

To: House Corporations
RI State Legislature
Providence, RI

From: Stephen Porder
Providence, RI, 02906

Re: HS 6418 - House Resolution on Creating a Special Legislative Commission to Study and Provide Recommendations for Increasing the Use and Building the Infrastructure for Alternative Fuels.

June 16, 2025

Dear Rep. Casey and Members of the House,

I am writing to provide public comment on HS6418: House Resolution on Creating a Special Legislative Commission to Study and Provide Recommendations for Increasing the Use and Building the Infrastructure for Alternative Fuels. I am a professor of ecology, evolutionary, and organismal biology and environment and society at Brown University, where I also serve as the Associate Provost for Sustainability. In this role I am guiding Brown's efforts to reach net zero emissions by 2040, and have undertaken extensive analyses of the potential for alternative fuels (both primary and recycled bio-oil and renewable natural gas) as a heating source for our campus of nearly 7 million square feet. I also represented Brown on a stakeholder committee on the future of gas in RI held by the PUC. I mention these experiences to describe my level of expertise on the future of sustainable energy, but all opinions stated below are my own, and not those of Brown University. I am writing in my capacity as a concerned citizen of Rhode Island.

There are several reasons I urge voting against the establishment of this commission:

1) There is already a viable, widely available solution to heat the air and water in our buildings that does not depend on biofuels: heat pumps. My 1920's Providence house, for example, has run entirely on air source heat pumps for heating both air and water since 2014. Brown University is planning to eliminate all combustion-based heating by transitioning all our buildings, including ones built as long ago as 1777, to heat pumps (we did consider, and ruled out, renewable natural gas and bio-oil as a viable solution for economic, resilience and carbon dioxide emissions related reasons). The challenge is implementing this known and ready technology at scale, not finding other alternatives that we already know do not scale or do not help (see below).

2) While recycled bio-oil (such as provided by Newport Biodiesel) has some environmental benefits (and I do not oppose the expansion of the use of recycled biodiesel), it has very little scalability, and will remain at best a very small fraction of the total energy supply. RNG is similar, though probably worse because of inevitable

methane leakage issues and the need for long-term maintenance of the gas pipeline infrastructure required to deliver it.

3) Hydrogen is not a viable source of home heating and, if it can be produced cleanly, should be saved for processes where there is not a viable alternative. For example, right now hydrogen is used as a feedstock for many chemicals - fertilizer being one of the most important. If we were to produce enough "clean" hydrogen by using renewable electricity to replace just the hydrogen used in the chemical industry globally (not heating or transport, both of which are much bigger sectors), it would require an increase in renewable energy generation equal to the TOTAL electricity generation of the United States in 2024. In addition, hydrogen is extremely difficult to prevent from leaking (it is the smallest, lightest gas in existence), and although it is not itself a greenhouse gas, it has impacts of atmospheric chemistry that make it act like a very strong greenhouse gas.

I have myriad other scientific concerns and would be happy to testify as an expert at any time if the legislature has an interest in the science behind our energy choices. However, my biggest concern, beyond the scientific ones above and several more that I did not include for relative brevity, is that the makeup of this proposed commission has no independent experts. It is proposed to be composed of representatives of the biofuel industry, the utility, and state legislators. But no one with a deep understanding of all of the alternatives we have, nor the scalability and consequences of their use. If you are going to have such a commission, I urge you to include all the options, and people qualified to discuss them seriously. This is too important a topic to tackle in such an opaque and ultimately narrow and misfocused manner.

Thank you very much for your service to our state, and for considering my opinion.

Sincerely

A handwritten signature in black ink, appearing to be 'SP' or 'SZ', written in a cursive, fluid style.

Stephen Porder
Providence, RI 02906