requirements for portable engines to reduce exposure to toxic diesel particulate matter (PM) and protect public health. The ATCM works in concert with the Portable Equipment Registration Program (PERP) to allow fleets to voluntarily register portable equipment used across California with the State rather than permitting or registering the equipment with each local air district individually. As a technology-forcing regulation, the ATCM was designed to force the development of retrofit emissions control technologies and new engine technologies which meet regulatory requirements. Some of these technologies materialized, though not as early as anticipated; this increased the cost to regulated parties compared to the estimates at the time of ATCM adoption. The purpose of the PERP and ATCM amendments (together referred to as Portable Regulatory Amendments) is to provide relief from the technologically and financially challenging 2017 and 2020 fleet average emission standards set by the current ATCM, while also safeguarding public health benefits by ensuring the emissions reductions envisioned in the original ATCM will be met.

Under the Portable Regulatory Amendments, fleets using portable equipment face delays in the compliance dates for the purchase of more expensive and lower emission equipment. In early years of implementation, the fleet owners face lower equipment costs relative to the BAU scenario, but see higher equipment capital costs as fleets increases turnover as the new compliance dates approach. Affected industries include rental companies, construction, and State and local agencies that employ portable engines. Examples of portable engines include those used in well drilling, service or work-over rigs, power generation (excluding cogeneration), pumps, compressors, diesel pile-driving hammers, welding, cranes, wood chippers, dredges, and military tactical support equipment applications. Additionally, the manufacturers of portable equipment face changing levels of demand as a result of the delay in the compliance date relative to the BAU.

To illustrate the change in costs for equipment owners, the average annual equipment replacement cost is calculated between today and the last emission standard dates under the BAU, and then compared with the Portable Regulatory Amendments. The average annual amortized equipment replacement cost under the BAU is $190,236,334 from 2017 until 2020 (the final compliance date under the BAU). The average annual amortized cost under the Portable Regulatory Amendments is $81,676,965 between 2017 and 2020, assuming 67% of fleets use the phase-out option, and 33% use the fleet average. Thus, when removing the cost of the BAU, the average annual equipment cost-savings over this period for about 4,400 fleets resulting from the Portable Regulatory Amendments is over $109 million dollars per year or 57% lower than the BAU. Adding the changes in registration fees and other ongoing costs, the total cost-savings over the life of the regulation is $530 million (between 2017 and 2030).

The Portable Regulatory Amendments are a major regulation because estimated direct cost savings impacts of the proposal exceed $50 million within a 12-month period after full implementation. Postponing the turnover of older tiered engines, as proposed in the Portable Regulatory Amendments, would result in direct cost savings to all fleets registered in PERP of over $190 million from 2017 until 2020 in response to delayed purchase requirements, with other 12-month periods exceeding $50 million in economic impact as well. These cost savings would be spread over subsequent years to allow fleets more time to replace equipment as explained in the Direct Cost section (D) of this document.
5. Description of the agency’s baseline:
For the baseline scenario, ARB utilized the Regional Economic Model, Inc. (REMI), specific to California, to model the macroeconomic impact of the Proposed Portable Equipment Regulation and ATCM Amendments, which assumes the California economy absent the proposed amendment as the baseline. REMI Policy Insight Plus (PI+) is utilized to provide year-by-year estimates of the total impacts of the proposed amendments, pursuant to the requirements of SB 617 and the California Department of Finance (DOF). ARB uses the REMI PI+ 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 considers a scenario with delayed tier phase-out dates and relaxed fleet average option standards which will allow older engines to operate longer, especially large fleets that opt-in to the fleet average standards.
   a. Alternative 1 is less stringent than the Proposed Regulatory Amendment by allowing older engines to operate longer. This alternative is not as costly for fleets but results in fewer emission reductions compared to the Portable Regulatory Amendments.
   b. The lower cost to businesses offered by Alternative 1 comes at a cost of higher statewide emission rates between 2020 and 2027.

   Alternative 2 considers a scenario in with accelerated tier phase-out and fleet average schedules compared to the Portable Regulatory Amendments and would result in higher emission reductions with additional costs to affected businesses.
   a. In Alternative 2 the final compliance date is two years earlier for large fleets and four years earlier for small fleets than in the Proposed Regulatory Amendments resulting in a compressed time frame for compliance and higher compliance costs in those years.
   b. The costs to businesses in 2025 are higher than the costs to businesses in 2017 under the existing ATCM which ARB has already determined was economically infeasible.

   Alternative 3 assumes that no regulation update is developed, and that ARB does not enforce the existing 2004 ATCM standards. This alternative would result in no emission reductions compared to baseline, and would increase cost savings to affected businesses.
   a. Alternative 3 comes at the lowest cost to industry but results in the no additional emission reductions beyond natural fleet turnover.

7. A description of the methods by which the agency sought public input. (Please include documentation of that public outreach).
ARB conducted eight public workshops on the Portable Regulatory Amendments. The workshops included affected industry stakeholders, members of the CAPCOA subcommittee, and the public. The workshops were held throughout the state on March 3, March 8, March 10, June 30, September 13, September 15, September 20, and November 10, 2016. Workshops were webcast to encourage participation by stakeholders who could not attend in person. Following each workshop, and throughout the regulatory development process, ARB received input from and worked with stakeholders on a variety of changes in the Portable Regulatory Amendments. Announcements and materials related to the workshops were publicly posted on the ARB website and distributed through a list serve to over 14,000 recipients.

At the first series of workshops in March, ARB invited the public to join a workgroup of interested stakeholders that would help shape the amendments. The resulting workgroup consisted of 48 industry representatives and CAPCOA subcommittee members. ARB held five formal workgroup meetings and many smaller meetings at the request of individual workgroup members. The Portable Regulatory Amendments, including alternatives, were directly shaped by stakeholder comments and suggestions.

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 Portable Regulatory Amendments are simulated in REMI by adjusting production costs for covered sectors to reflect the change in purchases of portable equipment, the increase in registration costs (adjusted for increased program costs), and the change in costs due to the maintenance of the portable equipment. The years of analysis are 2017 through 2030; these years are used to simulate the Portable Regulatory Amendments through 12 months post full implementation.

Agency Signature

Date
3/17/2017

Agency Head (Printed)
Richard W. Corey