



## COMMENTS ON E3 REPORT ACHIEVING CARBON NEUTRALITY IN CALIFORNIA

The International Emissions Trading Association (IETA) appreciates the opportunity to comment on the California Air Resources Board's (CARB's) workshop summarizing E3's report on achieving carbon neutrality in California. IETA is a global non-profit association established in 1999 to serve businesses engaged in market solutions to climate change. The IETA membership includes over 130 companies including brokers, consultants, certifiers, energy firms, exchanges, investors, industrial firms, power firms, law firms, and verifiers.

The E3 report chooses scenarios for achieving carbon neutrality in California.<sup>1</sup> The scenarios share a common set of assumptions, including zero-carbon electricity and widespread vehicle electrification, that reflect a bias for relying on these technology pathways. Yet, panelists at previous CARB workshops emphasized the importance of optionality in achieving California's carbon neutrality goals by protecting against relying on silver bullet technologies.<sup>2</sup> Therefore, IETA recommends supplementing the E3 report with additional analyses that incorporate optionality by considering a wider range of technology pathways. Specifically, we suggest using a general equilibrium economic model that allows for technology substitution and cost minimization. An economic approach would reduce tunnel vision and spark new thinking.

The E3 report provides far too few details regarding costs. Importantly, the description of cost methodologies gives the reader sparse information regarding assumptions. Parameters or variables are mostly stated without supporting evidence. For example, the E3 report states that "electrification of medium duty trucks generates net cost savings" without a corresponding reference. This lack of documentation makes it virtually impossible to assess the quality of cost estimates. Therefore, IETA recommends that CARB provide elaborated documentation on costs. Moreover, IETA suggests publishing a version of the Excel spreadsheet model that E3 used so that readers can further understand E3's modeling of costs.

The E3 report does not distinguish costs between different scenarios. IETA believes costs are a critical component to the political durability of CARB's climate policy mix and thereby California's ability to achieve its carbon neutrality goals. Therefore, IETA recommends that future analyses break out costs across scenarios, even if they are somewhat similar.

We believe that carbon neutrality is achievable if markets are leveraged to reduce costs and spur innovation, as reflected by IETA's recent guidance on net zero emissions.<sup>3</sup> CARB's focus on technology as

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<sup>1</sup> E3. 2020. Achieving Carbon Neutrality in California: PATHWAYS Scenarios Developed for the California Air Resources Board. Available [here](#).

<sup>2</sup> Energy Futures Initiative. 2019. Optionality, Flexibility, & Innovation: Pathways for Deep Decarbonization in California. Available [here](#).

<sup>3</sup> IETA. 2020. Council Guidance on Net Zero Climate Ambition. Available [here](#).

reflected by the E3 report is understandable as an effort to pin down uncertainties by using scenarios as an input to policy planning. However, planning in this context is somewhat paradoxical, given the ambition and timing of California's carbon neutrality goals. Therefore, an equal or greater focus should be placed on policies, rather than technologies. In that vein, cap-and-trade as a policy responds well to uncertainty surrounding costs by aligning incentives for innovation, revealing abatement costs, and delivering least-cost abatement.

IETA appreciates the opportunity to provide comment on CARB's workshop and E3's report on achieving carbon neutrality in California. Please direct comments and questions to Clayton Munnings, West Coast Representative of IETA at [munnings@ieta.org](mailto:munnings@ieta.org).

Sincerely,



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