



**Supplemental Information in support of 350VT's Testimony to SNRC
on the S.5 Affordable Heat Act**

prepared by Stuart Blood, Thetford, Vermont

February 8, 2023

There are notable instances where the stated intention of S.5 is at odds with the text of the bill itself. For example, on January 26, 2023 Richard Cowart, principal of Regulatory Assistance Project (RAP), made the following statement to a webinar on Clean Heat Standards by the Massachusetts non-profit Green Energy Consumers Alliance:

"Certainly, this argument has come up in Vermont and the Vermont legislation has a provision in it that requires any RNG to be qualified only if it can be proven that that methane would otherwise have been vented and wouldn't have been reduced to some other existing regulatory framework. So, it's very limited."

The webinar was recorded and can be viewed by following this link:

<https://www.youtube.com/watch?v=AlbyHY4wlkM>. Mr. Cowart's statement occurs at 44:18.

Since Mr. Cowart is the co-author of the December 2021 [Clean Heat Standard White Paper](#), and since he has appeared before this committee several times as an expert witness on the standard, presumably he speaks with authority on its intent.

The provision in S.5 that Mr. Cowart appears to be referencing is this on pages 17-18 of the bill as introduced:

(2) For each fuel pathway, the schedule shall account for greenhouse gas emissions from biogenic and geologic sources, including fugitive emissions. In determining the baseline emission rates for clean heat measures that are fuels, emissions baselines shall fully account for methane emissions reductions or captures already occurring, or expected to occur, for each fuel pathway as a result of local, State, or federal policies that have been enacted or adopted.

Nowhere does S.5 state that RNG will be qualified only if it can be proven that it is derived from biogas that would otherwise have been vented. While that may plausibly be the interpretation ultimately reached by the Public Utility Commission, it is not explicit in the bill. That ambiguity of intent could result in a lengthy delay in implementation due to confusion at the PUC and

litigation at the Supreme Court. The ambiguity could be removed, consistent with Mr. Cowart's statement of intent, by adding a single sentence to the paragraph quoted above:

“Renewable natural gas shall not qualify unless that particular gas (a) would otherwise have been vented, and (b) no other regulation presently in force would require the biogas¹ from which it was derived to be reduced, captured, or flared.”

In the same webinar in which he addressed RNG, Richard Cowart explained that “truly green hydrogen is a limited, scarce resource and should be used only for those applications for which there is no other reasonable option, which basically means don't waste it by putting it in pipelines.”

That statement is consistent with a [RAP report](#) subtitled “Principles to address the changing role of gas in a decarbonised energy system”, which was co-authored by Mr. Cowart. Principle #1 is “Implement solution sets that will reduce the greatest amount of greenhouse gases as quickly as possible in both the near and long term.” Citing various European Commission reports, as well as a recent paper by Howarth and Jacobson, the RAP report concludes that while hydrogen and other alternative gases may have a role in decarbonizing the energy system, it should be limited to “serving only hard-to-electrify sectors”.

The RAP report is relevant to design of a Clean Heat Standard. Citing the International Energy Agency (2022), it elaborates as follows:

“Building heat is an apt example: energy efficiency, district heating and electrification, in particular electric heat pumps, can meet building heating needs efficiently, effectively, and safely, while also reducing indoor air pollution. If hydrogen is considered instead, it would likely delay the transition of heating equipment and in turn delay attendant emissions reductions.”

I agree with 350VT's conclusion that RAP and Mr. Cowart make a compelling case against the inclusion of green hydrogen as a qualifying measure in the Clean Heat Standard. It should be removed.

It is worth noting how two of our neighboring states are approaching the issue of RNG and hydrogen in their reports and plans on clean heat. The Massachusetts Commission on Clean Heat, which was created by executive order of the governor, issued its [final report](#) on November 30, 2022. The terms "biogas", "biomethane", "renewable natural gas" or "RNG" do not appear in the report even once. Among the recommendations for an appropriate, efficient and equitable transition is this one: “Avoid future investments in and strategically retire gas infrastructure to reduce total costs.”

¹ There is no definition of “renewable natural gas” in the bill. RNG is always derived by purifying some form of biogas. There is also no definition of “biogas”. The one used by Professor Robert Howarth would be reasonable. “Biogas: the unrefined mixture of methane and carbon dioxide produced in anaerobic digesters and landfills.”

[Bill HD.3309, An Act relative to the clean heat standard](#) is currently before the Massachusetts legislature. It has many features in common with the Affordable Heat Act. One notable difference is in the definition of “Clean heat measure”: “Clean heat measures shall not include switching from one fossil fuel use to another fossil fuel use, or the use of Renewable Natural Gas or Hydrogen.”

On December 19, 2022, the New York Climate Action Council enacted a [Scoping Plan](#) for implementation of the Climate Leadership & Community Protection Act. In a separate [statement supporting the Scoping Plan](#), Council member and Cornell Prof. Robert Howarth explains that the plan “does not endorse any widespread use of RNG. In fact, the Plan specifies that it is generally preferable to use biogas (the unrefined mixture of methane and carbon dioxide produced in anaerobic digesters and landfills) directly and at the site of production rather than refining the biogas to produce RNG.”