

Testimony of Greg Campbell, Neither for Nor Against

LD 499 An Act to Prohibit Geoengineering and LD 825 An Act to Prohibit Geoengineering, Including the Use of Cloud Seeding, Weather Modification, Excessive Radio Waves and Microwave Radiation

Senator Tepler, Representative Doudera, members of the Environment and Natural Resources committee:

My name is Gregory A. Campbell. I received my B.S., M.S., and Ph.D. in Chemical Engineering at the University of Maine, Orono in the 1960s. During my 40 years career, my work included about 16 years in industrial research at General Motors Research and Mobil Chemical Research followed by about 24 years as a Chemical Engineering Professor at Clarkson University. As an emeritus professor, I continue to conduct research in process engineering and environmental science and engineering from Jonesport Down East in Washington County

I am testifying neither for nor against because:

- It is premature to either ban or embrace geoengineering. Environmental/Climate/Energy policy should be based on an understanding and utilization of the science, economics, risks and realities on the ground/in the water. The committee should amend these bills to ensure a reasoned and rational process regulates geoengineering.
- Predicted Reductions in the Gulf of Maine's alkalinity potentially threaten shellfisheries Down East. Geoengineering might be necessary to sustain those shellfisheries. Maine should put more resources into how this decrease in alkalinity can be slowed, averted and/or mitigated, including carbon emission reductions, research and geoengineering.

The ability of the lobsters, clams and oysters to make shells is dependent on the water in their habitat be alkaline. The Gulf of Maine has a relatively low alkalinity compared to much of coastal U.S. and a recent study, *Projecting ocean acidification impacts for the Gulf of Maine to 2050: New tools and expectations*, concluded "By 2050, the entire GOM will experience suboptimal conditions of aragonite saturation state ($O_a < 1.5$) for most of the year under RCP 8.5. "This indicates that shell forming will likely be inhibited.

Maine's environmental/climate/energy policies should be grounded on scientific fact and careful and rigorous risk and cost-benefit analysis. The assessment of the ecological, political and economic risks and rewards associated with geoengineering should be based on science. Foreclosing geoengineering as a possible option before any of that is done is premature and potentially removes mitigation strategies that could sustain Maine's climate impaired alkalinity-challenged shellfisheries.

The Committee is urged to amend these bills to allow for a reasoned consideration of the potential risks and rewards associated with geoengineering, and how Maine's climate policy should address this technology.

I would be happy to answer any questions at greg.masonbay@me.com