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Finding the ways that work

Ms. Rajinder Sahota
California Air Resources Board
1001 I Street
Sacramento, CA 95814

November 21, 2016

Submitted electronically

RE: Public Workshop on Scoping Plan Scenario Planning

Dear Ms. Sahota,

Thank you for this opportunity to comment on the public workshop held November 7, 2016 on scenario planning for the Scoping Plan Update process.

This portion of Scoping Plan Update process that includes considerations of alternatives is vital work and we appreciate ARB's effort to be thorough in meeting this statutory obligation while being inclusive and considering the diverse range of stakeholder input. This workshop is an example of ARB's commitment to doing more than is statutorily required to engage stakeholders and develop a carefully considered policy portfolio that has provided multiple opportunities for stakeholder input.

EDF does feel strongly that while we would like to see an inclusive set of climate and clean air policies that strive to promote environmental justice and balance a diverse set of interests, Cap and Trade is an essential part of that policy suite for California. Cap and Trade includes a number of important benefits for California that we think should not be lost including:

- Achieving the most cost-effective emissions reductions first.
- Placing an absolute limit on carbon pollution and assuring that California achieves the targets set out in AB 32 and SB 32.
- Placing a price on carbon that will incentivize emissions reductions across the economy.
- Maintaining regulatory certainty and capacity. California has been operating with a cap-and-trade program in place for almost four years now and planning for cap and trade for much longer. Regulators and businesses alike now have significant expertise in this program design and are used to operating within this regulatory framework. The cap-and-trade program has been successful so far in that emissions are declining and below the cap, prices have been relatively stable, there has been no need to use the allowance price containment reserve, auction proceed investments are promoting equity priorities, and the economy continues to thrive even with the country's most ambitious climate

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program in place. There have been no dramatic failures or warning signs that suggest the need for a major change in policy. EDF does welcome a conversation on further adjustments that could be made to the cap-and-trade program to promote equity priorities or supporting policies that could help to achieve California's very real and critical air quality challenges. We note in particular that beginning to transition to even more auctioning with fewer allowances freely allocated to industrial facilities would be appropriate for promoting AB 32's equity policy objectives because it would increase investments in disadvantaged communities to reduce greenhouse gas emissions and co-pollutants.

- Providing an opportunity for direct partnership through linking with like-minded jurisdictions like Quebec and Ontario.
- Providing multiple cost-containment tools that do not undermine environmental integrity such as the use of offsets that come from outside of capped sectors where reductions might be even more cost-effective.
- Maintaining strong incentives for emissions-intensive and trade-exposed (EITE) businesses to achieve direct emissions reductions. Under the current method of benchmarked output-based free allocation, EITE businesses have a strong incentive to make cost-effective reductions on site. The main alternative for providing protection to EITE businesses would be to provide a whole or partial exemption from the tax, which would remove the firm's incentive to make direct emission reductions.

Incorporating Uncertainty into the Modeling Framework

We encourage ARB to emphasize and look for additional opportunities to incorporate sources of real-world uncertainty in their modeling efforts. In particular, there is uncertainty about business-as-usual emissions from capped and uncapped sources and uncertainty about the cost of achieving emissions reductions via direct measures, which includes uncertainty about the cost of deploying specific technology. Failing to incorporate these sources of uncertainty into the analytical framework will likely lead ARB to understate the benefits of Cap and Trade and a carbon tax. Both Cap and Trade and a carbon tax are broad-based, technology neutral policies that achieve cost-effective emissions reductions by engaging the economy on a wide variety of margins. Accordingly, they each minimize the impact of risk associated with uncertain technology costs. In some contrast to direct measures which rely on the successful deployment of particular technologies. As discussed in greater detail below, Cap and Trade also provides greater environmental certainty than carbon tax or direct measures. As detailed in Borenstein et al. (2016), there is significant uncertainty in business-as-usual emissions between now and 2020, and even greater uncertainty about business-as-usual emissions through 2030. However, AB 32 and SB 32 require the state to meet a firm target. Cap and Trade eliminates this source of environmental uncertainty through the use of a flexible price mechanism. In contrast, if business-as-usual emissions deviate even somewhat from current projections, either a carbon tax or a suite of direct measures would need to be ratcheted or redesigned to maintain environmental integrity. Omitting these sources of uncertainty, understates the strengths of Cap and Trade relative to carbon tax and direct measures, and ignores the cost associated with needing to course correct in response to unanticipated macroeconomic changes or technology cost shocks (positive or negative). Ideally, ARB's modeling framework would incorporate these

sources of uncertainty. At a minimum ARB should continue to acknowledge these limitations in the modeling during workshops and in final drafts of the Scoping Plan analysis.

Modeling the Carbon Tax Alternative

ARB staff asked for input on the design of a carbon tax alternative that they should model for this scenario planning. We believe one of the most important points for ARB to consider with respect to a carbon tax is how California would ensure that a carbon tax delivered on California's statutorily required reduction targets for 2020 and 2030. Since other governments that do not already have a history of success with Cap and Trade are considering tools like carbon taxes EDF has also been considering the question of environmental integrity for a carbon tax. In a recent blog post available here, EDF's Susanne Brooks summarizes recent work by Resources for the Future and the Nicholas Institute on "Environmental Integrity Mechanisms" for carbon taxes. These might include tools like adopting an automatic ratchet mechanism that increases the carbon tax price if emission reduction goals are not being met. We believe that ARB should factor some these safeguards into any modeling of a carbon tax because AB 32 and SB 32 require California to achieve specific targets that in turn require a high degree of certainty about emissions reductions that will be achieved. These EIM's could be included in modeling by modeling a range of price trajectories, for example. It is most important that ARB does not consider a carbon tax alternative that does not include additional environmental integrity strategies to ensure California reaches is legally mandated targets.

EDF looks forward to continued conversations with other stakeholders, ARB staff and board, and California decision makers in the Legislature and Governor's office on these important topics.

Sincerely,

Erica Morehouse

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