

House Bill 1425 Climate Solutions Act of 2020

House of Delegates Committee on Environment and Transportation, February 19, 2020

Testimony by Donald F. Boesch, Ph.D.

Chairman Barve and members of the Committee, last year I am retired as Professor Emeritus from the University of Maryland Center for Environmental Science. I served as the Center's President from 1990 to 2017 and, as such, as a member of the Maryland Commission on Climate Change and chair of its Scientific and Technical Working Group. I am traveling and cannot testify at today's hearing, but I offer these observations from my personal perspective as a scientist with substantial experience in climate science assessments.

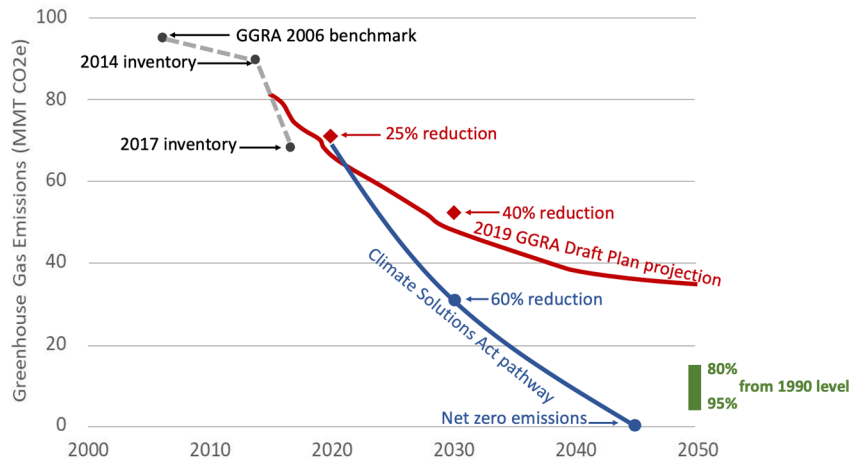
I focus my comments primarily on §2–1204 of the bill, which increases the statewide greenhouse gas emissions that the State shall reduce by 2030 from 40% to 60%, based on 2006 levels. It further specifies that the State shall achieve net-zero emissions by 2045. Simply put, these deeper reductions in emissions and shorter timeframes are more consistent with the science supporting the implementation of the Paris Climate Agreement than Maryland's current Greenhouse Gas Emissions Reduction Act. Let me explain.

As you recall, the language of the Paris Climate Agreement was adopted by consensus in December 2015 and signed in April 2016. The Agreement's goal is to keep the increase in global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the increase to 1.5°C, recognizing that this would substantially reduce the risks and impacts of climate change. Maryland's Greenhouse Gas Reduction Act was also amended in April 2016. It extended the State's commitment from 25% by 2020 to 40% by 2030, but also specified [§2–1205 (c) (3)] that the plans mandated by the Act "shall be developed in recognition of the finding by the Intergovernmental Panel on Climate Change that developed countries will need to reduce greenhouse gas emissions by between 80% and 95% from 1990 levels by 2050."

The amount and timeframe of reductions needed limit the increase in global temperature to 1.5°C had not yet been evaluated by the IPCC through its scientific consensus process. So, the IPCC undertook a *Special Report on Global Warming of 1.5°C* that was released in October 2018. The IPCC concluded that a 1.5°C limit to warming should not at all be considered safe, but risks associated with warming are substantially lower at 1.5°C than 2°C. To achieve this goal, net CO₂ emissions would need to be reduced to zero by mid-century and emissions of other greenhouse gases, such as methane, would have to be substantially reduced. Furthermore, we will have to rely on increasing the removal and storage of carbon from the atmosphere to reach net-zero and on producing negative emissions to compensate for any overshoot of 1.5°C.

The 2019 GGRA Draft Plan made public for review by the Maryland Department of the Environment in October 2019 does not demonstrate the urgency of reducing greenhouse gas emissions that is called for under the Paris Climate Agreement and the 2018 IPCC science report available a full year before. As one can see from the accompanying graph, the Draft Plan (red curve) estimates that its elements would exceed the 40% reduction in emissions requirement

by 2030, but it would achieve only a little more than a 50% emissions reduction by 2050, far removed from the 80-95% reduction from 1990 levels for which the existing Act requires recognition, much less the net-zero emissions the IPCC indicates we should be targeting. The Draft Plan avoids commitments to the kinds of more transformative actions that must be begun over the next decade in order to have a chance eliminating the remaining 60% reduction in emissions that would have to be accomplished over just the following two decades. Clearly, the new pathway required under the Climate Solutions Act (blue curve) is more consistent with the Paris Climate Agreement and the IPCC's scientific prescription for achieving it.



Other climate leadership states have recognized this need to cut emissions deeper and quicker. Minnesota and Colorado are committed to 80% and 90% reductions in greenhouse gas emissions by 2050, respectively. California has committed to achieving carbon neutrality statewide by 2045 and New York State to reducing emissions by 100% by 2040. Thirty-two Senators, including our Senators Carden and Van Hollen, have sponsored a bill to put the U.S. on a pathway to achieve net-zero emissions by no later than 2050. A draft of a bill with the same goal is circulating in the U.S. House of Representatives. Even the CEO of oil and gas-giant BP announced a few weeks ago that it would work to eliminate or offset all of its greenhouse gas emissions, including those associated with the consumption of its products, by 2050.

In contrast, Maryland's current greenhouse emissions reduction policies and programs seem no longer bold. Nonetheless, the GGRA of 2016 provides a good foundation on which to build. Maryland probably has achieved emissions reductions sufficient to meet the 2020 mandate, although I question whether the dramatic reduction from the 2014 to the 2017 inventories shown in the graph is real or an aberration. The 2019 GGRA Draft Plan includes many actions that will take us further, but Maryland now needs to be more aggressive. The Climate Solutions Act includes other meritorious provisions that I do have time to comment on, other than to state that the Draft Plan is rather timid in increasing emissions sinks and that planting large numbers of trees now is one of the most reliable ways to remove or store carbon over subsequent decades.