

Staff from California Air Resources Board released the [Draft Aliso Canyon Methane Leak Climate Impacts Mitigation Program](#) last week. While the program has yet to gain approval by the Board, the final version will probably not change much. Overall, the Draft Program signals ARB's desire to take full advantage of the political will and financial resources generated by the horrific environmental disaster that only just ended. In total, ARB has estimated that the leak released 100,000 metric tons of methane into the atmosphere, and that is the amount of emissions that the Mitigation Program will aim to prevent in order to achieve "full mitigation."

ARB sets an ambitious tone from the start, choosing to base its quantitative definition of "full mitigation" on the 20 year global warming potential (GWP) of methane, rather than the 100 year GWP. ARB notes that methane emissions will be the preferred target of projects, but other short-lived climate pollutants (SLCPs) and carbon dioxide may also be reduced, either directly or as an indirect effect of a project. In that case, the decision to calculate the conversion factor between different climate pollutants on a 20 year scale versus a 100 year scale is significant. Many SLCPs remain in the atmosphere (or "live") for far fewer years than carbon dioxide, which has an atmospheric lifespan of about 100 years or longer. However, their heat-trapping properties are much stronger than carbon dioxide's, and thus they have a larger impact on the climate from a short-term perspective, and a moderate impact over the long term. Taking methane as an example, over a 20 year time span, it is 84 times more effective at trapping heat than carbon dioxide, but over a 100 year time span, it is only 28 times as effective (albeit still an impressive number). Therefore, in choosing the 20 year GWP, ARB greatly increased the scale of mitigation required for non-methane projects.

Another sign that ARB is taking this charge seriously is the preference that the mitigation program "occur within a defined time frame, ideally five and not more than 10 years from the beginning of the Aliso Canyon leak." (p. 7). The timing of emissions reductions is extremely important. Scientists have often said that the more we put off reducing emissions, the harder those reductions will be to make, and that reductions made earlier will have a larger and more immediate impact on the climate. This makes sense - while we delay reductions, the total emissions only increases, making a particular reduction a much smaller percentage of the total than it would have been earlier. ARB is also recognizing, and in fact says explicitly, that the hope is that the projects included in this program will create permanent, long-term reductions. This means that the earlier they are put in place, the more

emissions are prevented. A shorter timeline also provides momentum and reduces the risk that project will be drawn out unnecessarily, or that there will be personnel changes that create delays.

ARB is also making clear that the main purpose of this program is to, to the extent possible, alleviate the *environmental* harm caused by the methane leak. There were suggestions that the mitigation projects be limited to the area surrounding the leak, or to Southern California. Some also suggested that ARB not even consider any projects that could have economic value for SoCalGas. In responding to both of these suggestions, ARB makes it clear that, while the commenters' points are valid, the primary objectives of the mitigation program are achieving reductions in emissions equal to the methane emitted by the leak and "catalyzing substantial additional reductions in emissions of SLCPs and other greenhouse gases over the near- and longer terms." ARB will limit eligible projects to those that are *in addition to* anything that SoCalGas may already be undertaking, planning, or be legally obligated or have voluntarily agreed to undertake before the leak. Furthermore, while any benefits to communities affected by the leak will be considered, ARB emphasizes that it will not preemptively limit the geographic scope of eligible projects at the cost of full mitigation or with the result of excessive costs. Essentially, ARB wants to get the most environmental bang for its buck, as well it should.

The categories of projects that ARB highlights as those they hope will make up the mitigation program are exactly what I had hoped they would be. When it comes to methane, there are several major sources that thus far have fallen outside of the regulatory scheme, but that make up about three-quarters of total emissions: waste management (both agricultural and human). Dairy and non-dairy livestock waste, landfills, and wastewater treatment plants account for the vast majority of methane emissions in California. The technology to capture a lot of this and convert it to biogas exists, and is already being used on a small-scale, but is still too expensive for most farmers to see it as an economical choice. There's also the problem of finding buyers for biogas and then transporting it - there's very little pipeline infrastructure running through farmland. There is general social and political support for it - what has been missing is really just the initial capital input. Enter SoCalGas. By identifying the dairy and waste sectors and energy infrastructure as the top two priorities in this mitigation program, ARB is aiming to leverage what was an environmental disaster as a vehicle for overcoming the barrier to what in theory was a huge climate mitigation opportunity.

The details of how this plan will be implemented, and by who, are still (perhaps not surprisingly) unknown, but it's clear that ARB is taking the Governor's directive and the opportunity it presents seriously.