Committee Report

REGULAR CALENDAR

May 15, 2019

HOUSE OF REPRESENTATIVES

REPORT OF COMMITTEE

The Majority of the Committee on Science, Technology and Energy to which was referred SB 168,

AN ACT relative to class 2 obligations under the electric renewable portfolio standards. Having considered the same, report the same with the following amendment, and the recommendation that the bill OUGHT TO PASS WITH AMENDMENT.

Rep. Kenneth Wells

FOR THE MAJORITY OF THE COMMITTEE

Original: House Clerk
Cc: Committee Bill File

MAJORITY
COMMITTEE REPORT

Committee:	**Science, Technology and Energy**
Bill Number:	**SB 168**
Title:	**relative to class 2 obligations under the electric renewable portfolio standards.**
Date:	**May 15, 2019**
Consent Calendar:	**REGULAR**
Recommendation:	**OUGHT TO PASS WITH AMENDMENT 2019-1894h**

STATEMENT OF INTENT

NH faces rising electricity costs on the multi-state regional grid because our neighboring states are driving down their total consumption by aggressively pursuing solar energy. This bill addresses our state's Renewable Portfolio Standard (RPS), which describes how much of NH's total energy mix will come from renewable energy. Renewable energy is a good deal for NH because, unlike fossil fuels such as coal, oil and natural gas, we can harvest renewable energy here in our state, paying in-state producers who will hire NH workers. This bill increases incrementally the Class II (solar electricity) portion of the RPS. It grows Class II from the existing 0.6% solar in 2019 to 5.4% by year 2025.

Vote 12-7.

Rep. Kenneth Wells
FOR THE MAJORITY

Original: House Clerk
Cc: Committee Bill File

REGULAR CALENDAR

Science, Technology and Energy

SB 168, relative to class 2 obligations under the electric renewable portfolio standards. **MAJORITY: OUGHT TO PASS WITH AMENDMENT. MINORITY: INEXPEDIENT TO LEGISLATE.**

Rep. Kenneth Wells for the **Majority** of Science, Technology and Energy. NH faces rising electricity costs on the multi-state regional grid because our neighboring states are driving down their total consumption by aggressively pursuing solar energy. This bill addresses our state's Renewable Portfolio Standard (RPS), which describes how much of NH's total energy mix will come from renewable energy. Renewable energy is a good deal for NH because, unlike fossil fuels such as coal, oil and natural gas, we can harvest renewable energy here in our state, paying in-state producers who will hire NH workers. This bill increases incrementally the Class II (solar electricity) portion of the RPS. It grows Class II from the existing 0.6% solar in 2019 to 5.4% by year 2025. **Vote 12-7.**

Original: House Clerk
Cc: Committee Bill File

Carol Stapler

From: robertbackus05@comcast.net
Sent: Wednesday, May 15, 2019 1:09 PM
To: Carol Stapler
Subject: Re: FW: Majority report for SB168

Excellent. I approve.

On May 15, 2019 12:51 PM, Carol Stapler <Carol.Stapler@leg.state.nh.us> wrote:

> **From:** Wells, Ken
> **Sent:** Wednesday, May 15, 2019 12:47 PM
> **To:** Carol Stapler <Carol.Stapler@leg.state.nh.us>; Joel Anderson <Joel.Anderson@leg.state.nh.us>; George Saunderson <George.Saunderson@leg.state.nh.us>
> **Subject:** Majority report for SB168
>
> **Majority report for SB 168 (with committee amendment 2019-1894h):**
>
> NH faces rising electricity costs on the multi-state regional grid, because our neighboring states are driving down their total consumption by aggressively pursuing solar energy. Senate Bill 168 addresses NH's Renewable Portfolio Standard (or RPS), which describes how much of NH's total energy mix will come from renewable energy. Renewable energy is a good deal for NH because, unlike fossil fuels such as coal, oil and natural gas, we can harvest renewable energy here in our state, paying in-state producers who will hire NH workers. This bill increases incrementally the Class II (solar electricity) portion of the RPS. It grows Class II from the existing 0.6% solar in 2019, to 5.4% by year 2025. It clarifies that Class III and Class IV (biomass and hydro) portion of the RPS remain constant through 2025, because those resources are fixed by relatively unchangeable timberland acreage and the number of dams and rivers.
>
> **Vote: 12-7**
>
> **Ken Wells**

Rep. Saunderson, Merr. 9
Rep. Wells, Merr. 1
May 9, 2019
2019-1894h
06/10

Amendment to SB 168

Amend the footnote to RSA 362-F:3 as inserted by section 1 of the bill by replacing it with the following:

*Class I increases an additional 0.9 percent per year from 2015 through 2025. A set percentage of the class I totals shall be satisfied annually by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy as defined in RSA 362-F:2, XV-a. The set percentage shall be 0.4 percent in 2014, 0.6 percent in 2015, 0.8 percent in 2016, and increased annually by 0.2 percent per year from 2017 through 2023, after which it shall remain unchanged. Class II shall increase to 0.5 percent beginning in 2018, 0.6 percent beginning in 2019, [~~and 0.7~~] ***1.4*** percent beginning in 2020, ***2.2 percent beginning in 2021, 3.0 percent beginning in 2022, 3.8 percent beginning in 2023, 4.6 percent beginning in 2024, and 5.4 percent beginning in 2025***[~~, otherwise~~]. Classes [~~II~~] ***III***-IV shall remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, [~~V-VI~~] ***VI. The requirements for classes I-II are subject to the provisions of RSA 362-F:4, V.***

REGULAR CALENDAR

May 30, 2019

HOUSE OF REPRESENTATIVES

REPORT OF COMMITTEE

The Minority of the Committee on Science, Technology and Energy to which was referred SB 168,

AN ACT relative to class 2 obligations under the electric renewable portfolio standards. Having considered the same, and being unable to agree with the Majority, report with the following resolution: RESOLVED, that it is INEXPEDIENT TO LEGISLATE.

Rep. Fred Plett

FOR THE MINORITY OF THE COMMITTEE

Original: House Clerk
Cc: Committee Bill File

MINORITY
COMMITTEE REPORT

Committee:	**Science, Technology and Energy**
Bill Number:	**SB 168**
Title:	**relative to class 2 obligations under the electric renewable portfolio standards.**
Date:	**May 30, 2019**
Consent Calendar:	**REGULAR**
Recommendation:	**INEXPEDIENT TO LEGISLATE**

STATEMENT OF INTENT

This bill raises the Class II Renewable Portfolio Standard (new solar) from the current 0.6% to 5.4% by 2025, the percentages applicable to the electric supply necessary to provide energy to consumers in megawatt hours. This additional requirement may consume 2,300 acres of land somewhere for new solar panels and cost electric consumers an additional $30 million per year. The minority objects to this additional burden on our lands and our pocketbooks.

Rep. Fred Plett
FOR THE MINORITY

Original: House Clerk
Cc: Committee Bill File

REGULAR CALENDAR

Science, Technology and Energy
SB 168, relative to class 2 obligations under the electric renewable portfolio standards. **INEXPEDIENT TO LEGISLATE.**
Rep. Fred Plett for the **Minority** of Science, Technology and Energy. This bill raises the Class II Renewable Portfolio Standard (new solar) from the current 0.6% to 5.4% by 2025, the percentages applicable to the electric supply necessary to provide energy to consumers in megawatt hours. This additional requirement may consume 2,300 acres of land somewhere for new solar panels and cost electric consumers an additional $30 million per year. The minority objects to this additional burden on our lands and our pocketbooks.

Original: House Clerk
Cc: Committee Bill File

SB168 relative to class 2 obligations under the electric renewable portfolio standarss. Rep Fred Plett for the MINORITY. This bill raises the Class II Renewable Portfolio Standards (new solar) from a current 0.5% to 5.4% by 2025, the percentages applicable to the electric supply necessary to provide energy to consumers, in Megawatt-Hours. This additional requirement will consume 2,300 Acres of land for new solar panels, and will cost electric consumers an additional $30 million per year. The minority objects to this additional burden on our lands and our pocketbooks.

MAY

somewhere

Voting Sheets

HOUSE COMMITTEE ON SCIENCE, TECHNOLOGY AND ENERGY

EXECUTIVE SESSION on SB 168

BILL TITLE: relative to class 2 obligations under the electric renewable portfolio standards.

DATE: May 15, 2019

LOB ROOM: 304

MOTIONS: **OUGHT TO PASS WITH AMENDMENT**

Moved by Rep. Saunderson	Seconded by Rep. Wells	AM Vote: 12-7

Amendment # 2019-1894h

Moved by Rep. Saunderson	Seconded by Rep. Wells	Vote: 12-7

CONSENT CALENDAR: NO

Statement of Intent: Refer to Committee Report

Respectfully submitted,

Rep Lee Oxenham, Clerk

HOUSE COMMITTEE ON SCIENCE, TECHNOLOGY AND ENERGY

EXECUTIVE SESSION on SB 168

BILL TITLE: relative to class 2 obligations under the electric renewable portfolio standards.

DATE: 5-15-19

LOB ROOM: 304

Amendment 2019-1894h

MOTION: (Please check one box)

☑ OTP ☐ ITL ☐ Retain (1st year) ☐ Adoption of Amendment # *(if offered)*

☐ Interim Study (2nd year)

Moved by Rep. Sanderson Seconded by Rep. Wells Vote: 12-7

MOTION: (Please check one box)

☐ OTP ☑ OTP/A ☐ ITL ☐ Retain (1st year) ☐ Adoption of Amendment # 12-7 *(if offered)* #1894h

☐ Interim Study (2nd year)

Moved by Rep. Sanderson Seconded by Rep. Wells Vote:

MOTION: (Please check one box)

☐ OTP ☐ OTP/A ☐ ITL ☐ Retain (1st year) ☐ Adoption of Amendment # *(if offered)*

☐ Interim Study (2nd year)

Moved by Rep. _____ Seconded by Rep. _____ Vote:

MOTION: (Please check one box)

☐ OTP ☐ OTP/A ☐ ITL ☐ Retain (1st year) ☐ Adoption of Amendment # *(if offered)*

☐ Interim Study (2nd year)

Moved by Rep. _____ Seconded by Rep. _____ Vote:

Majority - Sanderson 2019-1894h Am. 12-7-1

CONSENT CALENDAR: ____ YES ____ NO OTP/A 12-7-1

Minority Report? ☑ Yes ____ No If yes, author, Rep: Plett Motion

Respectfully submitted: _____

Rep Lee Oxenham, Clerk

OFFICE OF THE HOUSE CLERK

1/14/2019 3:25:56 PM
Roll Call Committee Registers Report

2019 SESSION

Science, Technology and Energy 2019-1894h

Bill #: SB 168 **Motion:** Am OTP **AM #:** _____ **Exec Session Date:** 5-15-19

Members	YEAS	Nays	NV
Backus, Robert A. Chairman	✓		
Moffett, Howard M. Vice Chairman Buchanan	✓		
Cali-Pitts, Jacqueline A.	✓		
Mann, John E.	✓		
Oxenham, Lee Walker Clerk	✓		
Somssich, Peter F.	✓		
Vincent, Kenneth S.			✓
Balch, Chris	✓		
McGhee, Kat	✓		
McWilliams, Rebecca J.	✓		
Saunderson, George L.	✓		
Wells, Kenneth D.	✓		
Harrington, Michael D.		✓	
Notter, Jeanine M.		✓	
Aldrich, Glen C. Torosian		✓	
Thomas, Douglas W.		✓	
Merner, Troy E.	✓		
Ober, Russell T.		✓	
Webb, James C. Frolio		✓	
Plett, Fred R.		✓	
TOTAL VOTE:	12	7	1

OFFICE OF THE HOUSE CLERK

1/14/2019 3:25:56 PM
Roll Call Committee Registers Report

2019 SESSION

Science, Technology and Energy

Bill #: SB168 Motion: OTPA AM #: (1894h) Exec Session Date: 5-15-19

Members	YEAS	Nays	NV
Backus, Robert A. Chairman	✓		
Moffett, Howard M. Vice Chairman Buchanan	✓		
Cali-Pitts, Jacqueline A.	✓		
Mann, John E.	✓		
Oxenham, Lee Walker Clerk	✓		
Somssich, Peter F.	✓		
Vincent, Kenneth S.			✓
Balch, Chris	✓		
McGhee, Kat	✓		
McWilliams, Rebecca J.	✓		
Saunderson, George L.	✓		
Wells, Kenneth D.	✓		
Harrington, Michael D.		✓	
Notter, Jeanine M.		✓	
~~Aldrich, Glen C.~~ ~~FLANAGAN~~ Torosian		✓	
Thomas, Douglas W.		✓	
Merner, Troy E.	✓		
Ober, Russell T.		✓	
~~Webb, James~~ C. ~~TAURIN~~ Fields		✓	
Plett, Fred R.		✓	
TOTAL VOTE:	12	7	1

Rep. Saunderson, Merr. 9
Rep. Wells, Merr. 1
May 9, 2019
2019-1894h
06/10

Amendment to SB 168

Amend the footnote to RSA 362-F:3 as inserted by section 1 of the bill by replacing it with the following:

*Class I increases an additional 0.9 percent per year from 2015 through 2025. A set percentage of the class I totals shall be satisfied annually by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy as defined in RSA 362-F:2, XV-a. The set percentage shall be 0.4 percent in 2014, 0.6 percent in 2015, 0.8 percent in 2016, and increased annually by 0.2 percent per year from 2017 through 2023, after which it shall remain unchanged. Class II shall increase to 0.5 percent beginning in 2018, 0.6 percent beginning in 2019, [~~and 0.7~~] ***1.4*** percent beginning in 2020, ***2.2 percent beginning in 2021, 3.0 percent beginning in 2022, 3.8 percent beginning in 2023, 4.6 percent beginning in 2024, and 5.4 percent beginning in 2025***[~~, otherwise~~]. Classes [~~II~~] *III*-IV shall remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, [~~V-VI~~] *VI. The requirements for classes I-II are subject to the provisions of RSA 362-F:4, V.*

Sub-Committee Actions

HOUSE COMMITTEE ON SCIENCE, TECHNOLOGY AND ENERGY

SUBCOMMITTEE WORK SESSION on SB 168

BILL TITLE: relative to class 2 obligations under the electric renewable portfolio standards.

DATE: May 9, 2019

Subcommittee Members: Reps. Oxenham, Balch, McGhee, Saunderson, Wells and Merner

Comments and Recommendations: The subcommittee agreed to move forward with SB 168 with a few small modifications. See attached notes.

MOTIONS: **OUGHT TO PASS WITH AMENDMENT**

Moved by Rep. Wells Seconded by Reps. Backus, Moffett, Oxenham, Cali-Pitts, Mann, Somssich, Vincent, Balch, McGhee, McWilliams, Saunderson, Wells, Harrington, Notter, Aldrich, D. Thomas, Merner, R. Ober, Webb and Plett AM Vote: 6-0

Amendment # 2019-1894h

Moved by Rep. Wells Seconded by Rep. Saunderson Vote: 6-0

Respectfully submitted,

Rep. George Saunderson
Subcommittee Chairman

HOUSE COMMITTEE ON SCIENCE, TECHNOLOGY AND ENERGY

SUB FULL COMMITTEE WORK SESSION on SB 168

BILL TITLE: relative to class 2 obligations under the electric renewable portfolio standards.

DATE: 5-9-19

Subcommittee Members: Reps. Backus, Moffett, Oxenham, Cali-Pitts, Mann, Somssich, Vincent, Balch, McGhee, McWilliams, Saunderson, Wells, Harrington, Notter, Aldrich, D. Thomas, Merner, R. Ober, Webb and Plett

Comments and Recommendations:

COMMITTEE AGREED TO MOVE FORWARD WITH SB 168 WITH A FEW SMALL MODIFICATIONS.

MOTIONS: OTP, (OTP/A), ITL, Retained (1st Yr), Interim Study (2nd Yr)
(Please circle one)

Moved by Rep. WELLS Seconded by Rep. SAUNDERSON AM Vote: 6 - 0

Adoption of Amendment # _____

Moved by Rep. _____ Seconded by Rep. _____ Vote:

_____ Amendment Adopted _____ Amendment Failed

MOTIONS: OTP, OTP/A, ITL, Retained (1st Yr), Interim Study (2nd Yr)
(Please circle one)

Moved by Rep. _____ Seconded by Rep. _____ AM Vote:

Adoption of Amendment # _____

Moved by Rep. _____ Seconded by Rep. _____ Vote:

_____ Amendment Adopted _____ Amendment Failed

Respectfully submitted,

Rep. Jane Sanderson
Subcommittee Chairman/Clerk

SB124 & SB 168 Subcommittee Meeting Note Taker: Kat McGhee

May 9. 2019

ST & E attendees: George Saunderson (Chair), Ken Wells, Kat McGhee, Howard Moffett, Bob Backus, Lee Oxenham, Chris Balch, Troy Merner, Jacqui Cali-Pitts

Additional interested parties: Jim Monahan, Madeleine Mineau, Matt Mailloux, Mike Fitzgerald, Karen Crampton, Joel Anderson, two other unidentified lobbyists

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Initial Discussion Points:

- SB168 Includes Class I & Class II energy sources which are dynamic - markets may increase with emerging technologies
- Class III (existing biomass & landfill methane used to generate electricity) and Class IV (existing small hydro) are steady inputs at 8% and 1.5% respectively - no growth anticipated
- Initial suggestions that we combine the bills in some way was discouraged by several knowledgable participants in the discussion. Each bill serves a different purpose and it even appears that SB124 was intended to 'pick up where SB168 left off'.
- SB168 amends the footnote of RSA 362:F-3 (a point to keep in mind if SB124 is retained bc it refers to this RSA), if SB168 changes 362:F-3, SB124 will include an erroneous reference.
- Retroactive timing of SB168 to 2018 must be changed; REC trading period has a 6 month lag, and starts on July 1 each year. Therefore, a 2020 program start might make sense.
- SB124 Passed through committee with amendment 2019-1742h so the existing timeframe would not lapse.

There was also discussions of more aggressive targets than 5.4 % penetration of solar by 2025. However, further discussion included the fact that initial PUC review was did not yet have sufficient data on the solar market to define realistic targets -therefore, it was decided that perhaps leaving the 2025 target and revisited further range targets was advisable.

Purpose of SB124 - acknowledges that all current RPS targets plateau in 2025, so it extends the vistas further out as a means of setting a long range commitment/signal/trajectory

Purpose of SB168 - to incentivize increased obligations in the anemic NH REC market

Decisions:

- SB168 is the priority as it has an immediate impact on improving a market that is not meeting NH's needs.
-Class II increases for 2018 and 2019 are to be eliminated from the bill.
-.7 Class II increases to be upped to .8 each year from 2020, to 2025 for a total of 5.4%

-Retain SB124 for further work and make sure when it is taken up again, that we make note that with passage of SB168, the RSA (362:F-3) it references has an amended footnote.

Unanimous vote to retain SB124 and make agreed upon edits to SB168

Hearing Minutes

HOUSE COMMITTEE ON SCIENCE, TECHNOLOGY AND ENERGY

PUBLIC HEARING ON SB 168

BILL TITLE: **relative to class 2 obligations under the electric renewable portfolio standards.**

DATE: **April 17, 2019**

LOB ROOM: **304** **Time Public Hearing Called to Order:** **2:00 pm**

Time Adjourned: **3:30 pm**

Committee Members: Reps. Backus, Moffett, Oxenham, Cali-Pitts, Mann, Somssich, Vincent, Balch, McGhee, McWilliams, Saunderson, Wells, Harrington, Notter, Aldrich, D. Thomas, Merner, R. Ober, Webb and Plett

Bill Sponsors:
Sen. Feltes
Sen. Fuller Clark
Sen. Watters
Rep. Oxenham

TESTIMONY

* Use asterisk if written testimony and/or amendments are submitted.

Public Hearing SB 168

Sen. Dan Feltes, prime sponsor - Stated that under the provisions of this bill the ramp up for solar between 2020 and 2025 would be in increments of about .7% in the final 4 years, but closer to .8 and .9 in the near term. Other states like MA and VT are above 10. Even ME is more aggressive than we are in terms of solar, and this is costing us in clean energy jobs, where there is great growth potential. There are already over 1500 employed in this burgeoning sector. Whatever the cost may be for this program, it is far outweighed by the benefits. Those benefits include both increased health and fighting climate change. The prices of arrays will come down as more come on line. The reduction in transmission costs by producing more electricity locally will also be enormous. The resources are here. We want to diversify our fuel sources – that helps with the peaks, it helps the clean tech sector and it helps reduce greenhouse gases.
Opponents come up with potential costs that are based on the alternative compliance payments (ACPs.) But nobody is going to be paying for ACPs on their bill. They ring alarm bells re rates and jobs, but the sponsor argued that if we don't do this we will lose out. Solar is growing regionally, we can't miss out. There is a threat of backsliding here in NH. There are over 1000 jobs here in NH that we need to support. These are the jobs of tomorrow. It is a matter of competitiveness. Growing our economy is not just about the business tax rate – it's what we do to attract the workforce for tomorrow. We do less than half what our neighbors do, and we hear that they may go substantially higher. This is a balanced piece of legislation. You will probably hear about the costs per year, some say 200 million others say over a billion. We hear all kinds of stuff, but in reality no one can credibly sit in this chair and tell you reliably what it will cost. He said he could tell us that this is a reasonable ramp up for Class II solar. It preserves existing things

in place, it is prudent, and he encouraged it to our favorable consideration.

Q: Rep. John Mann - I'm wondering if anyone has made projections about the solar industry going forward. It seems it would be an easy reach to get to those figures.
A: I'll defer to Madeleine Mineau. Our work in committee suggests it is within reach, especially if we can get HB 365 passed. That will help a lot.

Q: Rep. Peter Somssich - I have surveyed folks in the solar industry and they say they could do 5% by 2030. Another component of this is the capacity factor. If we assume that within 5 years wind and solar will have battery back up, making them available 24/7, that will be an easy target.
A: Battery storage will be an important component of our renewable energy strategy, and we are taking important policy steps this year.

Q: Michael Harrington – Just doing a back of the envelope estimate of the costs associated with this program, this looks like economic suicide – forcing onto our children costs that are running $10 -200 million per year.

***Dan Weeks, Revision Energy** - Supports. We do know from the overall scientific consensus more than a little about the costs of climate change, climate destruction and the climate crisis. Thirteen federal agencies produced a joint National Assessment last year that predicts the costs to the US economy. We could see the total GNP shrink by 10%. That means a hit of $75 billion in GNP here in NH. That is roughly 37 times more costly than estimates of the costs of the transition we need to make. DES has estimated a billion dollar per year cost in lives lost prematurely. Or we can look at the federal emergency dollars we are spending per capita or the ever increasing roster of disasters. The US Accounting office says we have already spent more than 350 billion over the last decade to deal with those. My testimony focuses on a few key points. First the RPS and ratepayer money. Contrary to many of the most often heard arguments, increasing our solar targets will bring net benefits to ratepayers. In a recent PUC proceeding looking into net-metering, the staff found no evidence of a significant cost shift. A 2017 study by the Acadia Center found that in 2015 there was a negative cost shift, i.e. that solar supplied more value to the grid than its owners received in compensation. If you included all the social benefits from cleaner air to improved health and reduced mortality the value of solar to the grid was more than 50% higher than its net-metered compensation. Similarly in MA, they found a reverse cost shift. Private solar investment delivered net system benefits, particularly in shaving the peak and offsetting the need to build and pay for peaker plants. Beyond New England, the Brookings Institution analyzed the costs and benefits of net-metering and found that the economic benefits outweigh and impose no net cost on ratepayers. In short, net-metering is a net benefit, and there is no cost shift. 123 NH residents die prematurely as a result of fossil fuel based air pollution at a cost of one billion dollars in public health dollars. Wildlife health – which is a driver of tourism – is also driven by climate change. Raising our Class II target to just 5% by 2025, would mean close to 80 MW per year going forward, and up to one billion dollars in new direct investments in NH's economy and future. Instead of sending 5 billion dollars out of state each year to purchase fuels, we can invest that

money here. It would be especially beneficial to low income communities – they are the first to suffer from tailpipe emissions and the most in need of good paying jobs. This new 80 MW in new generation will mean $200 million in direct investment and 6 times that once the ongoing ripple effects are counted.

Q: Chairman Robert Backus – Do you know of any businesses fleeing from MA as a result of their high level of support for renewable energy?
A: No, but I know they invest a lot to offset their costs. They are now at 18% efficiency. It was 5% when I was in college, and I understand that in high tech it's now 25%. There have been real breakthroughs, perhaps not on the order of Moore's law re computing efficiency, but very high indeed. There have also been great cost reductions, a 70% decline in costs of pv alone in the last 10 yrs. Solar is now a commodity that is manufactured cost effectively. I recently saw a film titled "Taming the Sun" which traced various breakthroughs in material science – leading up to thin film. They are going to be unrolling massive carpets of this stuff in the desert, at mere pennies per kWh to install. You will be able to apply it with a paintbrush. Of course we still need more R and D to get there, but we will. Even with our current wind and solar – we have capacity at 15% and efficiency at 19%. We'll get to 30% eventually. RE has already passed grid parity in parts of the US.

Q: Rep. Somssich - Have you heard about floating solar farms on lakes?
A: In Florida they are doing that on wastewater treatment ponds.
Q: How can we send out a signal that NH is open to business in RE?
A: The RPS can do that. It makes it possible to have a payback on investment in MA in just 3 years. That can make all the difference.

***Karen Cramton, PUC Director of Sustainable Energy Division** - No position on bill; see written testimony.

JJ Smith, NH Public Health Assn. – Supports. The health effects of transitioning away from fossil fuels are clear already. The health costs of particulate pollution can be counted in heart attacks, pneumonia, exacerbated asthma and COPD. Without more renewables we will continue to turn to highly polluting peaker plants, which carry the greatest health costs. It may not appear on business' bottom line, but it will cost business. Not just in health care costs, but in lost productivity. We need to incentivize everyone to do something. Business can invest in this to their own benefit.

Sam Dionne, Sunpin Solar Development - Supports. Mr. Dionne lives in Stratham and commutes 3 hours into MA where he has a solar business. He is currently working on 18 utility scale projects, and a 98 MW facility just opened. Looking at NH you have to ask what are they doing? It is not even on the radar for utility scale solar. 1MW is not enough to be cost efficient. Net-metering and the way it is set up presents a very good opportunity, but only for small projects. Solar developers are looking for opportunities in different markets, but not here. One of the first things they look at is the RPS; are there retiring coal plants, can you purchase land next door to your markets? As far as driving businesses away – and whether manufacturing is fleeing south or even outside the country, that is not the situation with solar. We are looking to sell, and going to these businesses with

offers for cheaper electricity. You need to open up and grow the market here.

Q: Chairman Backus - What qualifies as utility scale?
A: It differs. I'd say about 10 MW. For us, we'd never build below 1MW. Although projects can get scaled down for various reasons, and you might have sunk costs, so you'd continue despite the drop in scale. But the money is in large-scale projects. MA currently has a 250MW project in planning.
Q: A 5 MW project, what could that cost?
A: Construction costs in the 10s of millions, but in MA you get $1.40 per watt.

Madeleine Mineau, Clean Energy NH - Supports. Currently the market for Class II solar RECs is non-existent. First the obligations are too low – we have already achieved the goal set for 2025. These goals are too low, this sets the target at 0.7% from solar by 2025. We should aim a lot higher. We could do 5.4 % by 2025, many of our neighbors are already over 10%. This would be a signal to businesses to come to NH, and a boost to those already here. If you use a 13% capacity factor and consider load at 10 million, 0.7% of load can be met by 66 MW of solar, and we already have 80 MW. We can be a little bit more ambitious.

***Dan Weeks, ReVision Energy** - Supports; see written testimony.
Blue Sheet: Pro, 4; Con,3

Respectfully Submitted:

Lee Oxenham, Clerk

HOUSE COMMITTEE ON SCIENCE, TECHNOLOGY AND ENERGY

PUBLIC HEARING ON SB 168

BILL TITLE: **relative to class 2 obligations under the electric renewable portfolio standards.**

DATE: 4-17-19

ROOM: 304 Time Public Hearing Called to Order: ____

Time Adjourned:

(please circle if present)

Committee Members: Reps. Backus, Moffett, Oxenham, Cali-Pitts, Mann, Somssich, Vincent, Balch, McGhee, McWilliams, Saunderson, Wells, Harrington, Notter, Aldrich, D. Thomas, Merner, R. Ober, Webb and Plett

Bill Sponsors:
Sen. Feltes Sen. Fuller Clark Sen. Watters
Rep. Oxenham

TESTIMONY

* Use asterisk if written testimony and/or amendments are submitted.

Public Hearing SB 168

The prime sponsor, **Sen. Feltes**, stated that under the provisions of this bill the ramp up for solar between 2020 and 2025 would be in increments of about 7% in the final 4 years, but closer to 8 and 9 in the near term. Other states like MA and VT are above 10. Even ME is more aggressive than we are in terms of solar, and this is costing us in clean energy jobs, where there is great growth potential. There are already over 1500 employed in this burgeoning sector.

Whatever the cost may be for this program, it is far outweighed by the benefits. Those benefits include both increased health and fighting climate change. The prices of arrays will come down as more come on line. The reduction in transmission costs by producing more electricity locally will also be enormous. The resources are here. We want to diversify our fuel sources – that helps with the peaks, it helps the clean tech sector and it helps reduce greenhouse gases.

Opponents come up with potential costs that are based on the alternative compliance payments. ACPs. But nobody is going to be paying for ACPs on their bill. The ring alarm bells re rates and jobs, but the sponsor argued that if we don't do this we will lose out. Solar is growing regionally, we can't miss out. There is a threat of backsliding here in NH. There are over 1000 jobs here in NH that we need to support. These are the jobs of tomorrow. It is a matter of competitiveness. Growing our economy is not just about the business tax rate – it's what we do to attract the workforce for tomorrow.

We do less than half what our neighbors do, and we hear that they may go substantially higher. This is a balanced piece of legislation. You will probably hear about the costs per year, some say 200 million others say over a billion. We hear all kinds of stuff, but in reality no one can credibly sit in this chair and tell you reliably what it will cost. He said he could tell us that this is a reasonable ramp up for Class II solar. It preserves existing things in place, it is prudent, and he encouraged it to our favorable consideration.

Q – JM – I'm wondering if anyone has made projections about the solar industry going forward. It seems it would be an easy reach to get to those figures.

A – I'll defer to Madeleine Mineau. Our work in committee suggests it is within reach. Especiall if we can get HB 365 passed. That will help a lot.

Q - PS –I have surveyed folks in the solar industry and they say they could do 5% by 2030.

Another component of this is the capacity factor. If we assume that within 5 years wind and solar will have battery back up, making them available 24/7, that will be an easy target.

A – Battery storage will be an important component of our renewable energy strategy, and we are taking important policy steps this year.

Q – MV – Just doing a back of the envelope estimate of the costs associated with this program, this looks like economic suicide – forcing onto our children costs that are running $10 -200 million per year.

2 - *Dan Weeks – Revision Energy. Supports.

We do know from the overall scientific consensus more than a little about the costs of climate change, climate destruction and the climate crisis. Thirteen federal agencies produced a joint National Assessment last year that predicts the costs to the US economy. We could see the total GNP shrink by 10%. That means a hit of $75 billion in GNP here in NH. That is roughly 37 times more costly than estimates of the costs of the transition we need to make. DES has estimated a billion dollar per year cost in lives lost prematurely.

Or we can look at the federal emergency dollars we are spending per capita on the ever increasing roster of disasters. The US Accounting office says we have already spent more than 350 billion over the last decade to deal with those.

My testimony focuses on a few key points. First the RPS and ratepayer money. Contrary to many of the most often heard arguments, increasing our solar targets will bring net benefits to ratepayers. In a recent PUC proceeding looking into net-metering, the staff found no evidence of a significant cost shift. A 2017 study by the Acadia Center found that in 2015 there was a negative cost shift, i.e. that solar supplied more value to the grid than its owners received in compensation. If you included all the social benefits from cleaner air to improved health and reduced mortality the value of solar to the grid was more than 50% higher than its ne-metered compensation. Similarly in MA, they found a reverse cost shift. Private solar investment delivered net system benefits, particularly in shaving the peak and offsetting the need to build and pay for peaker plants. Beyond New England, the Brookings Institution analyzed the costs and benefits of net-metering and found that the economic benefits outweigh and impose no net cost on ratepayers. In short, net-metering is a net benefit, and there is no cost shift.

123 NH residents die prematurely as a result of fossil fuel based air pollution at a cost of one billion dollars in public health dollars. Wildlife health – which is a driver of tourism – is also driven by climate change. Raising our Class II target to just 5% by 2025, would mean close to 80 MW per year going forward, and up to one billion dollars in new direct investments in NH's economy and future. Instead of sending 5 billion dollars out of state each year to purchase fuels, we can invest that money here. It would be especially beneficial to low income communities they are the first to suffer from tailpipe emissions and the most in need of good paying jobs. This new 80 MW in new generation will mean $200 million in direct investment and 6 times that once the ongoing ripple effects are counted.

Q - BB – Do you know of any businesses fleeing from MA as a result of their high level of support for renewable energy?

A – No, but I know they invest a lot to offset their costs. They are now at 18% efficiency. It was 5% when I was in college, and I understand that in high tech it's now 25%. There have been real breakthroughs – perhaps not on the order of Moore's law re computing efficiency, but very high indeed. There have also been great cost reductions – a 70% decline in costs of pv alone in the last 10 yrs. Solar is now a commodity that is manufactured cost effectively. I recently saw a film titled "Taming the Sun" which traced various breakthroughs in material science – leading up to thin film. They are going to be unrolling massive carpets of this stuff in the desert, at mere

pennies per kWh to install. You will be able to apply it with a paintbrush. Of course we still need more R and D to get there, but we will. Even with our current wind and solar -- we have capacity at 15% and efficiency at 19%. We'll get to 30% eventually. RE has already passed grid parity in parts of the US.

Q - PS – Have you heard about floating solar farms on lakes?

A – In Florida they are doing that on wastewater treatment ponds.

Q – How can we send out a signal that NH is open to business in RE?

A – The RPS can do that. It makes it possible to have a payback on investment in MA in just 3 years. That can make all the difference.

3 - *Karen Cramton, PUC Director of Sustainable Energy Division.

4 - JJ Smith – Public Health – Supports.

The health effects of transitioning away from fossil fuels are clear already. The health costs of particulate pollution can be counted in heart attacks, pneumonia, exacerbated asthma and COPD. Without more renewables we will continue to turn to highly polluting peaker plants, which carry the greatest health costs. It may not appear on business' bottom line, but it will cost business. Not just in health care costs, but in lost productivity. We need to incent everyone to do something. Business can invest in this to their own benefit.

5 - Sam Dionne – self and Sunpin Solar Development. Supports.

Mr. Dionne lives in Stratham and commutes 3 hours into MA where he has a solar business. He is currently working on 18 utility scale projects, and a 98 MW facility just opened. Looking at NH you have to ask what are they doing? It is not even on the radar for utility scale solar. 1MW is not enough to be cost efficient. Net-metering and the way it is set up presents a very good opportunity, but only for small projects.

Solar developers are looking for opportunities in different markets, but not here. One of the first things they look at is the RPS, are there retiring coal plants, can you purchase land next door to your markets. As far as driving businesses away – and whether manufacturing is fleeing south or even outside the country – that is not the situation with solar. We are looking to sell, and going to these businesses with offers for cheaper electricity. You need to open up and grow the market here.

Q - BB – what qualifies as utility scale?

A – It differs. I'd say about 10 MW. For us, we'd never build below 1MW. Although projects can get scaled down for various reasons, and you might have sunk costs, so you'd continue despite the drop in scale. But the money is in large-scale projects. MA currently has a 250MW project in planning.

Q – A 5 MW project, what could that cost?

A - Construction costs in the 10s of millions, but in MA you get $1.40 per watt.

6 - Madeleine Mineau – Clean Energy NH. Supports

Currently the market for Class II solar RECs is non-existent. First the obligations are too low we have already achieved the goal set for 2025. These goals are too low, this sets the target at 0.7% from solar y 2025. We should aim a lot higher. We could do 5.4 % by 2025, many of our neighbors are already over 10%. This would be a signal to businesses to come to NH, and a boost to those already here.

If you use a 13% capacity factor and consider load at 10 million, 0.7% of load can be met by 66 MW of solar, and we already have 80 MW. We can be a little bit more ambitious.

SIGN UP SHEET

To Register Opinion If Not Speaking

Bill # SB 168 Date 4-17-19

Committee ST&E

**** Please Print All Information ****

Name	Address	Phone	Representing	(check one) Pro	Con
Susan Arnold			AMC	X	
Dorothy Currier				✓	
Sarah Thorne	Colmanton		self	✓	
Patricia Martin	Rindge		self	✓	
MARC BROWN	NERA				X
Business + Industry Association					X
Rep Dick Hinch - House Republican office					X
Dan Weeks	Nashua		ReVision Energy	✓	
Mary deGoosdi	Westmoreland			✓	

Testimony

Business and Industry Association
New Hampshire's Statewide Chamber of Commerce

122 North Main Street, Concord, NH 03301
Tel: 603.224.5388 • Fax: 603.224.2872 • Web: www.BIAofNH.com

April 17, 2019

Representative Robert Backus
House Science, Technology & Energy Committee
33 N. State Street
Concord, NH 03301

Dear Chairman Backus and Members of the Committee,

The Business and Industry Association, New Hampshire's statewide chamber of commerce and leading business advocate, submits this letter in strong opposition to Senate Bill 124 and Senate Bill 168 relating to renewable portfolio standards (RPS).

These bills seek to change the percentage requirements under the state's RPS statute and would together increase New Hampshire's total minimum requirement to roughly 56% by 2040. This is in addition to other renewable subsidy bills that may pass this session, including net metering. The estimated cost to New Hampshire ratepayers, if these two bills succeed, will be between $4 and $5 billion dollars by 2040. Homeowners, renters, small businesses and commercial enterprises already absorb electricity prices that are 50-60% higher than the national average, year-round. This legislation will add in excess of $200 million more per year. High electricity prices in New Hampshire and throughout the region are a drag on our economy.

Beyond the price tag, BIA questions whether there will be enough renewable energy generation available to meet the artificially high obligations established in the legislation by the 2040 deadline. Even if this unrealistic goal can be met, serious questions remain about the cost and availability of backup power from fast-state natural gas power plants and/or large batteries to ensure ratepayers have 24/7 service. Businesses will not stand for power outages and increasingly high electricity prices. Homeowner and renters should not be further burdened in this way either. The region is already hard-pressed to meet its electricity demand. Accelerating development of renewables through heavy subsidization by ratepayers is high risk and unlikely to produce results that help to lower costs and ensure reliability in the region.

Thank you for your consideration. We urgently request that you vote both bills, SB 124 and SB 168, "Inexpedient to Legislate."

Sincerely,

Jim Roche
President

New England Ratepayers Association

April 17th, 2017

Hon. Robert Backus, Chair
House Committee on Science, Technology and Energy
New Hampshire State Capitol, LOB Room 304
107 North Main Street
Concord, NH 03301

RE: Opposition to Senate Bill 124 and Senate Bill 168

Dear Chairman Backus,

On behalf of the New England Ratepayers Association thank for the opportunity to express our strong opposition to both Senate Bill 124 and Senate Bill 168.

We are in opposition to these bills simply because of the potential to rapidly and interminably increase the cost of electricity to consumers. According to the most recent Renewable Energy Fund Report submitted by the New Hampshire Public Utilities Commission to the Legislative Oversight Committee on Electric Utility Restructuring the current cost of compliance with New Hampshire's RPS is $.0046 per kWh or $47.7 million for 2017:

Table 4: Annual RPS Compliance Costs and Rate Impact

Compliance Year	Total RPS Obligation	Total REC Costs	Total ACP Costs	Total RPS Compliance Cost	Average per kWh Rate Impact
2008	4.00%	$ 6.6	$ 4.5	$ 11.1	$ 0.0011
2009	6.00%	$ 15.2	$ 1.3	$ 16.5	$ 0.0016
2010	7.54%	$ 15.6	$ 2.6	$ 18.2	$ 0.0017
2011	9.58%	$ 8.7	$ 19.1	$ 27.8	$ 0.0026
2012	5.55%	$ 15.7	$ 9.3	$ 25.0	$ 0.0023
2013	5.80%	$ 10.6	$ 17.5	$ 28.1	$ 0.0026
2014	7.20%	$ 25.8	$ 4.4	$ 30.2	$ 0.0028
2015	8.30%	$ 33.5	$ 4.2	$ 37.7	$ 0.0035
2016	8.50%	$ 28.1	$ 3.6	$ 31.7	$ 0.0030
2017	**17.60%**	**$ 42.5**	**$ 5.2**	**$ 47.7**	**$ 0.0046**
Total		$ 202.1	$ 71.7	$ 274.0	

All costs presented in millions and rounded to the hundred thousand.

If you extrapolate that number out through 2025 at the current targeted RPS obligation rate of 25.2% by 2025 the cost of RPS compliance to electricity consumers will be $68.3 million per year. ***Should*** SB 124 pass and ***if*** class I and class II REC prices increase to that of the Alternative Compliance Payment (ACP), which acts as a REC ceiling, the bill will increase costs to New Hampshire's ratepayers by $250 million annually:

Load at 10.7 million MWhs		2040
	ACPs/RECs	
Class I	$ 57.15	$ 174,278,925
Class I Thermal	$ 25.97	$ 15,561,224
Class II	$ 57.15	115574445
Class III	$ 12.00	$ 10,272,000
Class IV	$ 27.50	$ 4,413,750
Total Cost (Million$)		$ 320,100,344.00
STATUS QUO		$68,300,000.00
Increase from status quo		$ 251,800,344.00

This will increase costs to some large manufacturers by as much as $1.7 million annually and to smaller manufacturers by tens or hundreds of thousands of dollars per year. In addition, this could cost a low-income ratepayer an additional $180 per year each and low-income ratepayers in total and additional $22 million.[1] Would members of this committee support a bill that was going to remove this kind of money from programs that support low-income residents? If not, why would you support a bill that could potentially increase costs by millions of dollars?

A point to which we have testified on a number of occasions is the panoply of news articles, white papers and even discussion in this very committee asserting that solar and wind power are cost competitive—and has achieved grid parity with—more "traditional" generation sources. If this is true, why do we need to increase the value of RECs—aren't we overpaying for a technology that can already provide us with electricity at market rates?

For these reasons we ask you to vote ITL on SB 124.

[1] Based on 120,000 low income ratepayers which was a number NERA received from the PUC at an average usage of 650 kWhs per month.

With regards to SB 168, the following table shows the potential cost increases should SB 168 pass (data assumes RECS reaching 90% of ACPs or 50% of ACPs). Class II RECs are currently trading at approximately $10/MWh:

	Obligation	RECS/ACPS	90% ACP	50% ACP
2018	0.50%	$ 10.00	$ 535,000.00	$ 535,000.00
2019	1.20%	$ 57.15	$ 6,604,254.00	$ 3,669,030.00
2020	1.90%	$ 57.15	$ 10,456,735.50	$ 5,809,297.50
2021	2.60%	$ 57.15	$ 14,309,217.00	$ 7,949,565.00
2022	3.30%	$ 57.15	$ 18,161,698.50	$ 10,089,832.50
2023	4.00%	$ 57.15	$ 22,014,180.00	$ 12,230,100.00
2024	4.70%	$ 57.15	$ 25,866,661.50	$ 14,370,367.50
2025	5.40%	$ 57.15	$ 29,719,143.00	$ 16,510,635.00
		Total Cost	$ 127,131,889.50	$ 70,628,827.50
		Total Increase from current RPS obligation	***$ 123,386,889.50***	***$ 66,883,827.50***

*Total load 10.7 million MWhs

As you can see from the table should RECs reach 90% of ACPs electricity costs will ***increase*** by over $29 million by 2025. For perspective, this will increase electricity costs to a large manufacturer by over $200,000 per year, a small manufacturer by $20,000—and will increase costs to low-income ratepayers by $2.5 million in the aggregate annually.

For these reasons and those stated above regarding SB 124 we ask that you ITL SB 168.

Thank you for your time.

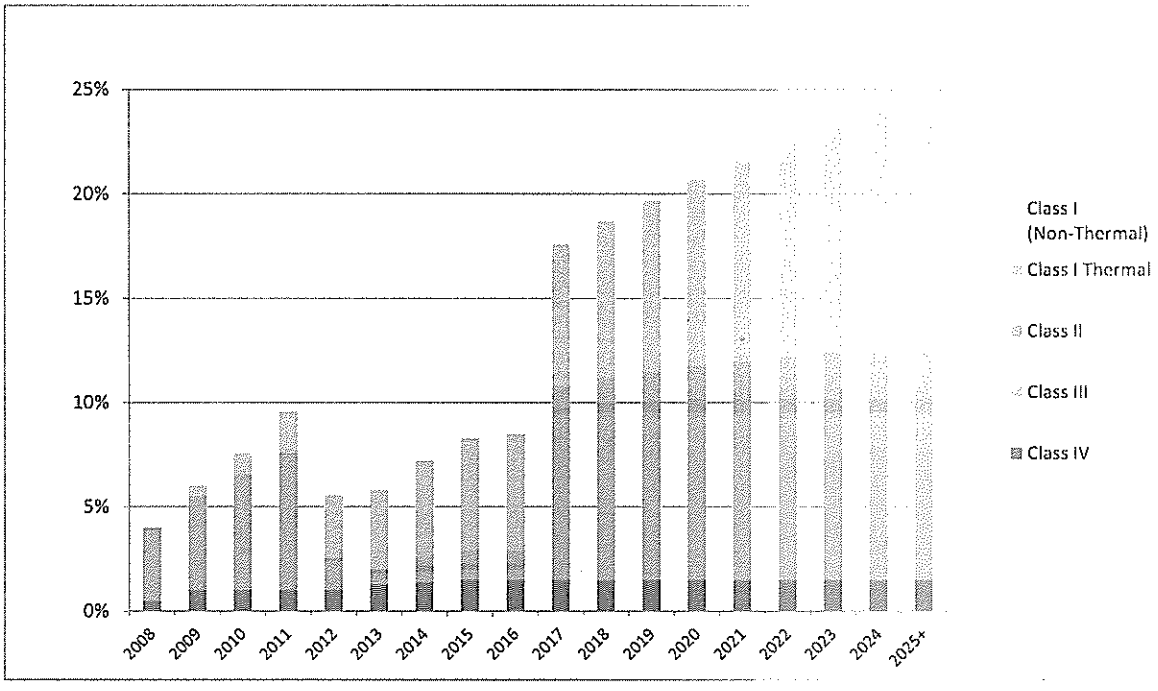
Respectfully submitted,

Marc Brown
President, New England Ratepayers Association
603-369-4301
marc@neratepayers.org

Senate Bill 168

Current RPS Law

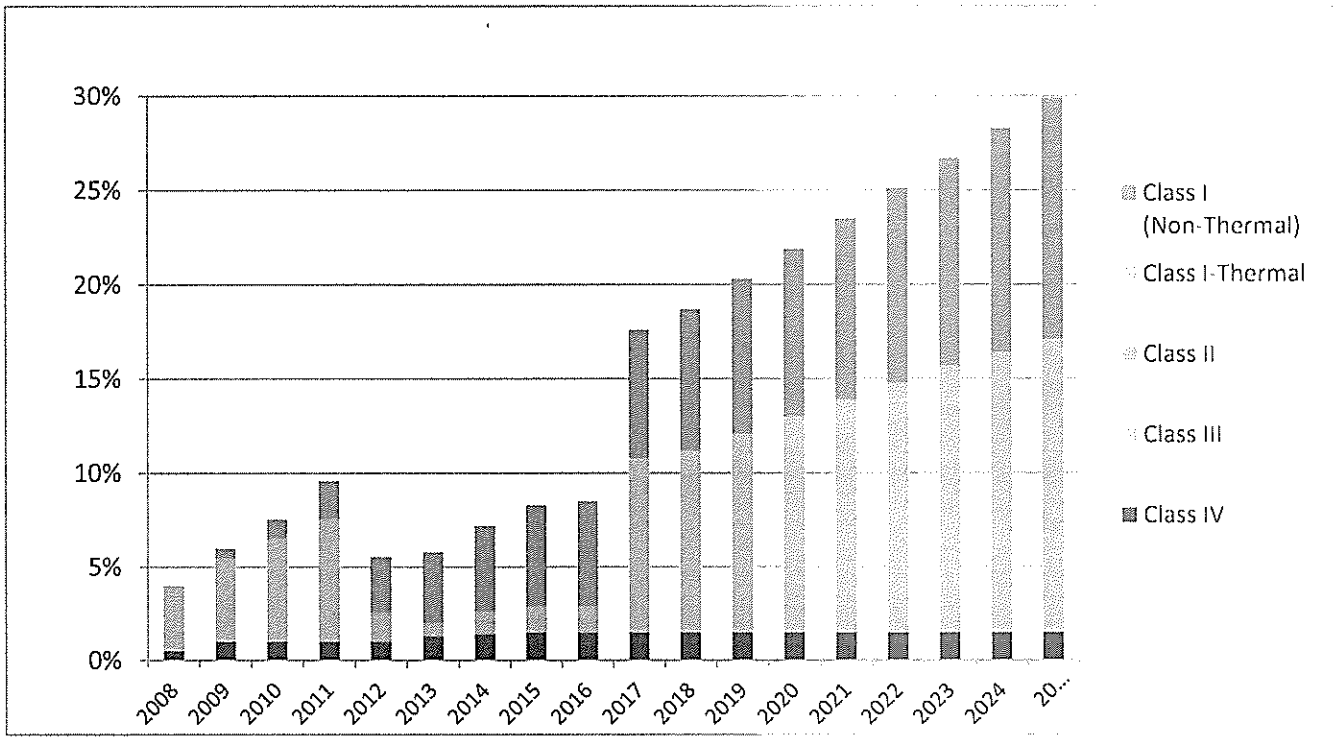
Calendar Year	Class IV	Class III	Class II	Class I-Thermal	Class I (Non-Thermal)	Total RPS Requirement
2008	0.50%	3.50%	0.00%	0.00%	0.00%	4.00%
2009	1.00%	4.50%	0.00%	0.00%	0.50%	6.00%
2010	1.00%	5.50%	0.04%	0.00%	1.00%	7.54%
2011	1.00%	6.50%	0.08%	0.00%	2.00%	9.58%
2012	1.00%	1.40%	0.15%	0.00%	3.00%	5.55%
2013	1.30%	0.50%	0.20%	0.00%	3.80%	5.80%
2014	1.40%	0.50%	0.30%	0.40%	4.60%	7.20%
2015	1.50%	0.50%	0.30%	0.60%	5.40%	8.30%
2016	1.50%	0.50%	0.30%	0.60%	5.60%	8.50%
2017	1.50%	8.00%	0.30%	1.00%	6.80%	17.60%
2018	1.50%	8.00%	0.50%	1.20%	7.50%	18.70%
2019	1.50%	8.00%	0.60%	1.40%	8.20%	19.70%
2020	1.50%	8.00%	0.70%	1.60%	8.90%	20.70%
2021	1.50%	8.00%	0.70%	1.80%	9.60%	21.60%
2022	1.50%	8.00%	0.70%	2.00%	10.30%	22.50%
2023	1.50%	8.00%	0.70%	2.20%	11.00%	23.40%
2024	1.50%	8.00%	0.70%	2.20%	11.90%	24.30%
2025+	1.50%	8.00%	0.70%	2.20%	12.80%	25.20%



Senate Bill 168

RPS With Senate Bill 168

Calendar Year	Class IV	Class III	Class II	Class I-Thermal	Class I (Non-Thermal)	Total RPS Requirement
2008	0.50%	3.50%	0.00%	0.00%	0.00%	4.00%
2009	1.00%	4.50%	0.00%	0.00%	0.50%	6.00%
2010	1.00%	5.50%	0.04%	0.00%	1.00%	7.54%
2011	1.00%	6.50%	0.08%	0.00%	2.00%	9.58%
2012	1.00%	1.40%	0.15%	0.00%	3.00%	5.55%
2013	1.30%	0.50%	0.20%	0.00%	3.80%	5.80%
2014	1.40%	0.50%	0.30%	0.40%	4.60%	7.20%
2015	1.50%	0.50%	0.30%	0.60%	5.40%	8.30%
2016	1.50%	0.50%	0.30%	0.60%	5.60%	8.50%
2017	1.50%	8.00%	0.30%	1.00%	6.80%	17.60%
2018	1.50%	8.00%	0.50%	1.20%	7.50%	18.70%
2019	1.50%	8.00%	1.20%	1.40%	8.20%	20.30%
2020	1.50%	8.00%	1.90%	1.60%	8.90%	21.90%
2021	1.50%	8.00%	2.60%	1.80%	9.60%	23.50%
2022	1.50%	8.00%	3.30%	2.00%	10.30%	25.10%
2023	1.50%	8.00%	4.00%	2.20%	11.00%	26.70%
2024	1.50%	8.00%	4.70%	2.20%	11.90%	28.30%
2025+	1.50%	8.00%	5.40%	2.20%	12.80%	29.90%



Bill as Introduced

SB 168 - AS AMENDED BY THE SENATE

03/28/2019 1180s

2019 SESSION

19-1090
06/01

SENATE BILL *168*

AN ACT relative to class 2 obligations under the electric renewable portfolio standards.

SPONSORS: Sen. Feltes, Dist 15; Sen. Fuller Clark, Dist 21; Sen. Watters, Dist 4; Rep. Oxenham, Sull. 1

COMMITTEE: Energy and Natural Resources

AMENDED ANALYSIS

This bill increases the renewable portfolio standard requirements for new solar energy from 2019 through 2025. The bill also provides an exemption from increases in the annual purchase percentages for certain electrical supply contracts.

Explanation: Matter added to current law appears in ***bold italics.***
Matter removed from current law appears ~~[in brackets and struckthrough.]~~
Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Nineteen

AN ACT relative to class 2 obligations under the electric renewable portfolio standards.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 Electric Renewable Portfolio Standard; Minimum Standards. Amend the footnote to RSA 362-F:3 to read as follows:

*Class I increases an additional 0.9 percent per year from 2015 through 2025. A set percentage of the class I totals shall be satisfied annually by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy as defined in RSA 362-F:2, XV-a. The set percentage shall be 0.4 percent in 2014, 0.6 percent in 2015, 0.8 percent in 2016, and increased annually by 0.2 percent per year from 2017 through 2023, after which it shall remain unchanged. Class II shall increase to 0.5 percent beginning in 2018, [~~0.6~~] ***1.2*** percent beginning in 2019, [~~and 0.7~~] ***1.9*** percent beginning in 2020, ***2.6 percent beginning in 2021, 3.3 percent beginning in 2022, 4.0 percent beginning in 2023, 4.7 percent beginning in 2024, and 5.4 percent beginning in 2025,*** otherwise classes II-IV shall remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, V-VI.

2 New Section; Minimum Electric Renewable Portfolio Standards; Exemption Period for Certain Electrical Supply Contracts. Amend RSA 362-F by inserting after section 3 the following new section:

362-F:3-a Exemption Period for Certain Electrical Supply Contracts.

I. The increases in the annual purchase percentages under RSA 362-F:3 applicable to class II for 2019 and thereafter as compared to the class II annual purchase percentages in effect as of January 1, 2019, shall not apply to the megawatt-hours delivered during the contract term under any electrical power supply contract entered into before the effective date of this section, provided that the contract term in effect before such effective date has not been extended or otherwise increased after that date.

II. Providers shall inform the commission by July 1 of each year, through July 1, 2022, of all such exempted contracts, including but not limited to, the execution date and expiration date of the contract, the basis for exemption under this section, and if applicable, the annual megawatt-hours supplied and exempted, or the annual amount of exempted methane gas certificates and the basis for exemption. All such information filed with the commission shall be exempt from the provisions of RSA 91-A:5, IV.

3 Effective Date. This act shall take effect 60 days after its passage.