The Climate Change Scoping Plan Update
Environmental Justice Advisory Committee Meeting
February 14, 2017
Outline

- Proposed Plan Overview
  - Objectives and GHG Targets
  - Background Summary
  - Proposed Strategy to 2030 GHG Target
  - Natural and Working Lands
  - Alternatives Evaluated
  - Analyses
- Next Steps
GHG Reduction Targets

Emissions to be Reduced by 2020

Additional Reductions by 2030

Additional Reductions by 2050

*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
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
Figure II-2. Proposed Scoping Plan Scenario – Estimated Cumulative GHG Reductions by Measure (2021–2030)

- **Cap and trade**
- **SLCP**
- **Mobile Sources CFT and Freight**
- **Energy efficiency (Res, Com., Ind. Ag. & TCU)**
- **50% RPS**
- **Refinery (20% reduction)**
- **Low Carbon Fuel Standard (18%)**
- **Demand response and flexible loads**

* Total non Cap-and-Trade Measures
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
Policy Analysis
No Cap-and-Trade (Alternative 1)

**Benefits**
- Under ideal conditions, delivers more cumulative emission reductions than needed to achieve 2030 target, but emissions start to increase in later years
- Majority of reductions due to enhanced known commitments
- New measures deliver refinery and industrial facility GHG emission reductions

**Drawbacks**
- New statutory authority needed for some policies and measures
- Fewer options for minimizing emissions leakage
- Limited opportunities for international or subnational collaboration through linkages
- No auction proceeds to fund Greenhouse Gas Reduction Fund Investments
- Need to identify other measures for compliance with CPP
- Need additional funding for new incentive programs
- Uncertainty may result in lower reductions and that target is not achieved
Policy Analysis
Carbon Tax Scenario (Alternative 2)

Benefits
- Majority of reductions due to known commitments
- New measure delivers refinery facility GHG emission reductions
- Provides compliance flexibility
- Could provide revenue for potential Greenhouse Gas Reduction Fund Investments, or other uses

Drawbacks
- Carbon tax does not include an explicit emissions limit (does not guarantee reductions-uncertainty)
- If reductions aren’t realized, additional measures need to be implemented quickly to make up unrealized reductions
Policy Analysis
Carbon Tax Scenario (Alternative 2) cont.

Drawbacks, cont.

- New statutory authority is needed
  - Structure of carbon tax is unclear absent of legislative direction—difficult to evaluate
  - Options to minimize emissions leakage are unclear (include exemptions for trade exposed sectors, putting burden on other sectors for GHG reductions)
- May not achieve reductions beyond the known measures
- No clear path for international and subnational collaboration through linkages
- Uncertain potential for additional GHG reductions at covered entities
- Does not include an enforceable mandate as required by US EPA to reduce emissions at the stack - would need to identify other measures for compliance with CPP
Policy Analysis
All Cap-and-Trade Scenario (Alternative 3)

Benefits
- Majority of reductions due to known commitments
- Provides compliance flexibility
- Could provide revenue for potential Greenhouse Gas Reduction Fund Investments, or other uses

Drawbacks
- No refinery measure
- No enhancement to Low Carbon Fuel Standard (keep at 10% reduction in CI)
- Less certainty about amount of greenhouse gas reductions at refineries
Policy Analysis
Cap-and-Tax Scenario (Alternative 4)

**Benefits**
- Majority of reductions due to known commitments
- Declining cap delivers additional GHG reductions beyond other measures to achieve the 2030 limit

**Drawbacks**
- Additional work would be needed to address new industry moving to the State
- Would need regulation to set individual caps for all entities, including establishing a base year
- Staff does not believe each sector can reduce at this level year over year
- Expected to be more cost than proposed plan and may result in loss of industry, jobs, and GDP
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.
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
Next Steps

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