1. Statement of the need for the proposed major regulation.

Climate change is one of the most serious environmental threats facing the world today. Global warming is already impacting the Western United States, particularly California, in more severe ways than the rest of the country. Significant impacts will likely occur even under moderate scenarios of increasing global greenhouse gas emissions (GHG) and resulting climate change. The goal of the proposed amendment is to help support continued and sustained incentives for investment action to reduce GHGs, while streamlining implementation of the Cap-and-Trade Program and continuing support for linkage with other jurisdictions by providing additional options for lower cost abatement.

2. The categories of individuals and business enterprises who will be impacted by the proposed major regulation and the amount of the economic impact on each such category.

The primary entities affected by the proposed amendment are businesses that are covered by the Cap-and-Trade program, which covers about 440 individual facilities across 18 different 2-digit NAICS codes. The sectors that have the largest obligations include wholesale trade, electric power generation, transmission and distribution, petroleum and coal products manufacturing, natural gas distribution, oil and gas extraction, and cement and concrete products manufacturing. Non-covered production entities might have to pay more for fossil fuels and the cost of other input goods could be greater due to higher fossil fuel costs.

3. Description of all costs and all benefits due to the proposed regulatory change (calculated on an annual basis from estimated date of filing with the Secretary of State through 1-2 months after the estimated date the proposed major regulation will be fully implemented as estimated by the agency).

Costs: The proposed amendment does not impose any direct costs on individuals. However, the amendment imposes costs, represented in the analysis as the obligation by sector, averaging a cumulative $5.23 billion annually across all covered industries.

Benefits: Currently, the auction value associated with the auction of state-owned allowances is directed to the Greenhouse Gas Reduction Fund (GGRF) and must be used to further reduce GHG emissions. Types of projects include high-speed rail, intercity rail, energy efficiency and weatherization, wetlands and forest health and waste diversion.

4. Description of the 12-month period in which the agency estimates the economic impact of the proposed major regulation will exceed $50 million.

The Amended Regulation was determined to be a major regulation as preliminary modeling for amendments related to the post-2020 Program result in a greater than $50 million economic impact over a 12-month period after full implementation. While direct costs to covered entities exceed $50 million in any one year, many entities achieve benefits through investments funded with GGRF funds.
5. Description of the agency's baseline:
For the baseline scenario, ARB utilized the Regional Economic Models, Inc. (REMI), specific to California, to model the macroeconomic impact of the proposed amendment to the Cap-and-Trade regulation, which assumes the California economy absent the proposed amendment as the baseline. REMI Policy Insights Plus (Pl+) is utilized to provide year-by-year estimates of the total impacts of the proposed amendment, pursuant to the requirements of SB 617 and the California Department of Finance (DoF). ARB uses the REMI Pl+ one-region, 160-sector model that has been customized by the DoF to include California-specific data on population, demographics, and employment.

6. For each alternative that the agency considered (including those provided by the public or another governmental agency), please describe:
   a. All costs and all benefits of the alternative
   b. The reason for rejecting alternative

   Alternative 1: Facility Specific Requirements
   a. Alternative 1 focuses on more prescriptive requirements for each sector. This includes requiring more on-site reductions or reduced production activity which results in reduced compliance flexibility and higher compliance costs to achieve the required GHG emissions reductions to achieve the 2030 target.
   b. Alternative 1 could sufficiently meet the environmental goals of the Amended Regulation but at a higher cost to California business and individuals relative to the Amended Regulation.

   Alternative 2: Carbon Fee
   a. Alternative 2 considers a firm price cap on the cost for allowances and includes a similar level of compliance flexibility as the Amended Regulation.
   Alternative 2 does not ensure the state achieves the 2030 target.
   b. ARB rejects this alternative because it would not ensure that California achieves the 2030 statewide GHG emissions target.

7. A description of the methods by which the agency sought public input. (Please include documentation of that public outreach).
The public process for the Amended Regulation began in late 2015, with publicly noticed workshops in October 2015, December 2015, February 2016, and March 2016. A meeting of the Environmental Justice Advisory Committee (EJAC) in January 2016 also included a public discussion of the Amended Regulation. These forums provided opportunity for stakeholder comment and the solicitation of alternatives to the Amended Regulation. The timeframe of the workshops allowed ARB to incorporate comments and alternatives into this analysis. ARB is holding additional workshops to help inform the Amended Regulation, and ARB considers stakeholder feedback throughout the regulatory adoption process, including up to the adoption of the final regulation. Thus, this analysis represents a snapshot of the Amended Regulation, and the costs and compliance requirements represent the best information available to ARB at the time of the SRIA submittal.

8. A description of the economic impact method and approach (including the underlying assumptions the agency used and the rationale and basis for those assumptions).
The Amended Regulation is simulated in REMI by adjusting production costs for covered sectors to reflect the purchase of Cap-and-Trade Program allowances, the distribution of free allowances, as well as the transfer of auction proceeds to sectors that have been identified to receive legislative appropriation of these funds. Based on reported emissions for 2014, the Cap-and-Trade Program covers about 45 different 2 to 4 digit NAICS sectors in the REMI model. ARB recognizes that modeling the Amended Regulation in REMI through changes in production costs for covered entities and modifications to consumption and state spending as a reflection of auction proceed investments may not capture the full impact. To best reflect the interaction of economic variables using REMI, however, ARB has employed the production cost variable to emulate the net emissions obligation of covered entities, the consumer spending and consumption variables to mimic incentive programs used to purchase energy efficient appliances and cleaner car technologies, and the State and local spending variables to simulate the impact of Cap-and-Trade Program auction proceeds directed to programs that reduce GHG emissions and bring additional co-benefits to the State.

Agency Signature

Date 4/1/2016

Agency Head (Printed)
Richard W. Corey