 - ▣ Consider the social costs of GHG reductions
 - ▣ Prioritize measures resulting in direct emission reductions
 - ▣ Follow existing AB 32 requirements—including considering cost-effectiveness and minimizing leakage

GHG Reduction Targets



*Executive Order B-30-15 and SB 32

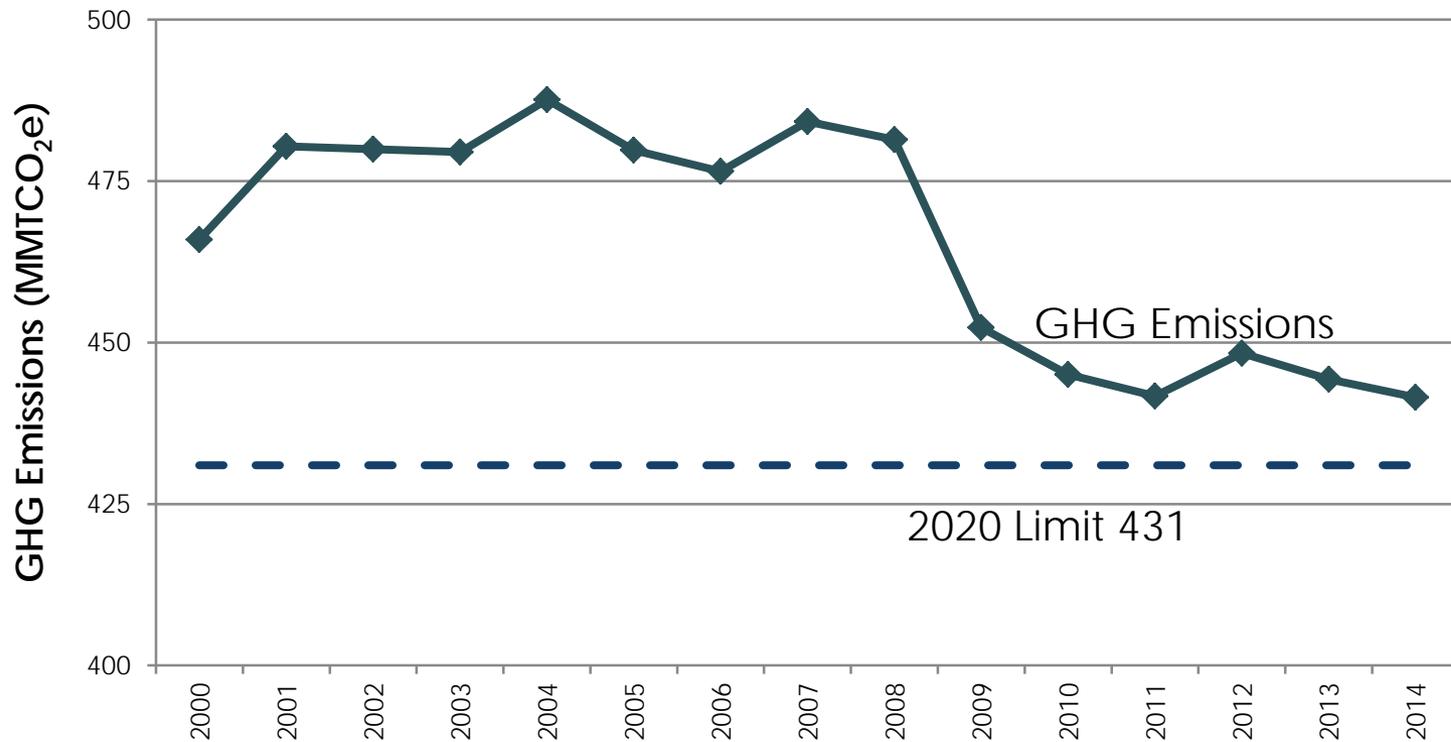
**Executive Orders S-3-05 and B-16-2012

Note: MMT = Million Metric Tons

Objectives for Scoping Plan

- ▣ Achieve 2030 target
- ▣ Provide direct GHG emissions reductions
- ▣ Provide air quality co-benefits
- ▣ Minimize emissions leakage
- ▣ Support climate investment in disadvantaged communities
- ▣ Protect public health
- ▣ Facilitate sub-national and national collaboration
- ▣ Support cost-effective and flexible compliance
- ▣ Support Clean Power Plan and other federal action

Progress to Date Reducing GHGs

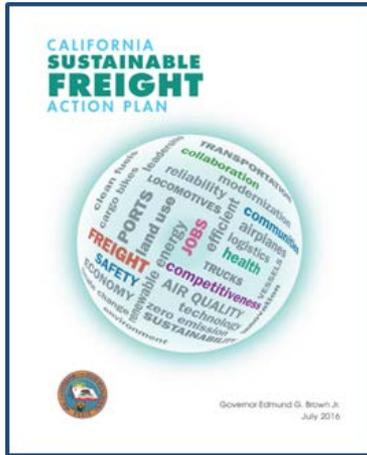


Current modeling shows GHG emissions will be below the 2020 target

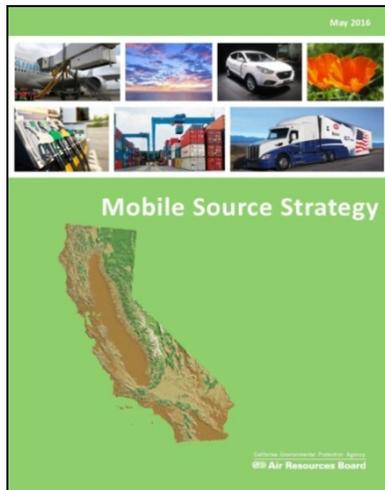
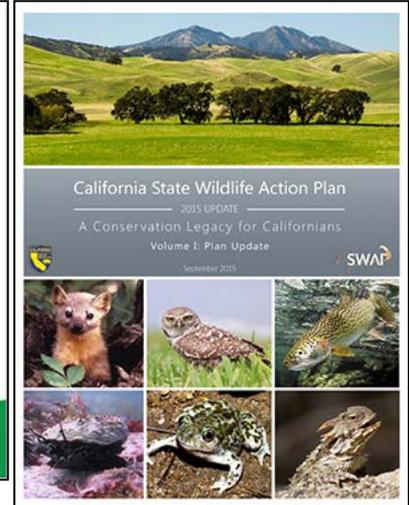
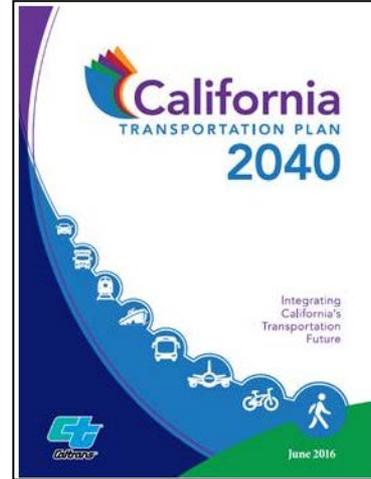
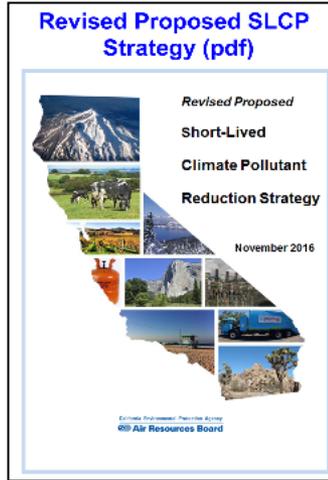
Building on an Existing Foundation

- Existing programs are delivering the emissions reductions needed to achieve the 2020 target
 - Program infrastructure exists to support continuation of existing programs
 - High compliance rates demonstrate regulated entities are able to successfully comply with existing programs
- Gross domestic product (GDP) has continued to grow
 - California is ranked as world's fifth largest economy
 - Per capita and per dollar of GDP GHG emissions have declined

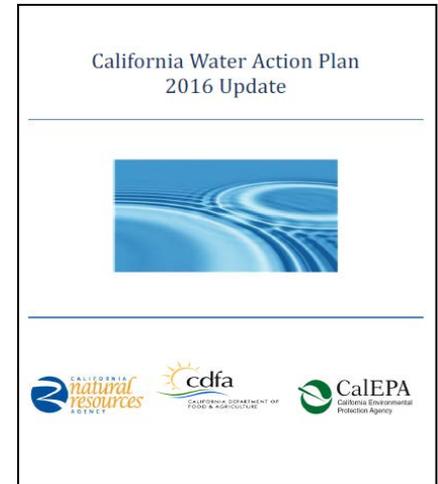
Foundational Plans for 2030



SB 375 Sustainable Communities Strategies



2030 Target Scoping Plan



2030 Target Scoping Plan Development

- ▣ 15 public workshops since kick-off in Fall 2015
- ▣ Environmental Justice Advisory Committee
 - ▣ 12 Committee meetings and
 - ▣ 11 Community meetings throughout the State
- ▣ Coordination across State Agencies
- ▣ Economic Reviewers
- ▣ Economic, environmental, and AB 197 analyses

Environmental Justice Advisory Committee

- ▣ Committee held 23 meetings throughout the State
 - ▣ 12 Committee meetings and 11 Community meetings
- ▣ Recommendations by sector
 - ▣ Partnership with Environmental Justice Communities
 - ▣ Equity
 - ▣ Coordination
 - ▣ Economic Opportunity
 - ▣ Long-Term Vision

Environmental Justice Advisory Committee Recommendations

- ▣ Recommendations intended “to be read and implemented holistically and not independently of each other”
- ▣ Long-term community engagement
- ▣ Culture shift in California
- ▣ Improve air quality in EJ communities
- ▣ Maximize benefits for all Californians
- ▣ Consider public health impacts and equity
- ▣ Develop metrics
- ▣ Coordination between government agencies

Proposed Scoping Plan Scenario

- ▣ *SB 350 – increase renewable energy and energy efficiency
- ▣ *SB 1383 – Short-Lived Climate Pollutant Reduction Plan
- ▣ *SB 375 – support sustainable community development
- ▣ *Mobile Source Strategy – help State achieve its federal and state air quality standards
- ▣ *Low Carbon Fuel Standard
- ▣ Sustainable Freight Action Plan
- ▣ New Refinery Efficiency Measure – 20 percent by 2030
 - ▣ Fewer GHG emissions per barrel of a refined product
- ▣ Post-2020 Cap-and-Trade Program
 - ▣ Trading and offset usage limit of 8 percent

*Existing commitments included in any Scoping Plan Update

Natural and Working Lands

- Goal: Manage California's Natural and Working Lands, including green space in urban areas, to be a resilient net sink of carbon in 2030, 2050 and beyond
- Continued efforts to model a reference case and management practices to inform performance targets
- By 2018, develop an Integrated and Working Lands Action Plan to detail how this sector becomes a net carbon sink
- SB 1383 goal to reduce methane emissions from livestock manure and dairy manure management operations

Proposed Plan Meets All Objectives (1 of 2)

- ▣ High probability of meeting 2030 target with hard cap
- ▣ Provides direct GHG emissions reductions from all sectors
- ▣ Provides air quality co-benefits through both command and control regulations and the Cap-and-Trade Program
- ▣ Protects public health through climate leadership, co-benefits, and investment in disadvantaged communities
- ▣ Minimizes emissions leakage through free allocation

Proposed Plan Meets All Objectives (2 of 2)

- ▣ Supports climate investment in disadvantaged communities by continuing to provide proceeds for GGRF
- ▣ Facilitates sub-national and national collaboration through linkage of Cap-and-Trade programs
- ▣ Supports cost-effective and flexible compliance by allowing trading
- ▣ Supports Clean Power Plan and other federal action because the Cap- and-Trade program can be used to comply with CPP

Alternatives Evaluated

- ▣ **No Cap-and-Trade** – rely on direct measures for all reductions
 - ▣ Higher estimated cost
 - ▣ Harder to address leakage concerns
 - ▣ Less certain to meet 2030 target because regulatory outcomes uncertain
 - ▣ No proceeds to fund GGRF
 - ▣ Difficult to link with other jurisdictions
- ▣ **Carbon Tax** – replace Cap-and-Trade with a carbon tax
 - ▣ Less certain to meet 2030 target because hard to set correct tax rate
 - ▣ Harder to address leakage concerns
 - ▣ Difficult to link with other jurisdictions
 - ▣ Requires additional statutory authority

Alternatives Evaluated

- **All Cap and Trade** – rely on Cap-and-Trade for reductions, no refinery measure and hold LCFS at 10% (all else is already under way or required by statute)
 - Less certainty of emission reductions at refineries
- **Cap-and-Tax** – require each facility/entity to reduce emissions annually with no trading, emissions would be taxed
 - Higher estimated cost
 - Harder to address leakage concerns, unless cap is set at different levels for trade exposed industry
 - Some facilities may need to cut output to meet targets; jobs/economic impacts
 - Difficult to link with other jurisdictions

Proposed Plan Analyses

- Estimated cumulative GHG reductions by proposed measure
- Estimated GHG reductions in 2030 for each evaluated measure (AB 197)
- Estimated criteria pollutant and air toxics reductions in 2030 for each evaluated measure (AB 197)
- Societal costs for each evaluated measure (AB 197)
- Cost-effectiveness for each evaluated measure (AB 197)
- Macroeconomic impacts
- Environmental impacts

Summary of Economic Analysis

- Under the Proposed Plan, the California economy, employment and personal income will continue to grow
 - The overall impacts of the Proposed Plan are negligible when compared to the overall California economy
 - Annual growth rates in GDP, employment, and personal income are essentially unchanged under the Proposed Plan when compared to the Reference, or no action, scenario
- The Proposed Plan is estimated to have an economic impact ranging from a cost of \$7.6 billion to a savings of \$3.8 billion in 2030 depending on future fuel prices

Summary of Economic Analysis

- The Proposed Plan achieves the SB 32 target at the lowest cost of the analyzed scenarios
- The estimated impact on California GDP is on the order of half of one percent of the estimated \$3.4 trillion economy in 2030
 - The Proposed Plan will result in a 3-month delay in reaching the GDP projected under the Reference, or no action, scenario
- The estimated annual cost to a California household ranges from \$30 to \$214 dollars in 2030 depending on the Cap-and-Trade allowance price

Environmental Analysis (EA)

- Draft EA provides an analysis of both the beneficial and adverse impacts and feasible mitigation measures for the reasonably foreseeable compliance responses associated with the recommended measures

Public Health

- ▣ Achieving Health Equity through Climate Action
- ▣ Potential Health Impacts of Climate Change Mitigation Measures
- ▣ Communications Supporting Climate Change Behaviors and Policies
- ▣ Community Engagement Leads to Robust, Lasting and Effective Climate Policies

Intergovernmental Collaboration

▣ Federal

- ▣ California policies have been foundation for national policies
- ▣ U.S. EPA Clean Power Plan support State efforts

▣ State

- ▣ Policies for State climate goals
- ▣ Action, advocacy, and collaboration

Local Action

- ▣ Opportunities to support State climate goals
- ▣ Recommended community-wide goal of 6 MTCO₂e per capita by 2030 and 2 MTCO₂e per capita by 2050 implemented through Climate Action Plan
- ▣ Beyond plan level actions, local governments can support State goals through individual projects via CEQA
 - ▣ Projects with emissions in excess of threshold, incorporate all feasible mitigation

Next Steps

- ▣ CEQA comment period: January 20 – March 6
- ▣ Workshops in February and March
- ▣ EJAC and Community Meetings
- ▣ February Board Hearing
- ▣ March 2017: Release Final Proposed Scoping Plan
- ▣ April 2017: Final Board consideration