

Revised Response to CFO-26-15
in the
Response to Comments on the Advanced Clean Cars Environmental Analysis

26-15 The commenter expresses that there was “Failure to Consider a Reasonable Range of Feasible Alternatives. Alternatives analysis is a central aspect of the CEQA review process. A lead agency must consider and evaluate a range of potentially feasible alternatives that will foster informed decision-making and public participation. To accomplish this, the CEQA document must develop and evaluate a range of reasonable alternatives that would feasibly attain most of the basic objectives of the project, but “would avoid or substantially lessen any of the significant effects of the project.” However, with respect to the CFO amendments, the EA fails to meet even the “reasonable range” standard.

Other than the statutorily required no project alternative, the sole alternative to the CFO amendments considered is the Memorandum of Agreement (MOA) with major gasoline refiners and importers to carry out the exactly same objectives provided in the CFO amendments.

Accordingly, the EA concludes (pp. 195-196) that its impacts would be the same or less than those of the proposed project, since potentially “varying levels of commitment” by MOA participants could lead to fewer hydrogen fueling stations being constructed.

WSPA strongly disagrees with the implication that MOA participants would breach the agreement. ARB has no grounds to impugn the intent of MOA participants to fully comply with requirements to which they have committed. Moreover, intent aside, compliance would not be optional. As the EA (p. 195) states, the “MOA would have the binding power of a contract and be legally enforceable.”

The unsupported presumption of inadequate MOA compliance also has an important consequence for the CEQA review of alternatives. The MOA alternative is designed to and can be expected to achieve the same results as the CFO amendments. Accordingly, the EA fails to consider any CFO alternative that is designed to “avoid or substantially lessen any of the significant effects of the project” as required by CEQA. Not every feasible alternative that an agency (or a commenter) can conceive of need be considered. Nevertheless, ARB is obligated to revise the EA to contain, and must then fully and fairly consider, some other alternatives that reasonably can be expected to accomplish actual reductions in significant impacts.

While it is ARB's obligation to develop a reasonable range of alternatives that can avoid or less impacts, at least two potential alternatives appear feasible.

First, as discussed above, the EA analysis assumes that hydrogen fueling facilities will be constructed at existing gasoline service stations. However, ARB could accomplish the same objective, promoting the availability of hydrogen fuel and so encouraging the manufacturing and purchase of FCVs, without assuming that hydrogen fueling will only occur at public fueling stations. Deployment of FCVs could also create a market for in-home hydrogen fueling. In-home fueling for natural gas vehicles already exists. Hydrogen fueling could be accomplished through exchange of canisters, such as is already being tested on light electric vehicles with fuel cells (such as scooters) in Taiwan. FCV fueling by this method could occur at some public fueling stations, but canisters also could be purchased at retail outlets and installed at home. Under this alternative, far fewer than the 450 public hydrogen dispensing facilities assumed by the EA would be necessary, and associated impacts would be reduced.

Second, refiners and importers could be provided the option of meeting CFO obligations through hydrogen dispensing or electric vehicle charging facilities. Electricity is also a clean fuel that could satisfy CFO requirements. The regulatory language in proposed 13 Cal. Code Regs. section 2300(a)(2) defines "clean alternative fuel" as "any fuel used as the certification fuel in a zero-emission vehicle" which includes both electricity and hydrogen. Since this alternative would have the effect of promoting a mixed fleet of FCVs and BEVs, the CEQA evaluation would include consideration of impacts associated with BEV batteries. Nevertheless, BEVs are a more mature technology with which consumers are more familiar than FCVs. At the least, hazard impacts and firefighting public service impacts associated with the use of explosive hydrogen fuel could be reduced. In particular, hydrogen handling by "lay persons" as opposed to trained personnel was recognized as an issue by the CEC (see above). Accordingly, this alternative merits consideration by ARB in a revised EA."

In accordance with the substantive requirements of CEQA, the alternatives in the EA represent a "reasonable range" that could potentially attain most of the basic project objectives while having the potential to reduce or eliminate significant environmental effects. The range of alternatives analyzed in the EA was governed by the "rule of reason," requiring evaluation of those alternatives "necessary to permit a reasoned choice." (See CEQA Guidelines, section 15126.6(f). The candidate alternatives must have the potential to meet the project objectives and be potentially feasible, based on technical, legal and regulatory grounds, to be considered for evaluation.

The project consists of a set of regulations that comprise the proposed ACC Program, of which the CFO regulation is one component. The EA examined the "No Project", a More Stringent Emissions Standard in the Low Emission Vehicles and the Zero Emission Vehicle Regulations, a Less Stringent Emissions

Standard in the Low Emission Vehicles and the Zero Emission Vehicle Regulations, a Clean Fuels Outlet Regulation Based on a Memorandum of Agreement with Major Refiners and Importers of Gasoline, and three other alternatives that were considered by rejected as infeasible. These include a Feebate Regulation, Targeting High-Emitting Vehicles in the Existing Fleet and targeting Battery Electric Vehicles or Hydrogen Fuel Cell Vehicles Only.

The commenter suggests ~~two~~ additional alternatives to ~~for~~ the CFO regulation that commenter believes ARB should analyzed in an EA. These include in-home fueling, an alternative where hydrogen fueling could be accomplished through exchange of canisters, and another that targets BEVS. The commenter suggests an “exchange of canisters for light electric scooters and micro cars alternative” as a viable alternative to hydrogen fueling infrastructure by automobile manufacturers, government and academic agencies, or other parties involved in researching the advancement of hydrogen and fuel cell vehicles.

~~The alternative suggested by the commenter is rejected for a number of reasons. It is not clear whether or not the commenter is suggesting that in-home refueling appliances should be considered as an alternative to requiring public infrastructure, and therefore arguably no further response is needed here. In the event it is determined that the commenter did properly present this as an alternative, it is rejected for a number of reasons.~~

~~First, ARB has determined that such in-home appliances do not meet the overall objectives of the Advanced Clean Car program, and poses feasibility challenges. The home energy station, such as the one under development by Honda, considers a whole energy approach using natural gas already supplied to the home to provide heat, energy, electricity, and hydrogen. This conceptual system may not be available to all FCV owners, specifically those who do not live in single-family dwellings, those whose homes do not have supplied natural gas or cannot be modified to accommodate such an appliance, and those who cannot afford it. Still in the development stages, this home energy and hydrogen fueling station concept shows promise for some applications, but development has not advanced sufficiently enough to be a likely fuel supply scenario in time for FCV deployments .~~

~~First, it~~ The canister alternative would not meet the overall objective of the Advanced Clean Cars program and would not serve the same purpose as the proposed regulation. The suggested alternative would reduce the overall scale of the regulation, and would result in different safety issues and a different suite of potential environmental impacts. Additionally, there could be feasibility issues that could be challenging to address. The alternative would require that NHSTA approve the full- function, highway legal vehicles to use detachable canisters of high pressure hydrogen. FCVs are designed to achieve a driving range similar to today’s vehicles. The mass of storage systems required to achieve this range can be greater than 100 kg. The idea of routinely swapping storage containers weighing greater than 100 kg obtained at retail outlets would likely be impractical

to perform at home. In addition, drivers and vehicles used for transporting high-pressure gas canisters would likely be required to obtain special permitting and licensing, thereby preventing the average fuel cell vehicle owner from purchasing canisters, transporting and storing them for use in their vehicles. ~~Please refer to response 26-15 above.~~

The BEV alternative that the commenter is advocating includes electric vehicle charging and CFO. BEV-only ZEV scenario would place more focus on public fast-charging facilities, and presents several challenges surrounding the necessity for a mandate, the parties who incur the cost, and the establishment of a standard for fast-charging the plug. The CFO ISOR analysis found that a charging infrastructure mandate is unwarranted and could hinder the current development of public charging infrastructure. Staff also found that more information is needed to determine what should be done from a regulatory perspective to increase BEV sales and electric miles traveled as BEVs are experiencing a successful commercial launch today without a public charging mandate. For this reason, and with the support of and input from auto manufacturers and electric vehicle advocates, staff's regulatory proposal included the public charging infrastructure needs assessment (section 2302(c)). At this time, it is uncertain that regulatory mandate for charging infrastructure is necessary to promote BEVs, but ARB intends to find out via the assessment proposed in section 2302(c). If the commenter is suggesting that regulated parties be allowed to choose to build charging stations instead of hydrogen stations, the end result would be insufficient hydrogen stations necessary to promote commercialization of FCVs. If they are suggesting an alternative that mandates fueling infrastructure for all ZEVs, then they would be required to provide both charging infrastructure and hydrogen dispensers based on on-road ZEVs and automaker projections.

Further, and although highly unlikely, battery fires have occurred and the EA discloses the potential for that impact. This contention is in contrast with the documents provided by the commenter that show that no impact would result with hydrogen fueling, per the NOEs and the mitigated negative declaration submitted.

Finally, the commenter repeats several concerns regarding hydrogen safety and public interaction with a new fuel that have been addressed in the EA. At this point, the commenter should be well aware that, regardless of the vehicle or fuel type, commercial introduction of any new technology will depend on strict adherence to codes and standards designed to protect the "lay person" against exposures, fires, explosions, or electrocution.