

Dear Senate Committee on Natural Resources and Energy,

It would be a serious mistake to pass H.40 out of your committee without amending it to allow customers to retain the renewable energy credits (RECs) from their solar and wind systems without penalty.

We have worked hard to encourage the adoption of renewable energy in our state. Passing a policy that, in effect, transfers ownership of RECs from the customer to the utility will needlessly undermine our efforts to increase renewable energy adoption.

I say that this policy is needless because **the clear majority of other states with Renewable Portfolio Standards (RPS) allow customers to retain their RECs.** I attach as **Exhibit A**, a table that shows that of the 31 states with RPS policies, only 2 transfer ownership of the RECs to the utilities. 19 of those states, the clear majority explicitly allow the customer to retain their RECs without penalty. These states have implemented successful RPS policies without double counting and without taking away solar owners' ability to make green claims about their energy.

As **Exhibit B**, I provide an excerpt from California Public Service Commission Decision 07-01-018, (March 2006) in which the Commission decides that solar owners shall be allowed to keep 100% of their RECs without penalty. The Commission found that "by enabling system owners to make green claims, RECs may provide a benefit, which could affect the decision to invest in solar DG systems. **Transferring RECs from DG system owners to ratepayers would remove that potential benefit and thereby could adversely impact decisions to invest in solar and other renewable DG projects.**" Accordingly, the Commission chose not to take customers' RECs from them.

I reside in Tunbridge and am the Operations Manager and Principal of Tunbridge Solar. My company develops solar arrays and supplies renewable energy to our customers, one of whom is Green Mountain College (GMC). What we do is good for Vermont – we are reducing Vermont's greenhouse gas emissions, saving our customers money, and contributing to the communities in which we work through property taxes, purchases, and job creation. It is important to our customers, and therefore to my business that they receive the RECs. Without the RECs, GMC and our other customers would have a significantly diminished reason for doing business with us (and any solar developer for that matter) because they would be unable to legally claim title to the renewability of the power we are providing them. If a customer were to sign a contract with us that did not include the RECs, they would be increasing their carbon footprint and the electricity they would receive would consist of coal, oil, nuclear, and natural gas. Why would any climate-conscious organization do business with a solar developer if it caused an increase in their carbon emissions?

Owning RECs is not just important to colleges, it's important to Vermont homeowners and businesses. I attach as **Exhibit C** a photo of maple yogurt (my favorite), made by Butterworks Farm of Westfield, Vermont. Butterworks differentiates its product by advertising that "we are a wind-powered dairy farm" prominently on the front of each quart of yogurt they sell. Without the ability to own RECs, **small Vermont businesses like Butterworks will be at a**

**disadvantage to competitors based in other states (such as Massachusetts and New Hampshire), where customers are allowed to keep their RECs without penalty.**

As **Exhibit D**, I provide a copy of the written testimony I gave to the House Energy and Natural Resource Committee, which provides more information.

**The solution is simple.** Rather than dictating that customers be substantially penalized if they wish to keep their RECs, this Committee should amend the language of the bill to allow customers to keep their RECs without penalty with the stipulation that if they do so, these RECs must be retired. With this language, the intent of the bill is honored because it makes no difference to the climate whether a REC is retired by the utility or by the customer so long as it is retired and the emission reduction is counted once. As this is the case, this cannot be considered “double counting.”

If the Committee does not agree with this proposed solution, I urge you to legislatively delegate the task of determining ownership of the RECs to the Public Service Board with the stipulation that compensation for RECs be fair to both ratepayers and renewable energy system owners. This solution makes sense if the Committee feels that it does not have the expertise to make a determination on this, however, I strongly urge the committee to give REC title to renewable energy owners without differing compensation.

**In conclusion, it is clear, based on my research, that a renewable portfolio standard can be adopted that is fair to all involved, accomplishes its purpose, and does not needlessly discourage the adoption of renewable energy. Nearly all the other states with renewable portfolio standards allow solar and wind owners to make green claims about their energy without being penalized. Vermont should take a lesson from them.**

Sincerely,



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## Exhibit A - REC Ownership State by State

State	Customer Owns RECs?	Details
<b>Arizona</b>		Not addressed in net metering rules; customer owns RECs unless participating in a utility incentive
<b>California</b>		The renewable energy credits (RECs) associated with the electricity produced and used on-site remain with the customer-generator. If, however, the customer chooses to receive financial compensation for the NEG remaining after a 12 month period, the utility will be granted the RECs associated with just that surplus they purchase.
<b>Colorado</b>		The customer-generator retains ownership of any RECs associated with the energy generated by the customer-generator's system. A utility may acquire the RECs by purchasing them from the customer-generator through a standard offer. All contracts for RECs for solar electric technologies located on site at customer facilities are required to have a minimum term of 20 years if the system is under 100 kW.
<b>Connecticut</b>		Customer owns RECs
<b>Delaware</b>		Customers retain ownership of renewable-energy credits (RECs) associated with electricity produced and consumed by the customer.
<b>D.C.</b>		Customer-generator unless indicated otherwise
<b>Hawaii</b>		Not addressed
<b>Illinois</b>		All net-metering customers (and dual-metering customers) hold ownership and title to all renewable-energy credits (RECs) and greenhouse-gas credits associated with customer generation.
<b>Iowa</b>		Not addressed
<b>Kansas</b>		The estimated generating capacity of all net-metered facilities counts toward the affected utility's compliance with Kansas's RPS. If a generator's capacity is being utilized towards a utility's RPS compliance, neither the utility nor the customer-generator may sell any associated RECs.
<b>Maine</b>		Not addressed
<b>Maryland</b>		Customers own and have title to all renewable-energy credits (REC) associated with electricity generation by net-metered systems.
<b>Massachusetts</b>		Customer owns RECs
<b>Michigan</b>		Customer generators own the renewable energy credits (RECs) associated with electricity generated under the program.
<b>Minnesota</b>		The Public Utility Commission ruled in July 2014 that the customer-generator retains ownership of RECs associated with the energy generated by the system.
<b>Missouri</b>		Customer-generator (transferred to utility in some cases where customer-generator receives a rebate)
<b>Montana</b>		Not addressed
<b>Nevada</b>		Customer owns RECs (unless utility subsidizes system)

## Exhibit A - REC Ownership State by State

<b>New Hampshire</b>		Customer-generator owns RECs. However, RECs associated with the net excess generation purchased by the utility at the end of an annual billing period may be claimed by the utility.
<b>New Jersey</b>		Customers eligible for net metering retain ownership of all renewable-energy credits (RECs) associated with the electricity they generate.
<b>New Mexico</b>		Utility owns RECs
<b>New York</b>		The ownership of renewable energy credits (RECs) and other environmental attributes associated with energy production from net metered systems remains unaddressed.
<b>North Carolina</b>		Customers that choose to take service under any tariff other than a time-of-use demand (TOUD) tariff must surrender to the utility all renewable energy credits (RECs) associated with the customer's generation – with no compensation for the customer.
<b>Ohio</b>		Not addressed
<b>Oregon</b>		Customers retain ownership of all renewable-energy credits (RECs) associated with the generation of electricity.
<b>Pennsylvania</b>		Customers retain ownership of alternative-energy credits (commonly referred to as "renewable-energy credits" or "RECs" when associated with renewable energy) unless there is a contract with an express provision that assigns REC ownership to another entity, or unless the customer expressly rejects REC ownership. If a net-metered customer chooses to take ownership or transfer ownership of alternative-energy credits, then the customer is responsible for installing metering equipment required to measure alternative-energy credits.
<b>Rhode Island</b>		Not addressed
<b>South Carolina</b>		Not addressed
<b>Utah</b>		Customer owns RECs
<b>Washington</b>		While the ownership of renewable energy credits (RECs) associated with generation is not specified in the state's net-metering law, the production incentive law states that customer-generators retain ownership of RECs.
<b>West Virginia</b>		Not addressed
<b>Wisconsin</b>		Not addressed

**Of the 31 states with renewable portfolio standards:**

**\* At least 19 states give ownership of RECs to the Customer**

**\* Only 2 states give ownership of the RECs to the Utility**

Data Source: Database of State Incentives for Renewable Energy (4/23/2015)

**Exhibit B – Excerpt from: California Public Utilities Commission Decision 07-01-018,  
January 11, 2007:**

“Our policy priority in developing the California Solar Initiative (CSI) program is to achieve the goals of SB 1, specifically to encourage solar installation and create a self-sustaining solar market. Thus, we are reluctant to make a decision that could potentially discourage investments in DG solar projects and jeopardize this objective. To the extent RECs have any value, whether explicitly through the sale of RECs into a voluntary or a compliance market, or implicitly, by enabling system owners to make green claims, they may provide a benefit, which could affect the decision to invest in solar DG systems. Transferring RECs from DG system owners to ratepayers would remove that potential benefit and thereby could adversely impact decisions to invest in solar and other renewable DG projects.

Allowing solar DG system owners to retain the RECs produced by their facilities is also consistent with the long-term goal of transitioning the solar industry away from ratepayer incentives to a self-sustaining model in which no such incentives are necessary. To the extent that RECs may prove to have any value, whether explicitly or implicitly as discussed above, they could supplement and eventually, in combination with other elements of economic value, replace altogether ratepayer incentives as these incentives are phased out.

Finally, we believe that transferring the RECs to the ratepayers as a condition of receiving ratepayer incentives, whether under the CSI or the SGIP, would run afoul of the policy articulated in D.02-10-062 to encourage the installation of renewable DG facilities. In that decision we included renewable DG in our definition of eligible

renewable generation under the RPS to encourage installation of additional renewable DG facilities. We fail to see how transferring the RECs to the utilities as a condition of receiving ratepayer incentives, whether under the CSI, SGIP, or via net metering, would encourage renewable DG installation. Rather, such a transfer might detract from system economics and perceived benefits, thereby discouraging renewable DG investment. If, however, we allow system owners to retain their RECs, they will be able to benefit from any demand for RECs whether in the compliance market, if and when the state migrates to an unbundled REC regime for RPS compliance purposes, or in the voluntary market.

For all of the reasons stated above, we will allow solar and other renewable DG facility owners to keep 100% of the RECs associated with their facilities, irrespective of whether or not they avail themselves of incentives provided under the CSI or SGIP. As the owners of the RECs, system owners are free to do what they want with them, including expressly transferring the ownership right to another entity. However, in making this decision, we recognize that in pursuing any legislative mandate, or our own policy initiatives, it is our responsibility to ensure that ratepayers do not pay more than is necessary to achieve the goals sought therein. Currently, ratepayers bear the costs of the CSI and the SGIP. As noted above, the incentives under the CSI are based on our estimation of what is required to promote solar installation consistent with the goals of SB 1. A similar rationale underlies the level of incentives developed in the context of the SGIP...”

**Exhibit C – Butterworks Farm Maple Yogurt Image** – Vermont small businesses like Butterworks Farm of Westfield would be at a competitive disadvantage to farms in Massachusetts and New Hampshire under the current provision:



**Exhibit D – Aaron Kelly Testimony to House Energy and Natural Resource Committee –  
on next page →**



Dear Natural Resources & Energy Committee,

I am a Tunbridge resident, Middlebury College graduate, Vermont Law School student, and founder of Tunbridge Solar, a solar developer that is leading the way in demonstrating that institutions and communities can save money on their energy costs and reduce their impact on the environment.

As a business-owner and a community member who cares about climate change, I want to draw your attention to a portion of H.40 ("RESET") that **fundamentally changes Vermont's Net Metering program** and as a result, harms the renewable energy industry, unfairly penalizes Vermont homeowners, businesses, and educational institutions who want to do the right thing by going green, and undermines Vermont's greenhouse gas reduction efforts.

**This provision needlessly establishes a two-tiered compensation system for solar energy.** In essence, under this provision, rather than being incentivized for doing the right, ethical thing regarding climate change, we would instead be punished.

If a homeowner or educational institution wants to go 100% renewable, they will receive a substantially smaller level of compensation for their solar energy than someone who does not care much about being green and willingly forfeits the "environmental attributes" of their energy, also known as their Renewable Energy Credits (RECs), to the power company. The language to which I refer appears in the bill on p. 39 lines 1-3:

"if the customer retains the attributes, reduces the value of the credit provided under this section for electricity generated by the customer's net metering system by the value of the attributes."

A significant motivation for many of your constituents who choose to install solar panels at their homes, including myself, is the ability to feel good that we are getting our power from renewable energy and are reducing our greenhouse gas emissions. If we do not hold legal title to the environmental attributes (RECs) of the energy that our own solar panels are producing, we cannot claim to be powering our homes with solar energy.

Likewise, many businesses and academic institutions, including Middlebury College, Vermont Law School, and Green Mountain College rely on solar panels to help meet their climate change goals. Without ownership of the environmental attributes (RECs) from their solar panels, they cannot count their solar energy toward their climate goals.

**As a consequence, this provision undermines your constituents' efforts toward sustainability** by forcing them to either relinquish their claim to the renewability of their power, thus destroying their reason for going solar, or get compensated significantly less for their energy, which undermines the financial case for going solar in the first place. **This provision needlessly discourages your constituents from going solar** when our stated objective is to encourage more renewable energy in Vermont.

**There is no valid justification** for forcing people into giving up their renewable attributes and thus their ability to be renewable. If members of our community want to go 100% renewable, it helps Vermont and the climate and doesn't harm anyone else. So why penalize them for doing the right thing? This simply doesn't make sense.

**The solution to this provision is simple, fair, and is consistent with good policymaking:**

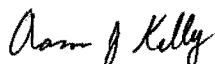
- Allow electricity consumers to keep the environmental attributes (RECs) of their renewable energy without needlessly penalizing them (with the stipulation that the RECs be retired).
- Allow utilities to receive credit for the total amount of renewable energy on their network in meeting the requirements of the bill.

**That's all that would be required to fix this provision that deprives Vermonters of their right to receive renewable energy from their own solar panels.**

I urge you to represent your constituents to the fullest of your ability by seriously questioning this provision in the bill and advocating for the above sensible changes.

I am, of course, available to address any questions or to help clarify any facts pertaining to this matter and am happy to meet with you at any time if I can be helpful.

With Warm Regards,



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**Attachments:**

- I attach testimony from Professor Kevin Jones, Deputy Director of the Institute for Energy and the Environment at Vermont Law School that proposes the specific changes needed to fix this provision, consistent with the above proposed solution.

February 5, 2015

Testimony before House Natural Resources and Energy Committee on H.40

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Thank you for the opportunity to speak on H.40. For context, I am the Deputy Director of the Institute for Energy and the Environment at VLS where I also lead our Energy Clinic and chair the VLS Campus Sustainability Committee. Our student staffed pro bono energy clinic is currently working on legal and business structures to support net-metered community solar and we are currently pursuing a long-term net metering agreement for VLS with a 500 kW solar project where VLS will retain and retire the RECs in support of our participation in the American College and University Presidents' Climate Commitment which requires us to work toward net zero carbon emissions. While my testimony is shaped by these experiences, the comments here are my own and do not necessarily reflect the views of organizations I am affiliated with.

I generally support the goals of H.40, particularly, the requirement that RECs be retired with the resulting greenhouse gas reductions accruing to Vermont electric load, as well as, the presence of meaningful tiers for distributed generation and energy transformation technologies. My comments today are focused on the DG tier, specifically net-metering.

#### H.40 as Drafted will Unnecessarily Harm Net Metering

My main concern with the bill as drafted appears on page 4, lines 1-3, which states *"(i) if the customer retains the attributes, reduces the value of the credit provided under this section for electricity generated by the customer's net metering system by the value of the attributes;"*

My concern with this provision is that it would provide a different monetary credit to a Vermont electric net metering customer that wants to retain and individually retire the RECs (or alternatively keep them bundled) associated with their net metered energy, preserving their right to make any associated green claims, compared to a net metered customer that turns their RECs over to the distribution utility to be retired. Since both of these transactions result in the same reduction in Vermont greenhouse gas emissions there is no logical reason to value the environmental benefit of the net metered energy differently.

There are a number of reasons to support a change to H.40 that provides the same net metering credit to customers whether the customer owns the REC (and retires

or does not unbundle it) or whether the REC is turned over to the utility for retirement. As a number of other parties have testified, reducing the financial benefit to customers that want to decrease their own carbon footprint could discourage these customers from net metering as both net metering credits and federal tax incentives are reduced. At a time when financial incentives are being reduced, it could significantly harm customer interest in net metering if we further reduce the incentive for those who want to participate in net metering to mitigate their own personal contributions to climate change. We should instead be encouraging these customers to further invest in net metering. Many state net metering programs leave the RECs with the customer. The following customers will be disadvantaged under a provision that causes them to give up their RECs for no good public policy reason:

1. Colleges and Universities that participate in the Climate Commitment. - Institutions such as VLS, Green Mountain College and Middlebury College have pursued net metering agreements that have retained and retired the RECs in order to reduce their own greenhouse gas emissions. Reducing the incentives to these institutions makes no public policy sense and a slight change in the economics of these agreements could result in them pursuing other strategies such as purchasing inexpensive carbon offsets rather than supporting the development of Vermont solar projects. H.40 should encourage, not discourage, Vermont university and college net metering agreements as they make progress toward reducing their greenhouse gas emissions.
2. Community Solar Projects - There are existing community solar projects across the state and others in various stages of development that are interested in reducing their individual and communities carbon footprints and thus want to own and retire their own RECs. These projects are providing business to local installers and affiliated contractors and often borrowing money from local financial institutions. There is no good public policy reason to reduce the financial incentive to these projects. If these projects have to turn over their RECs to the utility in order to make the finances work then you have taken away a primary reason that community solar projects exist and this bill will result in fewer community solar projects and reduced economic benefit to the Vermont solar industry.
3. Individual and Commercial Projects - If an individual or local business wants to reduce their own carbon footprints and make individual green claims they must retain their RECs. With reduced federal incentives, customer interest in greening their own carbon footprints will become an increasingly important reason for net metering. If the Vermont net metering credit is reduced further then there will be less customer interest in net metered solar and a negative impact on the most distributed form of energy, as well as, local solar installers. H.40 should encourage individuals and business that want to be 100% renewable to do so since it is good for the local environment and good for the local economy.

## An Alternative Proposal that Benefits the Customer and the Solar Industry and is Fair to the Utilities

There is a relatively simple alternative that could allow net metered customers to retain their RECs, allowing them to make their individual green claims, account for the net metered energy in the individual DG requirement for the utility, and not raise any concerns about double counting of RECs. The alternative is as follows:

1. Net metered customers that choose to make individual green claims would be paid the same incentive as net metered customers that turn their RECs over to the utility as long as they agree to not unbundle and sell their net metered RECs.
2. The total mWhs for these net metered customers production would be reduced from the DG requirement for each utility. For example, the individual utility requirement for 2017 would become:

$$(0.01 \times \text{utility's annual electric sales}) - (\text{total new customer net metered mWhs that retain their RECs or environmental attributes in utility's service territory}) = \text{utility DG requirement (mWhs)}.$$

Under this alternative, all net metered energy that retires the RECs toward Vermont's greenhouse gas goals is paid the same incentive, the total amount of renewable energy goals, including the amount provided by DG, under H.40 remains the same, utilities are credited for what their customers do under net metering and we remove the disincentive that would otherwise exist for those net metering customers that desire to reduce their own carbon footprints. Since the utility has a unique, separate requirement there are no double counting concerns.

Necessary changes would include:

- Revisions necessary to implement this would be on P18, lines 1-5 where the definition of required amounts would need to be revised to reduce the utility requirement by subtracting annually the quantity of customer retired (or bundled) RECs.
- Another revision would be required on page 40 lines 1-2 to remove the language "reduces the value of the credit" and to add language clarifying that as long as the customer retains and retires the REC (or alternatively does not unbundle it) that it would be eligible for the full net metering credit.