

From: Springer, Darren [Darren.Springer@vermont.gov]
Sent: Thursday, February 26, 2015 4:04 PM
To: 'Mike Hebert'
Subject: RE: H.40 Questions and letter from legislative economist Tom Kavet
Attachments: Summary of alternative compliance payment Greshin.docx

Mike,

Here are my thoughts and responses below (and also the memo from Asa to Rep. Greshin attached), hope this is helpful.

Thanks,
Darren

1. If we repeal SPEED, is that enough to preserve the value of our RECs in Mass and Conn? What is the minimum we could do to preserve their value? How do we know that?
 - A. *Repealing SPEED is not enough to preserve the value of our RECs. What the Department has heard from our counterpart agencies in Connecticut and other New England states is that we need, at a minimum, to do two things to ensure our RECs continue to have value in the New England market. 1. We have to have some skin in the game with our own REC retirement program, or RPS, that looks reasonably similar to what the other 5 states have. Tiers 1 and 2 do this (and Tier 3 provides the cost savings to keep the bill's rate impact close to neutral). We also have to ensure that we market our renewable projects appropriately, and are clear about claims made on projects where the RECS are sold instead of retained in Vermont.*
2. The alternative compliance payments in RESET establish a ceiling for the cost of the RESET program. If electricity sales were to remain constant through 2032, what ceiling would that ACP ceiling be? (ans. about \$2.1B)
 - A. *The Department analyzed a scenario for the first compliance year, at the request of Rep. Greshin, wherein the utilities all paid the ACP only, and did no projects. To be clear, we know for a fact that there are cost-effective projects below the ACP that they would be obligated to do under their least-cost service obligations, but for purposes of the exercise we modeled ACP only. The total cost for tiers 2 and 3 ACP only for year 1 was \$10 million, still far less than the \$50 million in ratepayer benefit at risk. See memo from Asa Hopkins to Rep. Greshin (ATTACHED)*
3. How many acres of solar panels would it take to meet the Tier-2 requirement for year 2017? 2032?
 - A. *The Department expects a mix of technologies to satisfy Tier 2, not just solar. And when solar is used, we continue to expect a significant portion to go on rooftops. But if the whole of Tier 2 was met with only ground-mounted solar it would take*

2,800 acres, out of an approximately 1 million acres available for agricultural and other uses in Vermont.

4. Do we have enough transmission capacity to satisfy all of our Tier-1 requirements using Hydro Quebec electricity through 2032?

A. Our utilities do not necessarily desire to comply with Tier 1 by purchasing more Hydro Quebec power. Tier 1 RECs for the additional increment that might be needed to satisfy the goals through 2032 can be purchased on the market for a tenth of a penny per kilowatt hour. That is likely the compliance route many utilities may go if they need additional Tier 1 RECs.

5. What percentage of our Tier-3 requirements will be met with:

- a. EVs and EV infrastructure?
- b. Home insulation?
- c. Heat pumps?
- d. Something else?

A. This is up to utilities and consumers. All of those technologies and others are eligible, but it is up to utilities to offer programs and consumers to demand products or services. The legislation does not mandate any particular mix of technologies.

6. As the biofuel component of our heating oil blend climbs, does it make sense to replace our oil burners with heat pumps?

A. The Department expects that biofuel blending will increase for oil burners over time, and in fact supporting higher blends of biofuel is an eligible Tier 3 technology choice. Cold-climate heat pumps offer space heating and cooling, and as long as they are cost-effective can be a good supplement to conventional or bio-blended oil. Tier 3 provides credit for fossil fuel reduction, so to the extent heat pumps are being used in a home with a high bio blend, that heat pump project would receive less credit for a utility and may not be the most cost-effective Tier 3 project in that scenario.

7. How much will our consumption of electricity increase as a result of 15 years of the RESET program.

A. That would depend on a variety of factors including how many consumers install heat pumps or use electric vehicles, but increasing electricity use for these technologies is not in of itself a bad thing if it is saving money through reduction of more expensive heating or transportation fuels. The more critical thing is that we do not significantly impact peak demand. The language of the bill makes clear that installation of these technologies should include the appropriate technology choice (i.e. cold-climate heat pumps appropriate for Vermont's climate), and include demand management efforts by the utility so we avoid increasing peak demand. If we do that, we can bring rates for electricity down by using more off-peak kilowatt hours without increasing the need for more poles, wires, and power. That means we are spreading the same fixed costs for the system over more units of sales, and the rate per unit can come down, as David Hallquist testified from Vermont Electric Cooperative.

Darren M. Springer, Deputy Commissioner

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From: Mike Hebert [mailto:mikehebert413@gmail.com]

Sent: Thursday, February 26, 2015 2:30 PM

To: Springer, Darren

Subject: Fwd: H.40 Questions and letter from legislative economist Tom Kavet

----- Forwarded message -----

From: <miltonrealtor@aol.com>

Date: Thursday, February 26, 2015

Subject: H.40 Questions and letter from legislative economist Tom Kavet

To: miltonrealtor@aol.com

Hi,

At the caucus last night, I indicated that I would send these questions to all members. They are attached as well as Tom Kavet's letter attempting to explain the full impact of this bill on utility rate payers.

We plan to offer an amendment and divide the question on this bill.

Don

Here are some questions that you might raise on the floor:

1. If we repeal SPEED, is that enough to preserve the value of our RECs in Mass and Conn? What is the minimum we could do to preserve their value? How do we know that?
2. The alternative compliance payments in RESET establish a ceiling for the cost of the RESET program. If electricity sales were to remain constant through 2032, what ceiling would that ACP ceiling be? (ans. about \$2.1B)
3. How many acres of solar panels would it take to meet the Tier-2 requirement for year 2017? 2032?
4. Do we have enough transmission capacity to satisfy all of our Tier-1 requirements using Hydro Quebec electricity through 2032?
5. What percentage of our Tier-3 requirements will be met with:
 - a. EVs and EV infrastructure?
 - b. Home insulation?
 - c. Heat pumps?
 - d. Something else?

6. As the biofuel component of our heating oil blend climbs, does it make sense to replace our oil burners with heat pumps?

7. How much will our consumption of electricity increase as a result of 15 years of the RESET program.

Summary of alternative compliance payment – potential impacts

Asa S. Hopkins
Public Service Department
February 23, 2015

Prepared at the request of Rep. Greshin.

The alternative compliance payment (ACP) structure of H.40 serves as a cost cap for utility compliance with the provisions of the bill. As such, cost estimates based on the ACP are the *maximum* costs.

Utilities are provided significant opportunities for flexibility with both Tier 2 (distributed generation) and Tier 3 (energy transformation) in order to minimize the likelihood that any utility will pay the ACP.

Each of the other New England states uses an ACP mechanism to contain the costs of their comparable policies. Use of this mechanism is another way in which H.40 would bring Vermont into a parallel policy and market structure with the rest of the region, preserving our utilities' ability to sell excess high-value RECs into the regional market. If that ability were lost, it could mean a 6% rate increase in 2017.

What follows is an estimate of the potential 2017 utility payments of ACP revenue to the Clean Energy Development Fund in cases where, on a statewide aggregate basis, electric utilities fall short of the H.40 targets. Data are presented on a percentage-point basis. That is, where the table shows "1%" it means that, for example, the obligation was 3% of retail sales and the utilities instead demonstrated only 2%. Obligations begin in 2017 at 1% in Tier 2 and 2% in Tier 3 (for a total of 3%).

| | | |
|---|---------------|----------------------|
| 2013 statewide utility sales: | 5635 | GWh (gigawatt-hours) |
| Alternative compliance rate (Tiers 2 and 3): | \$0.06 | per kWh |
| 2013 utility revenue: | \$855,778,012 | |

| %-Point Shortfall | Total ACP/Resulting CEDF revenue | % of 2013 utility revenue |
|--------------------------|---|----------------------------------|
| 0.5% | \$1,690,500 | 0.2% |
| 1.0% | \$3,381,000 | 0.4% |
| 1.5% | \$5,071,500 | 0.6% |
| 2.0% | \$6,762,000 | 0.8% |
| 2.5% | \$8,452,500 | 1.0% |
| 3.0% | \$10,143,000 | 1.2% |