Many in the environmental community, myself included, heralded the passage of SB 1383 in the California legislature. This bill is the first state law to target short-lived climate pollutants (SLCPs), and it codified the reduction goals that ARB had adopted as part of its general GHG reduction agenda. This is not a trivial accomplishment – legislatively set targets are much, much harder to change or get rid of than targets set in regulations or agency policy. Despite these structural advantages, the content of SB 1383 suggests the law may end up weakening California's abilityt to address SLCP emissions.

This is not California's first foray into regulating SLCPs. The California Air Resources Board (ARB) issued its first Proposed Short-Lived Climate Pollutant Strategy last April. In response to the passage of SB 1383, ARB released a Revised Proposed Short-Lived Climate Pollutant Reduction Strategy last week, and a closer look at the changes made in light of SB 1383 shows how the legislation may have actually slowed and limited California's actions on this front. The Revised Proposal differs from the Proposal released in April 2016 in three main ways: there is no strategy for non-anthropogenic (forest fire) black carbon emissions; the timeline for controlling methane has been pushed back multiple years; and the Strategy incorporates the international commitment to phasedown HFCs at the recent meeting in Kigali, Rwanda. Additionally, the Revised Strategy includes updated funding numbers.

The most significant change to the Proposed Strategy is the delay of the methane reduction strategy as a whole. SB 1383 prohibits any regulations of methane from the dairy and livestock sector from taking effect before 2024. In contrast, the original Proposed SLCP Strategy had intermediate goals for dairy manure management to reduce emissions 20% by 2020, 50% by 2025, and 75% by 2030. Now the only steps that ARB may take before 2024 are hold public workshops, conduct and fund research and pilot projects, and design market incentives to encourage reductions. The Revised Strategy also sets a goal for reducing organics disposal to 75% of 2014 levels by 2025, while the original Strategy had a goal of eliminating such disposal by 2025. Finally, although the Revised Strategy retains the original goal of reducing organic waste by 50% by 2020, due to SB 1383 any ARB regulations designed to do so cannot go into effect before 2022 – effectively requiring ARB to rely on voluntary efforts and market incentives.

There is nothing wrong with directing ARB to use market incentives and to work with industry to develop voluntary efforts. In fact, one of California's hallmark environmental programs, the cap-and-trade system, is the quintessential market-based approach to climate change. The dairy industry was, until SB 1383, part of

the cap-and-trade system, since sources could earn emissions offsets by funding dairy biodigesters. Instead of taking a truly market-oriented approach (by perhaps adding large dairies into the cap-and-trade scheme), SB 1383 just delays ARB's regulation of the dairy and waste sectors and conditions that regulation on a number of intermediate steps, while maintaining the same general reduction goals for 2030 that ARB had already set for itself. Given the legislature's willingness to regulate other sectors of the economy, particularly the energy sector, it would be hard to argue that this was motivated purely by a belief in market forces. The more likely case is that ARB's more ambitious previous Proposed Strategy produced significant push back from the dairy industry, and possibly local municipalities (often in control of waste management).

The legislature also significantly decreased the funding allocated from the Greenhouse Gas Reduction Fund to the SLCP reduction efforts from the amounts in the Governor's budget proposal. Except, that is, for biodigesters at dairies – that program received significantly more than proposed. The Governor had proposed $40 million to fund reductions of black carbon from residential wood smoke, $100 million for diversion of organic waste, $20 million for HFC reductions from refrigerants, and $35 million for dairy digester research and demonstration. The final budget instead provided $5 million for wood smoke reduction, $40 million for organic waste diversion, and none for HFC reductions. Funding for dairy digesters, however, increased to $50 million.

Again, the overall reduction goals for each SLCP by 2030 did not change due to SB 1383. So what difference does it make if the path to getting there is a little steeper at the end? Well, as their name suggests, short-lived climate pollutants do not stay in the atmosphere very long, so we have the opportunity to reduce the absolute concentration of these pollutants in the atmosphere in the immediate future. The earlier we start, the larger the absolute reduction and the easier it will be to slow overall warming. Similarly, delaying reductions by a few years will nudge the climate warmer in the short-term. Of course, these delays only affect a few sources of emissions in one state, and will not alone prevent California from meeting its 2050 goals. Still, they are somewhat out of character for a legislature that has displayed as good a grasp of climate change science as one could hope, and a hawkish approach to reining in emissions. I can only hope that the dairy industry is genuine in its commitment to developing effective methane reduction strategies in the meantime.