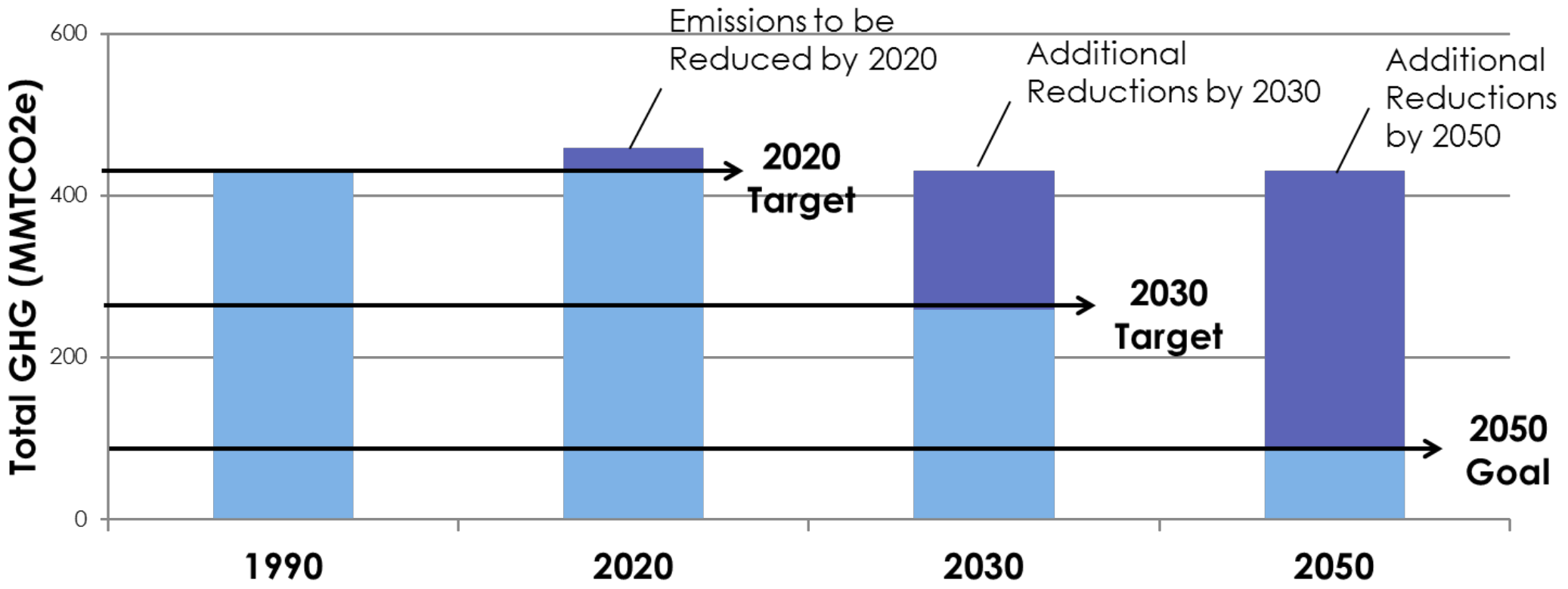


Cap-and-Trade Regulation and Mandatory GHG Reporting Regulation 2018 Amendments



NOVEMBER 15, 2018

Key Climate Legislation and Executive Orders



Note: MMT = Million Metric Tons

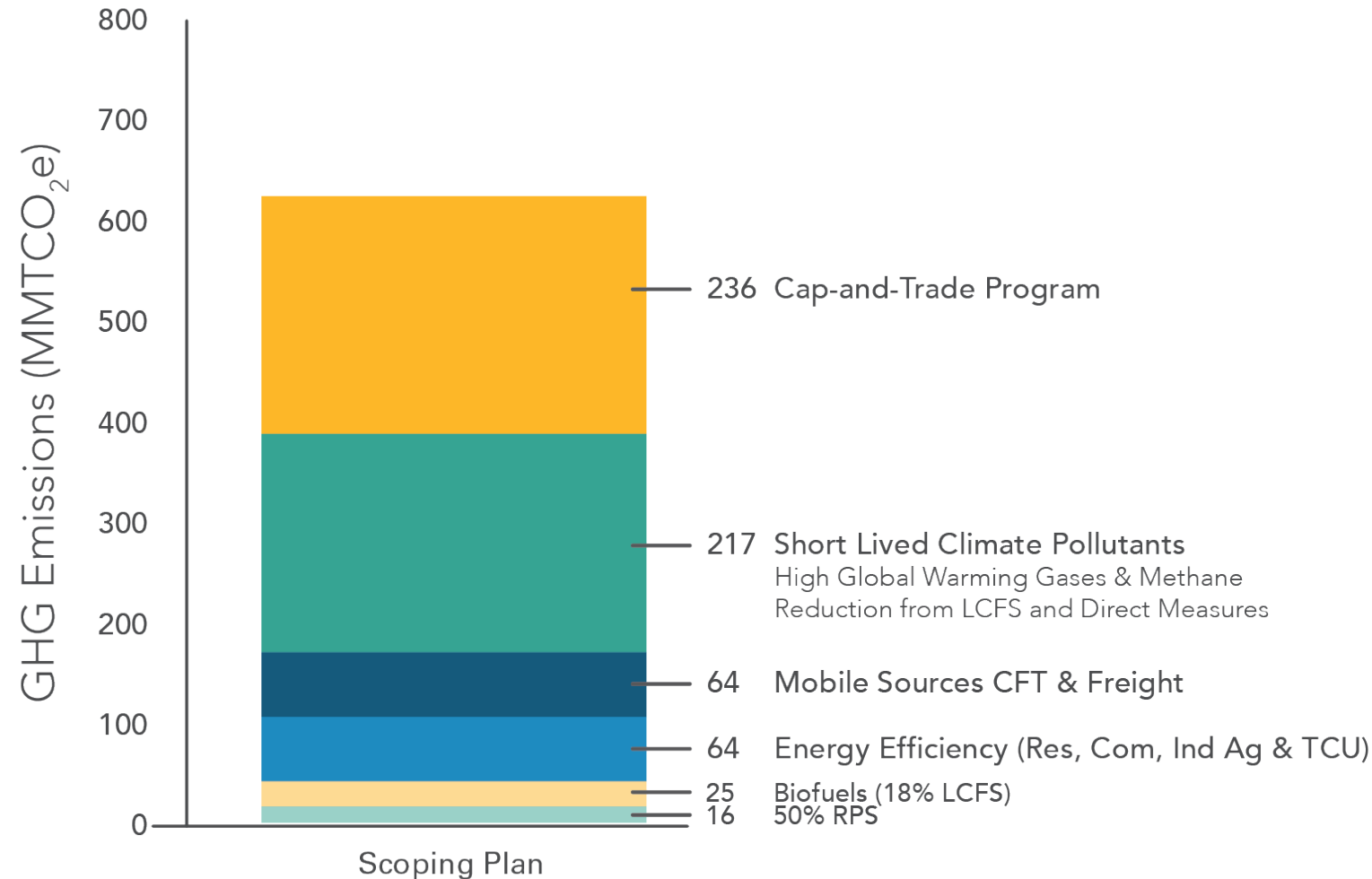
Cap-and-Trade Program Background



- Critical part of State strategy to achieve AB 32 and SB 32 GHG reduction targets
 - 2017 Scoping Plan that includes Cap-and-Trade is 4 times less costly than alternatives
- Covers ~80% of State's emissions and works in concert with other complementary air quality and climate policies
 - Cap-and-Trade designated in AB 398 to reduce GHG emissions for oil and gas extraction and refinery sectors
- Greater than \$8 billion generated for California Climate Investments
 - ~50 percent of investments are benefiting disadvantaged communities

Role of Post-2020 Cap-and-Trade Program

- Complement other climate strategies
- Contribute significant reductions towards achieving SB 32
- Transform the way we develop and use energy

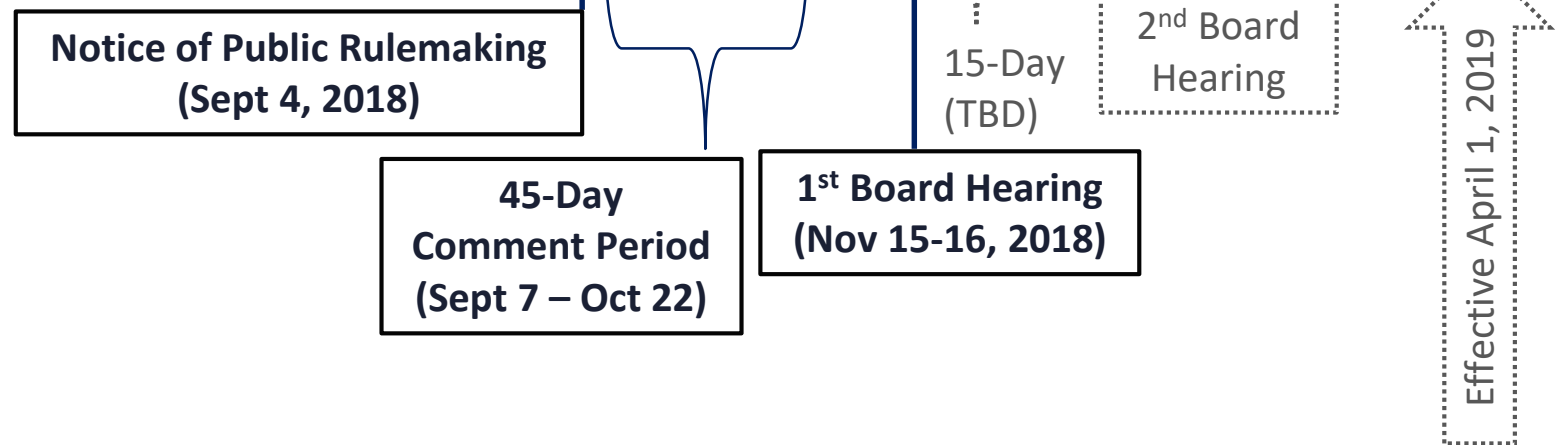


Rulemaking Timeline

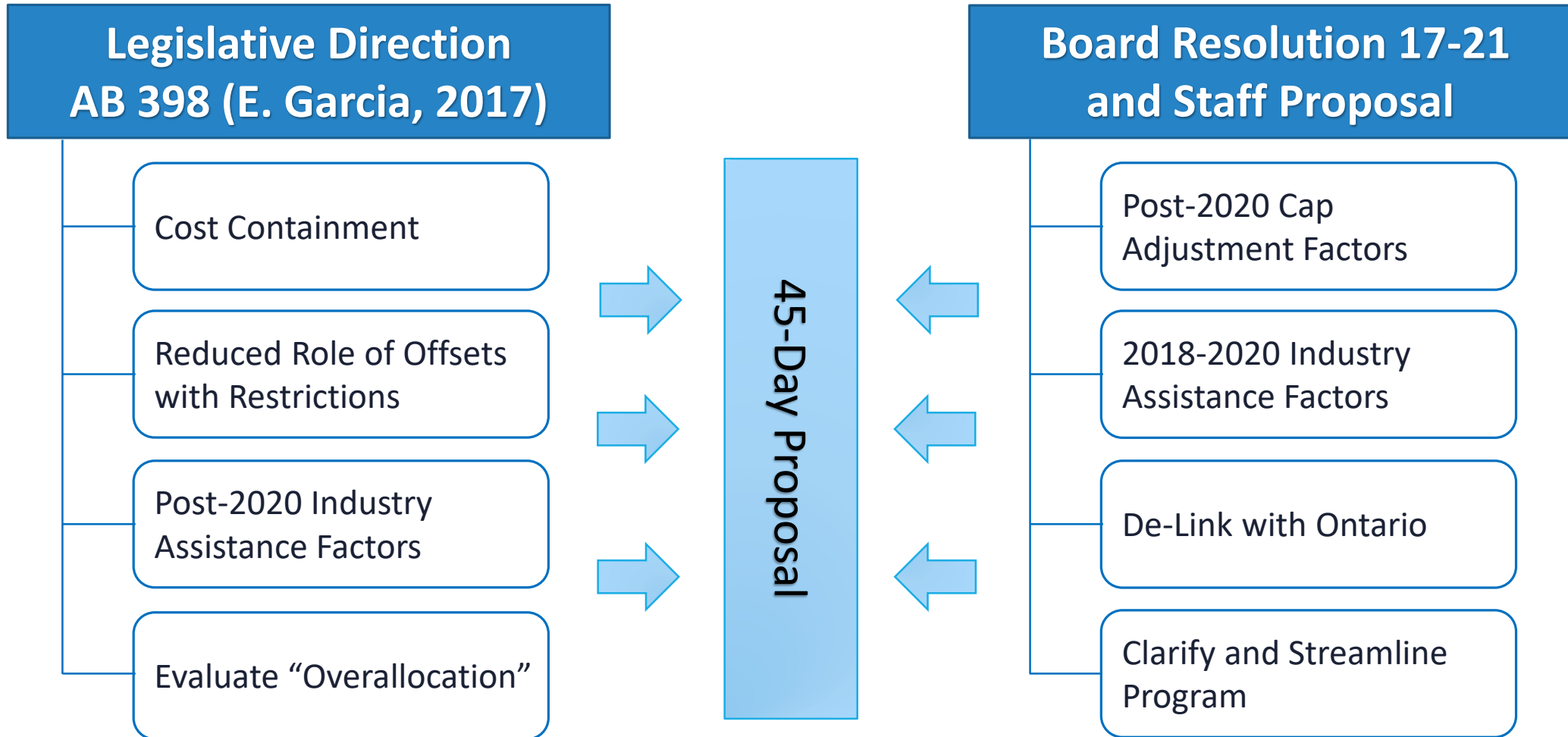
Informal Public Process Workshops



Formal Rulemaking Activity



Key Objectives of 2018 Amendments



Staff Evaluation of Banking Rules and “Over-allocation” (1 of 2)

Does the design of the Cap-and-Trade Program support a steadily increasing carbon price signal to prompt the needed actions to reduce GHG emissions?



Yes, historical data demonstrates the carbon price has steadily increased over time

Are the pre- and post-2020 caps set appropriately given the Cap-and-Trade Program’s role in achieving the statewide GHG reduction targets when taking into account complementary policies?



Yes, caps are binding on modeled GHG emissions and conform to the statewide GHG reduction targets

Staff Evaluation of Banking Rules and “Over-allocation” (2 of 2)

Does California need to make adjustments to its Cap-and-Trade Program to address potential “over-allocation” similar to actions taken in the European Union Emissions Trading System and Regional Greenhouse Gas Initiative?



No, this Program has features that already support a steadily increasing carbon price

Is there any evidence that future allowance prices would not continue to gradually increase to prompt the needed actions to reduce GHG emissions?



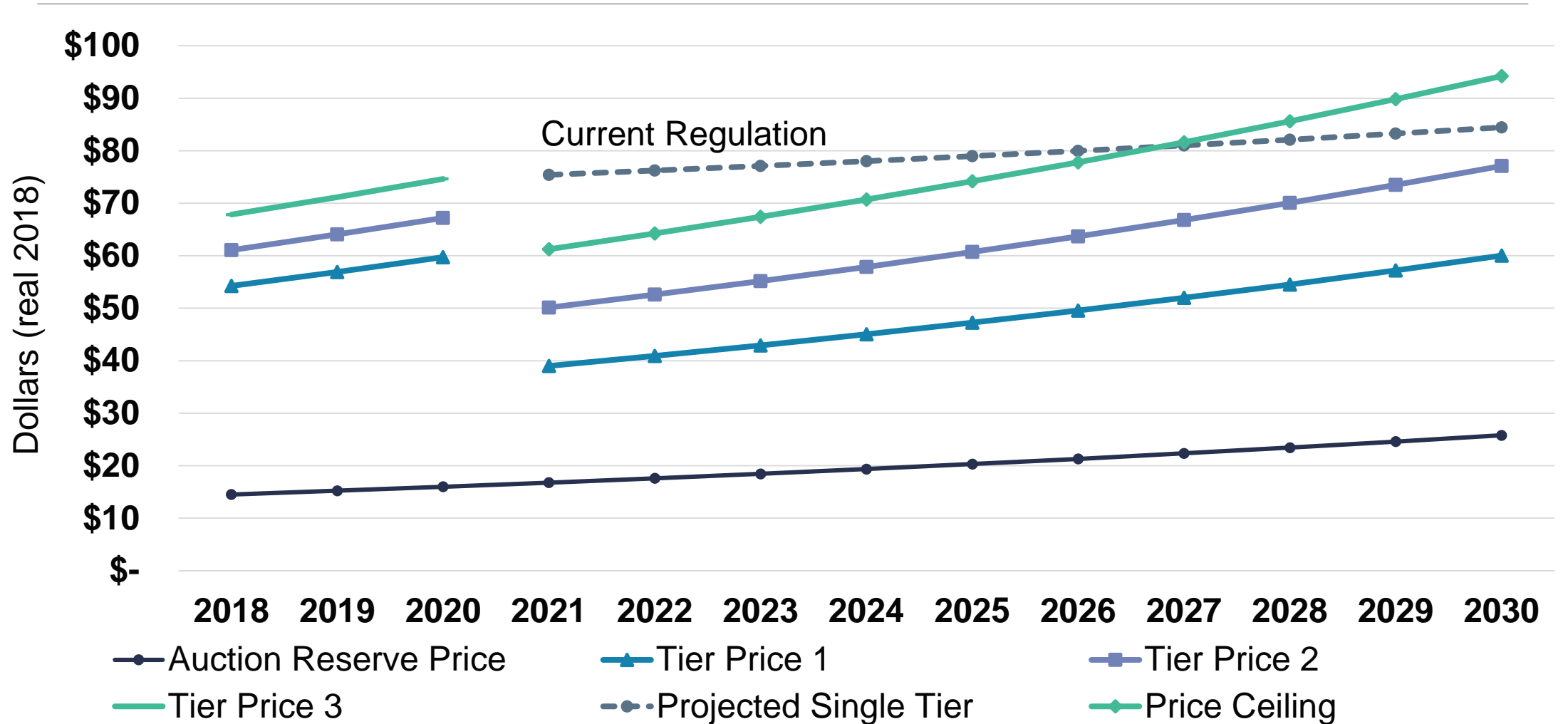
No, staff and third-party analyses do not indicate allowance prices would collapse or stagnate

What would happen if caps from 2021 through 2030 were reduced in response to concerns about unused allowances from 2013 through 2020?



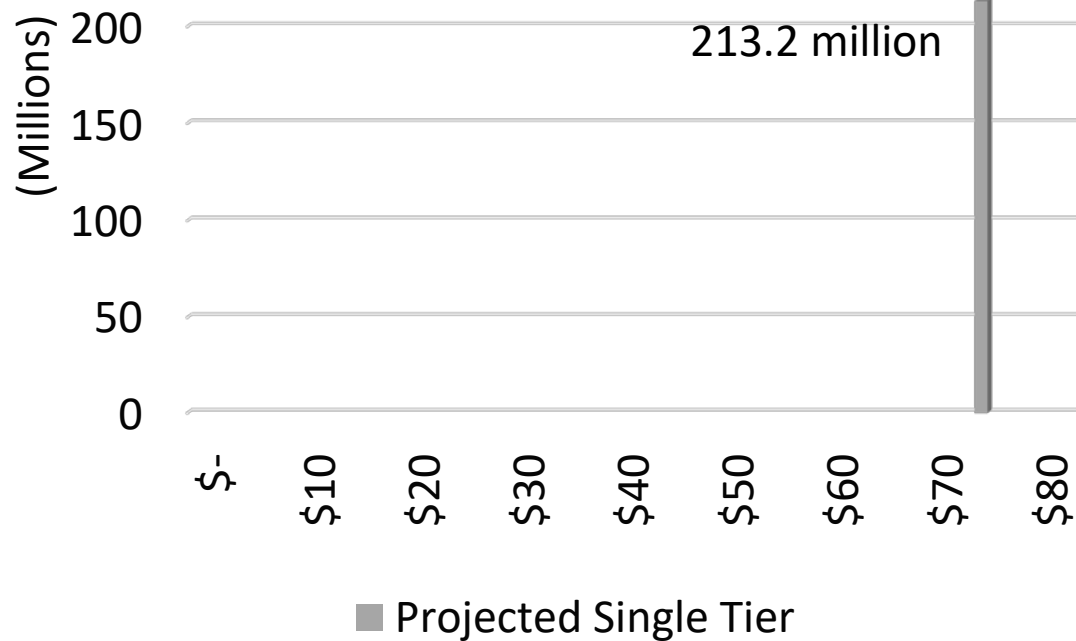
Reduced caps would increase allowance prices today

Price Ceiling and Reserve Tiers

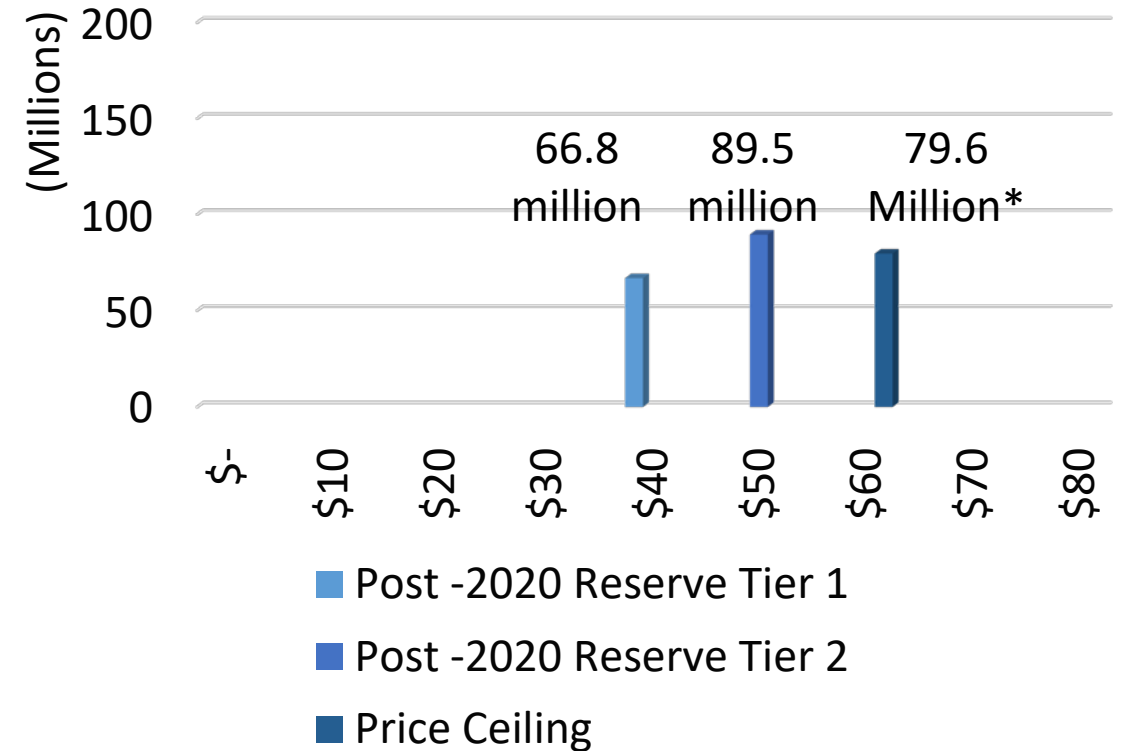


Proposal for More Allowances at Lower Prices

Current Regulation: Projected Single Tier Reserve Allowances Available in 2021



Proposed Amendments: New Post-2020 Reserve Allowances Available in 2021



*If allowances exhausted, proposal includes sale of price ceiling units; moneys from sale would fund GHG reductions pursuant to AB 398

AB 398 Considerations for Setting Price Ceiling

Avoid Adverse Impacts to Economy and Households

2017 Scoping Plan shows Cap-and-Trade Program achieves 2030 target at lowest cost

Consider Full Social Cost of Carbon

Acknowledges current values for full social cost of carbon are underestimates

Cost to Achieve Reductions

Considers costs of existing and known technologies to reduce emissions

Cost Containment Tier Prices in 2020

Ensures early investments in technology and allowances are not devalued

Auction Reserve Price Relative to Price Ceiling

Ensures sufficient time for price discovery and implementation of actions to reduce emissions

Avoid Environmental and Economic Leakage

Ceiling is consistent with existing Regulation with higher levels of allowance allocation

**Price
Ceiling**

Offset Amendments (1 of 2)

- Reduce offset usage limits
 - Calendar year emissions for 2021 to 2025 have an offset usage limit of 4 percent for compliance
 - Calendar year emissions for 2026 to 2030 have an offset usage limit of 6 percent for compliance
- Direct Environmental Benefits in the State
 - The reduction or avoidance of emissions of any air pollutant in the State or reduction or avoidance of any pollutant that could have an adverse impact on waters of the State
 - For entity's compliance, no more than one-half of the offset usage limit may be sourced from projects that do not provide direct environmental benefits in the State

Offset Amendments (2 of 2)

Implementing “Direct Environmental Benefits in the State”

- Performance standard for projects located in-state or sourced with gases from in-state
 - Consistent with approach to implement additionality
 - Criteria is established by project type and if projects conform to all protocol requirements, they are determined to meet all offset-related criteria
- Case-by-case review for projects located out-of-state or sourced with gases from out-of-state
 - Burden is on project developers to demonstrate how the project meets the requirements of “direct environmental benefits in the State”
 - CARB staff reviews submitted information and makes a determination

Ontario Cap-and-Trade Program Linkage



June 15: Official communication from Government of Ontario to end cap-and-trade regulation and withdraw from Aug. 2018 Joint Auction

June 15: CARB and Québec take steps to protect environmental stringency of linked market and suspend transfers with entities registered in Ontario

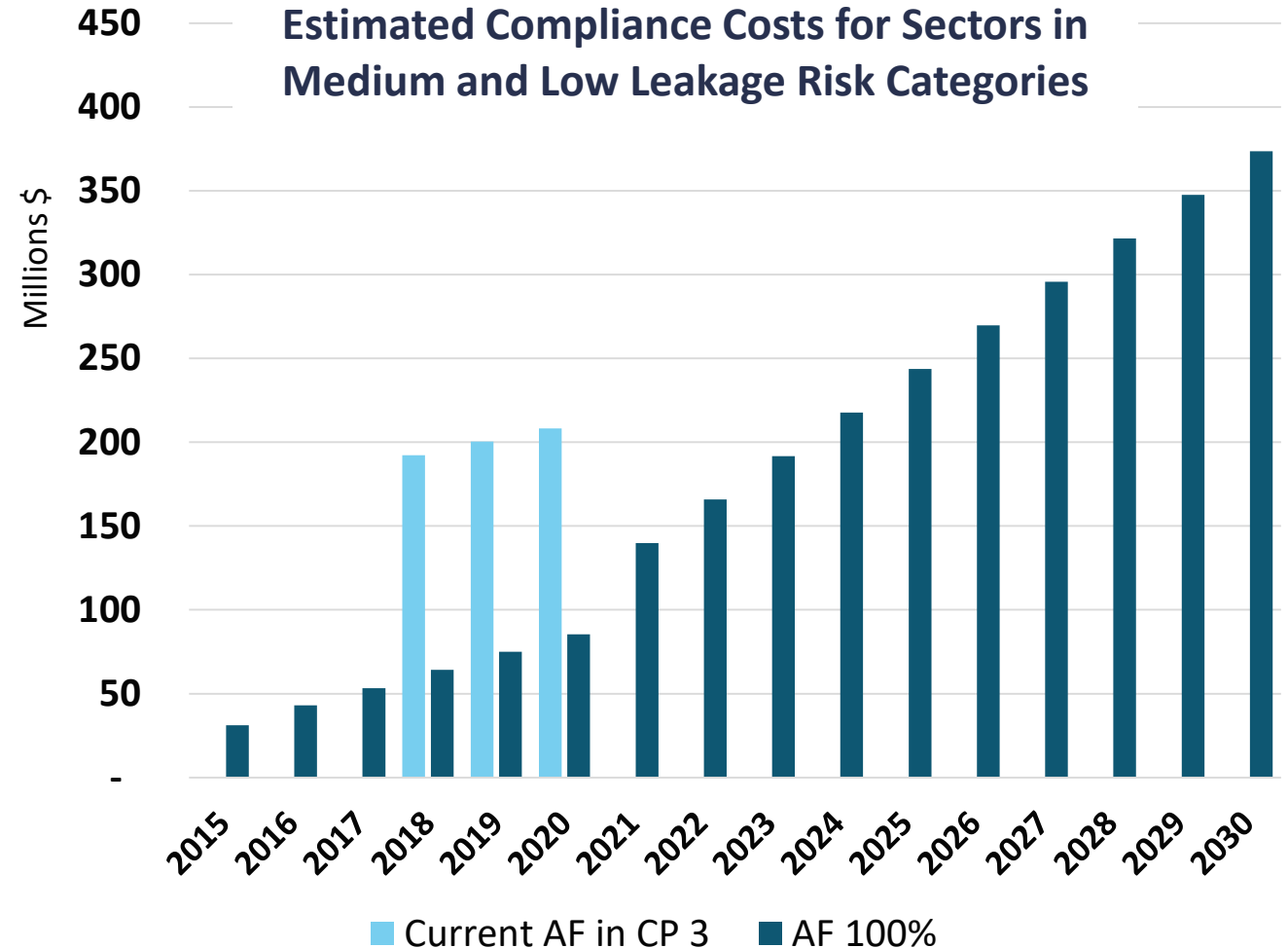
July 3: Ontario Government publishes regulation revoking cap-and-trade regulation and prohibiting any trading by their entities

September 4: 45-day amendments to de-link with Ontario

- Added process to protect environmental stringency of California program
- Continued recognition of Ontario-issued allowances in California entity accounts

Industrial Allowance Allocation

- Set industry assistance factors to 100 percent 2018-2020 and 2021-2030
 - Without change, 2018 -2020 compliance costs more than double, only to drop later
 - Smooth path into more stringent post-2020 Program
- More slowly declining cap adjustment factors for certain sectors post-2020

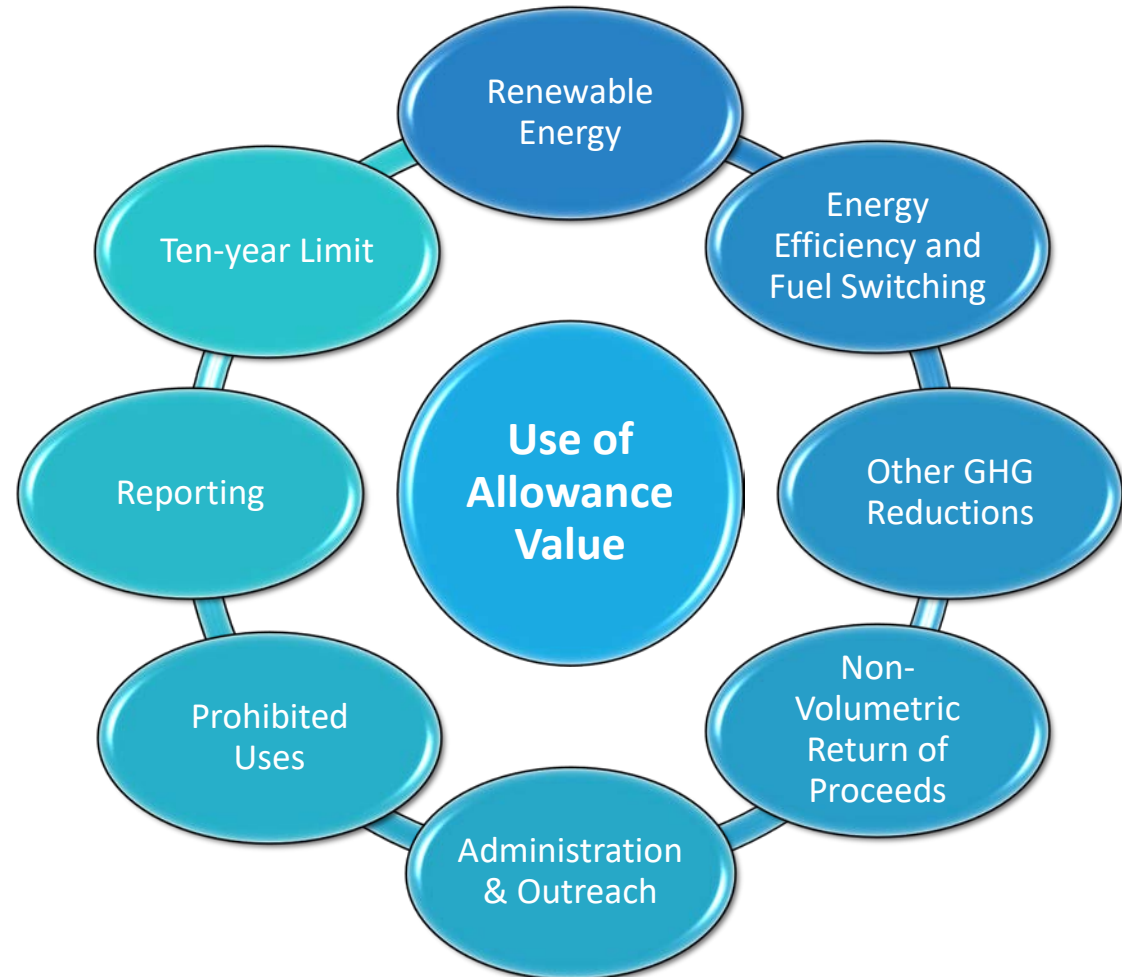


Expected Impacts of Proposed Amendments

- Increase compliance costs and costs to consumers
 - Reduction in offset usage limits
 - Limits on offsets that do not meet definition of direct environmental benefits
- Reduce compliance costs and costs to consumers
 - Introduce two new Reserve tiers of allowances at prices below the existing post-2020 single Reserve tier
 - More than 156 million allowances available at prices lower than existing regulation
 - Add price ceiling that balances across AB 398 criteria
 - Continue to allow limited banking
 - No removal of unused allowances or reductions to the post-2020 caps
 - Increase in industrial assistance factors to 100 percent from 2018 through 2030

Use of Allowance Value

- CARB allocates allowances to electrical distribution utilities and natural gas suppliers
 - Ratepayer benefit
 - Consistent with AB 32 goals
- Proposed amendments clarify how proceeds from allowances can be used



Other Proposed Revisions

- Clarify definitions and procedural aspects of the compliance offset program
- Update existing provisions to ensure appropriate allowance allocation to provide transition assistance and minimize emissions leakage
- Establish a process to assess compliance obligations for GHG emissions associated with electricity imported through the Energy Imbalance Market (EIM)
- Clarify and update “Know Your Customer” procedures, CITSS registration requirements, and auction processes and procedures
- Extend the application deadline for the “But-For” CHP exemption
- Enhance CARB’s ability to implement and oversee the Regulation

Macroeconomic Impacts

Macroeconomic Indicators in 2030

	Proposed Amendments (2030)	Percentage Change Relative to Reference
California GDP (Billion \$2018)	\$3,448	0.0%
Employment (Thousand Jobs)	25,334	0.0%
Personal Income (Billion \$2018)	\$2,968	0.0%

- Staff modeled the impacts of the proposed amendments relative to the current Regulation (Reference Scenario)
- Economic analysis of proposed Regulation shows minimal impact on growth of economy, employment, and personal income

Environmental Analysis

- Draft Environmental Analysis (EA) completed
- Released for 45-Day public comment period: September 7, 2018 – October 22, 2018
- Prepare written responses to comments
- Present Final EA and written responses to comments on Draft EA to Board at the second Board Hearing

Mandatory Reporting Regulation Proposed Amendments

- The Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (MRR) requires California's largest emitters to annually report and verify greenhouse gases (GHG) and product data
- Minor product data clarification for dairies to align with industry practices
- Update source testing requirements for nitric acid producers not subject to the Cap-and-Trade Program
- Clarify reporting and verification cessation provisions for specific facility and entity types
- Adjustments to support Cap-and-Trade on EIM related emissions

Aligning CARB GHG Accounting and the EIM

- Under AB 32, CARB must account for total annual GHG emissions from the generation of electricity delivered to and consumed in California
- The Energy Imbalance Market (EIM) design does not account for all imported electricity emissions and results in emissions leakage
 - As a temporary solution, CARB is currently retiring unsold allowances from the state's pool of allowances to account for the emissions leakage
- CAISO released a proposal that would reduce the amount of electricity available to support EIM imports
 - Staff supports this proposal because it reduces emissions leakage, but it does not fully address the accounting concerns

EIM Purchaser Proposal

- Staff is proposing to place the obligation for emissions leakage on the electricity sector responsible for those emissions
 - In the 45-day proposal staff included a reporting and compliance obligation for new entities not already covered under MRR or Cap-and-Trade
 - Staff intends to propose in a 15-day package to retire allowances that would otherwise be provided to the electricity sector, and not capture new entities
- Staff proposal will only address EIM transactions, not day-ahead market transactions or regionalization

Proposed 15-day Changes

Cap-and-Trade Regulation

- Retiring allowances from the electricity sector for EIM compliance obligations
- Slightly revise and clarify provisions for use of allowance value
- Update leakage risk classification for new sectors eligible for allowance allocation that were listed as TBD in the 45-day package
- Revise regulatory conformance and invalidation provisions for U.S. Forest offset projects to improve implementation
- Clarify offset related text to ensure clarity on application of “Direct Environmental Benefits”
- Remove the true-up allocation that was proposed to retroactively align some transition assistance with CPUC decision on natural gas pricing

MRR

- Calculation of EIM compliance obligation for utilities participating in the EIM

Next Steps

- Potential 15-Day packages for both regulations: late-November
- Continued engagement with stakeholders
- Second Board Hearing on both regulations: December 2018/January 2019
- If adopted, regulations are expected to be in effect: April 1, 2019

Future Cap-and-Trade Regulatory Considerations

- Update electricity sector allocation for 2021 through 2030 to reflect 60 percent Renewable Portfolio Standard per SB 100
- Provide additional allowance allocation to industrial covered entities to minimize the potential for leakage resulting from higher energy costs
- Exempt fuel cells that meet certain criteria until there is full carbon cost pass-through in natural gas prices
- Update existing Compliance Offset Protocols

Thank You
