

LEGISLATIVE COMMITTEE MINUTES

SB113

Bill as Introduced

SB 113 - AS INTRODUCED

2021 SESSION

21-0901
10/06

SENATE BILL **113**

AN ACT relative to the alternative compliance payments for renewable energy obligations not met through the purchase of renewable energy credits.

SPONSORS: Sen. Bradley, Dist 3; Sen. Watters, Dist 4; Sen. Giuda, Dist 2; Sen. Perkins Kwoka, Dist 21; Rep. Gordon, Graf. 9; Rep. Pearl, Merr. 26; Rep. Merner, Coos 7; Rep. Lang, Belk. 4

COMMITTEE: Energy and Natural Resources

ANALYSIS

This bill sets the alternative compliance payment at \$55 per megawatt hour to the renewable energy fund for electric distribution utility requirements not satisfied by renewable energy credits. This bill also changes the rate adjustments for certain class obligations.

.....

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Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.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

AN ACT relative to the alternative compliance payments for renewable energy obligations not met through the purchase of renewable energy credits.

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

1 1 Findings and Purpose. The general court hereby finds that renewable energy policies should
2 be technology neutral, so that one resource is not arbitrarily favored over another.

3 2 Electric Renewable Portfolio Standards; Electric Renewable Energy Classes. Amend RSA 362-
4 F:4, I (c) to read as follows:

5 (c) Hydrogen derived from biomass fuels, *water*, or methane gas.

6 3 Electric Renewable Portfolio Standards; Renewable Energy Fund. Amend RSA 362-F:10, II-
7 III to read as follows:

8 II. In lieu of meeting the portfolio requirements of RSA 362-F:3 for a given year if, and to the
9 extent sufficient certificates are not otherwise available at a price below the amounts specified in
10 this paragraph, an electricity provider may, at the time of report submission for that year under RSA
11 362-F:8, make payment to the commission at the following rates for each megawatt-hour not met for
12 a given class obligation through the acquisition of certificates:

13 (a) Class I-\$55, except for that portion of the class electric renewable portfolio standards
14 to be met by qualifying renewable energy technologies producing useful thermal energy under RSA
15 362-F:3 which shall be [~~\$25~~] *\$55* beginning January 1, [~~2013~~] *2021*.

16 (b) Class II-\$55.

17 (c) Class III-~~[\$31.50]~~ *\$55 beginning January 1, 2021*.

18 (d) Class IV-~~[\$26.50]~~ *\$55 beginning January 1, 2021*

19 III.(a) Beginning in 2013 *for Class I (except for useful thermal energy under RSA 362-*
20 *F:3) and Class II, and beginning in 2022 for Class I qualifying renewable energy*
21 *technologies producing useful thermal energy under RSA 362-F:3, Class III, and Class IV,*
22 the commission shall adjust these rates by January 31 of each year using *1/2 of* the Consumer Price
23 Index as published by the Bureau of Labor Statistics of the United States Department of Labor [~~for~~
24 ~~classes III and IV and 1/2 of such Index for classes I and II~~].

25 (b) [~~In lieu of the adjustments under subparagraph (a) for class III in 2015 and 2016, the~~
26 ~~class rate in each of those years shall be \$45. In lieu of the adjustments under subparagraph (a) for~~
27 ~~class III in 2017, 2018, and 2019, the class rate in each of those years shall be \$55.~~

28 (c) ~~By January 31, 2020 the commission shall compute the 2020 class III rate to equal~~
29 ~~the rate that would have resulted in 2020 by the application of subparagraph (a) to the 2013 rate~~
30 ~~and each subsequent year's rate to 2020.~~

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1 ~~(d) In 2021 and thereafter, the class III rate shall be determined by application of~~
2 ~~subparagraph (a) to the prior year's rate]~~ ***The 2020 class rates for all classes are those in effect***
3 ***on December 1, 2020 as posted by the commission.***

4 4 Effective Date. This act shall take effect 60 days after its passage.

Committee Minutes

SENATE CALENDAR NOTICE
Energy and Natural Resources

Sen Kevin Avard, Chair
Sen Bob Giuda, Vice Chair
Sen James Gray, Member
Sen David Watters, Member
Sen Rebecca Perkins Kwoka, Member

Date: March 8, 2021

HEARINGS

Monday	03/15/2021	
(Day)	(Date)	
Energy and Natural Resources	REMOTE 000	1:00 p.m.
(Name of Committee)	(Place)	(Time)
1:00 p.m. SB 109	relative to municipal host customer generators serving political subdivisions.	
1:45 p.m. SB 113	relative to the alternative compliance payments for renewable energy obligations not met through the purchase of renewable energy credits.	

Committee members will receive secure Zoom invitations via email.

Members of the public may attend using the following links:

1. Link to Zoom Webinar: <https://www.zoom.us/j/99384693686>
2. To listen via telephone: Dial (for higher quality, dial a number based on your current location): 1-301-715-8592, or 1-312-626-6799 or 1-929-205-6099, or 1-253-215-8782, or 1-346-248-7799, or 1-669-900-6833
3. Or iPhone one-tap: US: +13126266799,,99384693686# or +19292056099,,99384693686#
4. Webinar ID: [993 8469 3686](https://www.zoom.us/j/99384693686)
5. To view/listen to this hearing on YouTube, use this link: <https://www.youtube.com/channel/UCjBZdtrjRnQdmg-2MPMiWrA>
6. To sign in to speak, register your position on a bill and/or submit testimony, use this link: <http://gencourt.state.nh.us/remotecommittee/senate.aspx>

The following email will be monitored throughout the meeting by someone who can assist with and alert the committee to any technical issues: remotesenate@leg.state.nh.us or call (603-271-6931).

EXECUTIVE SESSION MAY FOLLOW

Sponsors:

SB 109

Sen. Avard

Sen. Bradley

Sen. Giuda

Rep. Lang

SB 113

Sen. Bradley

Sen. Watters

Sen. Giuda

Sen. Perkins Kwoka

Rep. Gordon

Rep. Pearl

Rep. Merner

Rep. Lang

Griffin Roberge 271-3042

Kevin A. Avard
Chairman

Senate Energy and Natural Resources Committee
Griffin Roberge 271-3042

SB 113, relative to the alternative compliance payments for renewable energy obligations not met through the purchase of renewable energy credits.

Hearing Date: March 15, 2021.

Time Opened: 2:08 p.m.

Time Closed: 3:05 p.m.

Members of the Committee Present: Senators Avard, Giuda, Gray, Watters and Perkins Kwoka.

Members of the Committee Absent: None.

Bill Analysis: This bill sets the alternative compliance payment at \$55 per megawatt hour to the renewable energy fund for electric distribution utility requirements not satisfied by renewable energy credits. This bill also changes the rate adjustments for certain class obligations.

Sponsors:

Sen. Bradley

Sen. Watters

Sen. Giuda

Sen. Perkins Kwoka

Rep. Gordon

Rep. Pearl

Rep. Merner

Rep. Lang

Who supports the bill: Gerald Beck, Holderness, NH; Patricia Beffa-Negrini; Bruce Berk, Pittsfield, NH; Robert Berti, Rumney, NH; Cheri Birch; Craig Birch; Sandra Blanchard; Senator Jeb Bradley, NH Senate District 3; Nancy Brennan; Ronald Briggs; Karen Burl; Catherine Bushueff; Hunter Carbee; Joanne Casino; Michele Chalice; Denise Clark; Martha Clark; Elizabeth Corell; Rebecca Crowe; Dorothy Currier; Claudia Damon; Ann Davis; Richard DeMark; Karen Dewey; Russell Dowd; Anne Emerson; Cheri Falk; Peter Farrell; Marsha Feder; Nicole Fordey; Mark Froling, Froling Energy; John Gage, Windham, NH; Ann Garland; Senator Bob Giuda, NH Senate District 2; Laurie Gordon; Margaret Gordon; James Graham; Nancy Graham; Nancy Greenwood; Kent Hackmann; Lydia Hansberry; Teri Hardwick; Robert Hayden, Standard Power; Mel Hinebauch; Don House; Anne Huberman; Richard Husband; Whitaker Irvin, Q Hydrogen Commercialization, LLC; Deborah Jakubowski; Dennis Jakubowski; Robert Johnson, II, NH Farm Bureau Federation; Andrew Jones; Carolyn Jones; Susan Kaplan; Margaret Keeler; Nancy Kelley-Gillard; Catherine Koning; Joseph Kwasnik; Ruth Larson; Matt Leahy, Society for the Protection of NH Forests; Donna Ledgard; William Maloney; Patricia Martin, Rindge, NH; Beth McGuinn; Brigid McNamee; Madeleine Mineau, Clean Energy NH; Charles Moreno; Theresa Mundy; Marie Nardino; Jay Newton; Charles Niebling, Innovative Natural Resource Solutions, LLC; Timothy Noonan; Joy Nowell; Michael O'Leary, Bridgewater Power; Evan Oxenham; Representative Howard Pearl, Merrimack - District 26; Ruth Perencevich; Representative Maria Perez, Hillsborough - District 23; Senator Rebecca Perkins Kwoka, NH Senate District 21; Charles Petruccelli; Maxine Petruccelli; Elizabeth Anne-Platt; Fred Portnoy; Don Rankin; Laurie Rardin; Donna Reardon; John Reardon; Barbara Reed; Dan Reed; Annie Rettew; Susan Richman, Durham, NH; Lorin Rydstrom; Ruth Sanchez; Judith Saum; Jennifer

Smith; Maja Smith; Kathy Spielman; Jasen Stock, NH Timberland Owners Association; Jeanne Torpey; Autumn Van Sice; Laura Vincent; Bryan Ward; Debbie Ward; Phil Ward; Senator David Watters, NH Senate District 4; Ken Wells, Andover, NH; Mary Wilke; Maura Willing; Ed Witt; John Woodward; John Zavgren.

Who opposes the bill: Catherine Corkery, NH Sierra Club; Shaina Kasper and Hayley Jones, Community Action Works Campaigns; Margaret Hurley; Linda Terwilliger.

Who is neutral on the bill: Daniel Itse.

Summary of testimony presented in support:

Senator Jeb Bradley

NH Senate District 3

- SB 113 is a reintroduction of HB 1518-FN (2020). HB 1518-FN was tabled in the Senate due to the outbreak of the COVID-19 pandemic but was later rolled into HB 1234-FN-A (2020). However, HB 1234-FN-A was vetoed by Governor Sununu.
- SB 113 creates consistency within the state's Renewable Portfolio Standard (RPS), which helps benefit in-state small-scale renewable electric generators – hydroelectric facilities, biomass facilities, solar installations, etc. Section 3 sets the Alternative Compliance Payment (ACP) for the RPS classes to \$55. This will particularly help NH's hydroelectric and biomass facilities.
- Over the past few years, NH has seen steep declines in the amount of biomass being burned at NH's biomass facilities. Only two biomass facilities in Bridgewater and Berlin are operating. The lack of biomass facilities has had a detrimental impact on NH's forest products industry and undermines the ability to have renewable energy in the state. Hydroelectric facilities are facing challenges as wholesale electricity costs continue to decline.
- Passage of SB 113 should have no impact on NH's electricity rates, given the low price of Renewable Energy Credits (RECs). Overtime, SB 113 will help stabilize the different renewable energy sectors.
- Senator Bradley noted that Section 2 will be beneficial for a company, Q Hydrogen, that is repurposing a Groveton facility to create hydrogen derived from water.
- Senator Watters noted that NH will likely see a major play in hydrogen production for offshore wind. His sense was that may undercut what other hydrogen producers are likely to do. He asked Senator Bradley if this issue should be addressed now or further down the road.
 - Senator Bradley encouraged Senator Watters to ask his question of Mr. Irvin.
- Senator Watters noted that SB 113 sets the ACP for the different RPS classes at \$55, making the ACP price technology neutral. Senator Watters noted his bill, SB 151-FN (2021), requires a specific size procurement from offshore wind power. He asked if SB 151-FN may have any impact on the changes proposed in SB 113.
 - Senator Bradley said SB 151-FN establishes a procurement process for offshore wind. SB 113 simply sets the ACP price at \$55 to benefit in-state small energy producers that have been operating for some time.

Whitaker Irvin, Jr. – provided written testimony

Chief Executive Officer, Q Hydrogen Commercialization, LLC

- For decades, hydrogen has been talked about as an alternative energy source. Q Hydrogen has taken this concept and developed it into a reality. Q Hydrogen's plan would generate clean power that is unhindered by the limitations faced by current renewable sources.
- Q Hydrogen's proprietary method generates hydrogen from water using hydrodynamic forces created within a turbine featuring a unique design and metallurgy. This method can dramatically reduce hydrogen's production cost, making it easier to produce and moving hydrogen into a low-cost fuel source.
- Q Hydrogen purchased a former paper mill and power plant site in Groveton and plans to convert this facility into the world's first power plant fueled by clean, economical Q Hydrogen. Q Hydrogen chose to locate its facility in NH due to its deregulated energy generation and its business-friendly environment where innovative businesses can thrive.
- Under current statute, hydrogen derived from biomass fuels and methane gas are eligible under the RPS. Section 2 would include water as a source that hydrogen can be derived from. Passing Section 2 will make NH a partner in developing this new and dynamic energy source. Q Hydrogen's Groveton facility is intended

to be the beginning of Q Hydrogen's NH footprint. There are many locations throughout the state that could be retrofitted like the one in Groveton.

- Senator Avard asked how long Q Hydrogen had been looking to bring its business to NH.
 - Mr. Irvin said that Q Hydrogen started its process several years ago. Q Hydrogen was looking at biomass facilities that had closed. Q Hydrogen had determined that the Groveton facility was the best location to retrofit. The Groveton property was purchased in 2019 and construction began in October 2019. COVID-19 and supply chain issues delayed development, but Q Hydrogen intends to open the Groveton facility in summer 2021.

Edward Witt

Procurement Forester, Madison Lumber Mill (MLM)

- MLM saws roughly 21 million cord feet per year, which is enough lumber to build 1,400 conventional homes. MLM has 59 employees and an annual \$3.5 million payroll.
- In 2020, MLM purchased logs from 61 independent logging contractors and paid \$7.8 million for those logs. MLM produces 20,000 tons of wood chips as a byproduct of producing lumber, which is roughly 630 tractor trailer loads.
- Traditionally, NH's sawmills and forest products industry have relied heavily on NH's biomass facilities as markets for low-grade material from the forest and wood chips from sawmills. Over the past year, most of NH's biomass facilities have closed or operated on a sporadic schedule. Additionally, a large paper mill in Jay, ME blew up. These events have limited low-grade wood markets for wood chips such as those produced at MLM.
- MLM and other low-grade wood producers have become even more reliant on the few remaining biomass facilities operating in NH to sell their residual chips. Without these outlets, MLM would shut down as sawmills cannot stockpile low-grade wood.
- Log suppliers have also been impacted by the lack of low-grade wood markets. There is no low-grade soft wood pulp market, especially for white pine. Loggers must sell their low-grade pulp to a very limited biomass market. This has reduced logging capacity, with some loggers only doing 50% of what they did in the previous year. MLM has had to contact loggers to purchase logs from further away at higher cost.
- SB 113 will help ensure the continued operation of NH's biomass plants, as well as to ensure NH's healthy forests, energy independence, and proper wildlife management. Without SB 113, sawmills and loggers will see a continued decline in their operations.

Madeleine Mineau

Executive Director, Clean Energy NH (CENH)

- The RPS is an important policy that supports and encourages the development of in-state renewable energy.
- SB 113 increases the ACPs for Class I Thermal, Class III, and Class IV to levels equal to Class I and Class II. ACPs act as a ceiling price within the RPS. When renewable energy facilities sell their RECs into the regional RPS market, they will never receive an amount more than the ACP. Increasing the ACP will give more value to in-state biomass and hydroelectric facilities.

Peter Farrell

District Manager, New England Forestry Consultants, Inc. (NEFCO)

- Provides consulting services to NH landowners as a NH licensed forester. NEFCO manages 130,000 acres of NH's forestland. In the last five years, NEFCO's annual sale of timber for clients has averaged 11 million board feet of saw logs and 88,000 tons of low-grade pulp and biomass product. Biomass accounted for nearly 33% of that low-grade tonnage.
- The ability to have viable forests and to have a reliable income stream from low-grade wood comes from having biomass facilities. The market for low-grade forest product varies significantly in NH. In the forest products industry, when one sector feels a crunch, all connected sectors feel a crunch.
- The explosion at the Jay, ME mill had an immediate impact, putting 300 loads of pulp a day back into the marketplace that had no home to go to. Biomass markets have been under siege for the last few years.
- Senator Avard asked where low-grade wood goes if it does not have an outlet. He wondered if it would stay in the forest or go in landfills.
 - Mr. Farrell said finding outlets for low-grade is limited. For example, pulp wood can be left in the forest. While this is not a bad thing, it takes a chunk of income away from landowners and loggers who would otherwise sell that low-grade wood to a biomass facility.

Charles Niebling – provided written testimony

Partner, Innovative Natural Resource Solutions, LLC

- Since 2014, when the Class I Thermal REC incentive created by the passage of SB 218-FN (2012) became effective, the Class I Thermal REC incentive has had a significant beneficial impact on thermal renewable energy development in the state. As of December 2020, there are 58 projects that are qualified to produce and sell Class I Thermal REC. These include 46 biomass or biofuel projects and 12 geothermal projects:
 - The total installed capacity is over 53 mega-watts.
 - The biomass projects include 4 county facilities, 4 non-profit rural hospitals, 22 public school facilities, 3 college campus facilities, 2 private school facilities and 7 businesses.
 - The biomass projects spend approximately \$5 million annually on wood chips and wood pellets sourced from within NH and have created a new market for about 70,000 tons per year of low-grade wood.
 - The 58 projects have displaced the need for over 3.3 million gallons of heating oil equivalent on an annual basis, thus reducing export of fuel dollars by about \$8.5 million annually.
- The trend in new qualified projects has declined in recent years as low oil and propane prices have reduced the incentive to invest capital in renewable heating technologies, such as those fueled by wood pellet and wood chips.
- If SB 113 becomes law, the levelized \$55 ACP will spur significant new interest in this heating option. This in turn will create new markets for low grade wood. Markets for low-grade timber are essential to performing sustainable forestry and timberland management. Lacking pulp and paper mills, NH's primary market for this material has been biomass wood chips and wood pellet feedstock for energy production. Biomass electric generation has contracted in NH because of inability to compete against cheap natural gas electricity. A positive development has been the modest growth in biomass heating projects using both wood chips and wood pellets.

Rebecca Crowe

Timberwolf Logging

- Employ roughly 30 employees and have an annual payroll of \$1.3 million. Most employees are local, with many of employees being family members.
- Logging companies need sustainable low-grade wood markets. Timberwolf Logging earns most of its income during the first quarter of the year due to frozen conditions. With the lack of low-grade wood markets, sales are down 7% so far into 2021. Timberwolf Logging has already exceeded its quota at the chip mill, leading the company to sit on low-grade wood until the summer.
- Leaving low-grade wood in the forest takes time to biodegrade. This has left some landowners to close their land or hold off on forest maintenance.
- Senator Avar asked how SB 113 helps Timberwolf Logging.
 - Mrs. Crowe said that biomass facilities would be offered a set ACP rate, giving them policy consistency. For example, Pinetree Power in Bethlehem is currently closed, but could open back up if they had a guarantee for what they could get for income. Opening Pinetree Power back up would create more outlets for low-grade wood.

Jasen Stock – provided written testimony

Executive Director, NH Timberland Owners Association (NHTOA)

- SB 113 will support NH's RPS Class III and Class I Thermal power projects to support low-grade wood markets. Adopting SB 113 will provide stability to the remaining operational biomass facilities and incentives for the development of additional thermal projects. Passage of SB 113 will also enable the industry and infrastructure to adapt as other uses and markets for low-grade wood get developed.
- Over the past two years, NH has lost low-grade wood markets with the idling of four biomass power plants and the loss of a major pulp wood market in Jay, ME. In late 2020, the loss of NH low-grade wood market was at 1,255,176 tons. In a typical year, NH's total wood market (low-grade and high-grade wood products) is 3 to 3.5 million tons.
- The loss of low-grade wood markets is felt by loggers and timberland owners:
 - Landowners are unable to economically improve forest health and vigor, leading them to delay maintenance or to conduct "high-grading," where the logger "cuts the best and leaves the rest." Both options weaken woodlots environmentally and ecologically.
 - Managing for healthier and vigorous woodlots results in high-quality timber that has economic value to the landowner, forest products businesses, and the local community.

- The loss of low-grade wood markets is felt by NH's sawmills. NH's 50 sawmills support 2,593 jobs and generate \$447.7 million annually in economic activity. A lack of low-grade wood markets results in three impacts:
 - Sawmills need markets for their low-grade wood – without robust low-grade wood markets, sawmills must ship their low-grade wood further away at additional cost, making what was once considered a product has now become a disposal issue.
 - Lessened log procurement – with loggers downsizing and fewer acres seeing management, sawmills are either decreasing production to match lower log supply or spend more transporting logs from neighboring states.
 - Future saw log quality – the loss of low-grade wood markets has made it difficult to practice sustainable forestry. This impact will be felt decades from now as timber stands that should be thinned and improved are not, resulting in a lower quality log.
- Senator Avard asked how the impact to NH's forest products industry has affected timber tax revenue for municipalities.
 - Mr. Stock said few timber sales means less timber tax revenue. NHTOA does not have the most recent 2020 timber tax data as NH's tax data is a year behind. Anecdotally, there has been a reduction in timber tax revenue. There are fewer loggers in NH's forests due to the lack of low-grade wood markets. A Plymouth State University study of the NH's forest products industry found that NH's six biomass facilities paid some \$7 million to local and state taxes.

Michael O'Leary

Asset Manager, Bridgewater Power Company

- Biomass facilities have struggled over the past few years. Several facilities have permanently closed or reduced operations. Biomass facilities have three revenue streams – energy, capacity, and RECs.
- Robust REC markets are important for the continued operation of biomass facilities. SB 129 (2017) increased the Class III ACP to \$55 until the end of 2019, but the ACP was dropped to \$34.54 in 2020. This ACP decline, as well as the economic disruption caused by COVID-19, was problematic. A \$55 ACP will help stabilize biomass operations and low-grade wood markets.
- Some may be concerned that SB 113 will not maintain the survival of NH's biomass plants and will increase NH's electric rates. Should SB 113 not work, the PUC has the authority under RSA 362-F:4, VI to modify the Class III and IV RPS requirements to ensure that ratepayers are not impacted. The PUC has exercised this authority in the past when biomass facilities were selling their RECs out of state.

Lorin Rydstrom

Hollis, NH

- Owns a 50-acre woodlot in Hollis and a 400-acre woodlot in Northfield. In his last forest thinning, Mr. Rydstrom received 50 cents a ton for the low-grade wood that was extracted. That was about \$12-15 for every truck off his woodlot. Landowners are not seeing an economic benefit to maintain their forests.
- NH is experiencing extreme weather events – wind, rain, invasive species, etc. Science has proven that managed forests will help slow the impact of climate change by storing carbon. There needs to be some economic benefit for the owner for forests to be managed. If not, that land will have different uses.

Matt Leahy – provided written testimony

Public Policy Manager, NH Forest Society

- Sustainable forest management is an important conservation strategy – a family able to derive income from sustainable forest management of their land is more likely to permanently conserve it. This model depends on a vibrant market for all the timber harvested in the forest. Much of the standing timber is low-grade timber. Using this low-grade wood for electricity or heat is becoming the primary way to use the volume of low-grade wood NH's forests produce.
- Disruptions in biomass power plant operations or in the use of thermal biomass will undermine the outlets that loggers, landowners, and wood processors rely on for their low-grade timber. Increasing the value of ACPs will benefit the economic viability of those markets.

Mark Froling

President, Froling Energy

- Froling Energy specializes in biomass boiler systems. The company has 15 full-time employees and is responsible for nearly 33% of the Class I Thermal RECs.
- Reiterated testimony made by Mr. Niebling.

Summary of testimony presented in opposition:

Catherine Corkery

NH State Director, NH Sierra Club

- When the RPS was created, the ACP was higher for Class I than other classes to incentivize the development of new renewable projects. SB 113 creates a \$55 ACP across all RPS classes. This is a disservice to Class I.

Neutral Information Presented: None.

GJR

Date Hearing Report completed: March 15, 2021.

Speakers

Senate Remote Testify

Energy and Natural Resources Committee Testify List for Bill SB113 on 2021-03-15

Support: 112 Oppose: 5 Neutral: 1 Total to Testify: 16

<u>Name</u>	<u>Email Address</u>	<u>Phone</u>	<u>Title</u>	<u>Representing</u>	<u>Position</u>	<u>Testifying</u>	<u>Signed Up</u>
Farrell, Peter	pfarrell@neforestryconsultants.com	603 387 4338	A Member of the Public	Myself	Support	Yes	3/14/2021 7:12 PM
Niebling, Charlie	niebling@inrslc.com	603.965.5434	A Member of the Public	Myself	Support	Yes	3/9/2021 2:57 PM
Witt, Ed	ed.witt@madisonlm.com	603-651-9912	A Member of the Public	Myself	Support	Yes	3/10/2021 3:38 PM
Crowe, Rebecca	rcrowetwolf@gmail.com	603-444-7115	A Member of the Public	Myself	Support	Yes	3/10/2021 3:40 PM
Berti, Robert	admin@forecollc.com	603-481-2600	A Member of the Public	Myself	Support	Yes	3/10/2021 3:42 PM
Rydstrom, Lorin	LSRYD@outlook.com	603-321-4581	A Member of the Public	Myself	Support	Yes	3/10/2021 3:44 PM
O'Leary, Michael	moleary@bridgewater-os.com	Not Given	A Member of the Public	Myself as GM of Bridgewater Power	Support	Yes	3/11/2021 2:00 PM
Burl, Karen	burlandclearing@aol.com	603-396-4572	A Member of the Public	Myself	Support	Yes	3/11/2021 2:52 PM
Stock, Jasen	jstock@nhtoa.org	603.224.9699	A Lobbyist	NH Timberland Owners Association	Support	Yes	3/9/2021 1:23 PM
Bradley, Jeb	jeb.bradley@leg.state.nh.us	603-271-3479	An Elected Official	Myself SD 3 Jeb Bradley	Support	Yes	3/12/2021 2:58 PM
Mineau, Madeleine	madeleine@cleanenergynh.org	607-592-6184	A Lobbyist	Clean Energy NH	Support	Yes	3/15/2021 10:14 AM
Irvin, Whit	wirvin2@quasarwave.com	603.496.8092	A Member of the Public	Myself	Support	Yes	3/15/2021 10:50 AM
Corkery, Catherine	catherine.corkery@sierraclub.org	603.224.8222	A Lobbyist	NH Sierra Club	Oppose	Yes	3/15/2021 11:42 AM
Irvin, Whitaker	wirvin2@quasarwave.com	240.593.6968	A Member of the Public	Q Hydrogen Commercialization, LLC	Support	Yes	3/15/2021 1:38 PM
Froling, Mark	mark@frolingenergy.com	603 520 6272	A Member of the Public	Froling Energy	Support	Yes	3/15/2021 1:57 PM
Leahy, Matt	mleahy@forestsociety.org	224-9945, ex	A Lobbyist	Society for the Protection of NH Forests	Support	Yes	3/15/2021 11:10 AM
Rardin, Laurie	rardins@comcast.net	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 11:41 AM
House, Don	donhouse@metrocast.net	508.344.4612	A Member of the Public	Myself	Support	No	3/15/2021 1:22 PM
Johnson, II, Robert	robj@nhfarmbureau.org	603.312.6877	A Lobbyist	NH Farm Bureau Federation	Support	No	3/15/2021 2:27 PM
Jones, Andrew	arj11718@yahoo.com	Not Given	A Member of the Public	Myself	Support	No	3/16/2021 11:15 AM
Dowd, Russell	rfdnh@roadrunner.com	Not Given	A Member of the Public	Myself	Support	No	3/16/2021 7:39 PM
Reardon, John	bugs42953@aol.com	603.224.8151	A Member of the Public	Myself	Support	No	3/15/2021 11:42 AM
Martin, Patricia	pmartin2894@yahoo.com	603.899.2894	A Member of the Public	Myself	Support	No	3/15/2021 11:44 AM
Emerson, Anne	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 11:46 AM
BERK, BRUCE	bruce.berk.nh@gmail.com	603.540.4163	A Member of the Public	Myself	Support	No	3/15/2021 11:47 AM
Davis, Ann	woodswithoutgile@tds.net	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 12:42 PM

Beffa-Negrini, Patricia	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 12:09 PM
McGuinn, Beth	bethsveggies@gmail.com	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 12:43 PM
Itse, Daniel	itsenh@comcast.net	Not Given	A Member of the Public	Myself	Neutral	No	3/15/2021 12:50 PM
Wells, Ken	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 12:59 PM
Kasper, Shaina	shaina@communityactionworks.org	802.922.4780	A Lobbyist	Community Action Works Campaigns	Oppose	No	3/15/2021 11:09 AM
Newton, Jay	Jjnewt@gmail.com	508.254.1286	A Member of the Public	Myself	Support	No	3/15/2021 10:17 AM
Hurley, Margaret	Not Given	Not Given	A Member of the Public	Myself	Oppose	No	3/12/2021 3:05 PM
Giuda, Bob	bob.giuda@leg.state.nh.us	603-271-3042	An Elected Official	NH Senate District 2	Support	No	3/9/2021 1:14 PM
Watters, Scnator David	david.watters@leg.state.nh.us	603-271-2104	An Elected Official	Myself (SD 4)	Support	No	3/12/2021 8:43 AM
Husband, Richard	RMHusband@gmail.com	603.883.1218	A Member of the Public	Myself	Support	No	3/12/2021 9:46 AM
Hardwick, Teri	teri@dhhardwick.com	Not Given	A Member of the Public	Myself	Support	No	3/12/2021 10:58 AM
Birch, Craig	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/12/2021 11:47 AM
Carbee, Hunter	hcarbee30@gmail.com	16034960118	A Member of the Public	Myself	Support	No	3/12/2021 11:49 AM
Oxenham, Evan	evan.oxenham@gmail.com	603.727.9368	A Member of the Public	Myself	Support	No	3/12/2021 11:51 AM
Perkins Kwoka, Senator Rebecca	rebecca.perkinskwoka@leg.state.nh.us	603-271-2104	An Elected Official	Myself (SD 21)	Support	No	3/12/2021 1:12 PM
Woodward, john	jc@clockery.com	603.313.7676	A Member of the Public	Myself	Support	No	3/12/2021 4:31 PM
Ward, Bryan	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/12/2021 4:55 PM
Ward, Phil	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/12/2021 4:56 PM
Ward, Debbie	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/12/2021 4:58 PM
Fordey, Nicole	nikki610@gmail.com	Not Given	A Member of the Public	Myself	Support	No	3/12/2021 6:21 PM
Smith, Jennifer	jaycmd7699@gmail.com	603.738.6221	A Member of the Public	Myself	Support	No	3/12/2021 6:24 PM
Ledgard, Donna	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/12/2021 12:08 PM
Nowell, Joy	joy@newburynh.org	603-938-6054	A Member of the Public	Myself	Support	No	3/12/2021 4:50 PM
Koning, Catherine	koninge@franklinpierce.edu	603.732.2885	A Member of the Public	Myself	Support	No	3/13/2021 11:22 AM
Brennan, Nancy	Not Given	529-1969	A Member of the Public	Myself	Support	No	3/14/2021 7:05 PM
Jakubowski, Deborah	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/14/2021 7:06 PM
Moreno, Charles	Not Given	603 234-0444	A Member of the Public	Myself	Support	No	3/14/2021 7:10 PM
Graham, Nancy	nancygraham806@gmail.com	Not Given	A Member of the Public	Myself	Support	No	3/14/2021 7:15 PM
jakubowski, dennis	dendeb146@gmail.com	603.496.5749	A Member of the Public	Myself	Support	No	3/14/2021 7:20 PM
Garland, Ann	annhgarland@gmail.com	Not Given	A Member of the Public	Myself	Support	No	3/14/2021 7:20 PM
Keeler, Margaret	peg5keeler@gmail.com	603-491-4689	A Member of the Public	Myself	Support	No	3/14/2021 7:35 PM
Sanchez, Ruth	ruthmaria29@yahoo.com	Not Given	A Member of the Public	Myself	Support	No	3/14/2021 7:35 PM
Reed, Dan	dreed@cforesters.com	603.387.5279	A Member of the Public	Myself	Support	No	3/12/2021 10:48 AM
Beck, Gerald	bentrimone@gmail.com	603.536.3561	A Member of the Public	Myself	Support	No	3/12/2021 12:49 PM

Maloney, William	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/12/2021 1:29 PM
Birch, Cheri	cbirch@nhtoa.org	603.224.9699	A Member of the Public	Myself	Support	No	3/12/2021 1:56 PM
Hayden, Robert	b.hayden@standardpower.com	603.325.1749	A Member of the Public	Myself	Support	No	3/12/2021 1:58 PM
Jones, Hayley	hayley@communityactionworks.org	(971) 400 51	A Lobbyist	Community Action Works Campaigns	Oppose	No	3/12/2021 7:25 PM
Kelley-Gillard, Nancy	ndgillard@ne.rr.com	Not Given	A Member of the Public	Myself	Support	No	3/13/2021 2:27 PM
DeMark, Richard	demarknh114@gmail.com	603.520.5582	A Member of the Public	Myself	Support	No	3/14/2021 12:38 PM
kwasnik, joseph	jkwasnik25@gmail.com	603.730.7148	A Member of the Public	Myself	Support	No	3/14/2021 7:47 PM
Willing, Maura	Maura.Willing@Comcast.net	Not Given	A Member of the Public	Myself	Support	No	3/14/2021 8:04 PM
Larson, Ruth	ruthlarson@msn.com	Not Given	A Member of the Public	Myself	Support	No	3/14/2021 8:09 PM
jones, carolyn	carolynj1947@gmail.com	603.357.0563	A Member of the Public	Myself	Support	No	3/13/2021 4:24 PM
Clark, Martha	mctraveler1@comcast.net	Not Given	A Member of the Public	Myself	Support	No	3/14/2021 8:18 PM
Torpey, Jeanne	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/14/2021 8:22 PM
Vincent, Laura	lvlauravincen5@gmail.com	603.783.4849	A Member of the Public	Myself	Support	No	3/14/2021 8:23 PM
Huberman, Anne	Anne.Huberman@gmail.com	603.924.0842	A Member of the Public	Myself	Support	No	3/14/2021 8:24 PM
Falk, Cheri	Falk.cj@gmail.com	603.654.2777	A Member of the Public	Myself	Support	No	3/14/2021 8:56 PM
Richman, Susan	susan7richman@gmail.com	603.868.2758	A Member of the Public	Myself	Support	No	3/13/2021 9:24 PM
Damon, Claudia	cordsdamon@gmail.com	603.226.4561	A Member of the Public	Myself	Support	No	3/14/2021 9:21 PM
Ruth, Perencevich	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/14/2021 9:21 PM
Clark, Denise	denise.m.clark03055@gmail.com	603.213.1692	A Member of the Public	Myself	Support	No	3/14/2021 9:25 PM
Kaplan, Susan	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/14/2021 9:58 PM
Currier, Dorothy	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/14/2021 10:02 PM
Casino, Joanne	joannecasino@comcast.net	603.746.3491	A Member of the Public	Myself	Support	No	3/14/2021 10:09 PM
Spielman, Kathy	jspielman@comcast.net	603.397.7879	A Member of the Public	Myself	Support	No	3/15/2021 7:57 AM
Terwilliger, Linda	lindaterwilliger364@gmail.com	603.667.3021	A Member of the Public	Myself	Oppose	No	3/14/2021 5:36 PM
Graham, James	jamesg@blue-bottle.com	603.795.2605	A Member of the Public	Myself	Support	No	3/14/2021 8:46 PM
Rettew, Annie	abrettew@gmail.com	Not Given	A Member of the Public	Myself	Support	No	3/14/2021 8:48 PM
perez, maria	mariaeli63@gmail.com	603.801.7867	An Elected Official	Distric 23	Support	No	3/15/2021 7:57 AM
Zavgren, John	john@zavgren.com	603.371.0513	A Member of the Public	Myself	Support	No	3/15/2021 8:09 AM
Corell, Elizabeth	Elizabeth.j.corell@gmail.com	603.545.9091	A Member of the Public	Myself	Support	No	3/15/2021 8:14 AM
Pearl, Howard	howard.pearl@leg.state.nh.us	603-231-1482	An Elected Official	Merrimack 26	Support	No	3/15/2021 8:43 AM
Hinebauch, Mel	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/14/2021 10:29 PM
Feder, Marsha	marshafeder@gmail.com	603.860.8743	A Member of the Public	Myself	Support	No	3/15/2021 2:07 AM
Reed, Barbara D.	moragmcp83@outlook.com	603.352.5015	A Member of the Public	Myself	Support	No	3/15/2021 6:48 AM
Saum, Judith	judithsaum@gmail.co,	603-786-6170	A Member of the Public	Myself	Support	No	3/15/2021 6:48 AM
Blanchard, Sandra	sandyblanchard3@gmail.com	603.724.3768	A Member of the Public	Myself	Support	No	3/15/2021 9:32 AM
Rankin, Don	diggindawgsgw@gmail.com	603.732.2783	A Member of the Public	Myself	Support	No	3/15/2021 9:46 AM

noonan, timothy	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 10:59 AM
Smith, Maja	majahauck@aol.com	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 11:24 AM
Hackmann, Kent	hackmann@uidaho.edu	16039343225	A Member of the Public	Myself	Support	No	3/15/2021 11:32 AM
Portnoy, Fred	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 11:36 AM
Gage, John	jhgage@gmail.com	603.965.1586	A Member of the Public	Myself	Support	No	3/15/2021 11:37 AM
Bushueff, Catherine	agawamdesigns@gmail.com	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 6:26 AM
Gordon, Margaret	Megordon98@gmail.com	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 7:07 AM
Greenwood, Nancy	nancgreenwood@yahoo.com	603.226.2471	A Member of the Public	Myself	Support	No	3/15/2021 7:11 AM
Gordon, Laurie	Lmgord23@gmail.com	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 7:12 AM
Briggs, Ronald	Rongb1950@gmail.com	603.226.2471	A Member of the Public	Myself	Support	No	3/15/2021 7:12 AM
Nardino, Marie	mdnardino@gmail.com	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 7:22 AM
Dewey, Karen	pkdewey@comcast.net	603.504.2813	A Member of the Public	Myself	Support	No	3/15/2021 7:30 AM
Platt, Elizabeth-Anne	lizanneplatt09@gmail.com	603-715-8191	A Member of the Public	Myself	Support	No	3/15/2021 7:33 AM
Van Sice, Autumn	Not Given	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 7:38 AM
Chalice, Michele	michele.chalice@gmail.com	603.313.9153	A Member of the Public	Myself	Support	No	3/15/2021 7:48 AM
Reardon, Donna	bugs42953@aol.com	603.496.0252	A Member of the Public	Myself	Support	No	3/15/2021 11:40 AM
Mundy, Theresa	tmundy@me.com	603.667.3183	A Member of the Public	Myself	Support	No	3/15/2021 8:48 AM
McNamee, Brigid	brigidmcnamee@yahoo.com	603.223.0139	A Member of the Public	Myself	Support	No	3/15/2021 8:55 AM
Petruccelli, Maxine	maxinepet@gmail.com	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 9:06 AM
Petruccelli, Charles	chasmxpet@gmail.com	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 9:07 AM
Hansberry, Lydia	lydiamae1@icloud.com	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 9:14 AM
Wilke, Mary	wilke.mary@gmail.com	Not Given	A Member of the Public	Myself	Support	No	3/15/2021 9:21 AM

Testimony

Griffin Roberge

From: Teri Hardwick <teri@dhhardwick.com>
Sent: Friday, March 12, 2021 11:37 AM
To: Griffin Roberge
Subject: SB 113 PLEASE Support ! Written Testimony

We are a large SOUTHERN NH logging firm in Bennington NH. Since many of the biomass plants have closed and others are clinging to staying open we have been forced to reduce production and have gone from 23 employees to 15 employees (not at all to do with covid). The forest industry markets have left us with very slim options as to where to bring the low-grade wood. The sawlogs must still be processed but in order to do that, we must now leave some of the low-grade wood that is in the way cut and left on the ground to go to waste. This is a FIRE HAZARD, UGLY, and a "neanderthal" way of harvesting given today's technology.

This bill seeks to modify the Renewable Portfolio Standard Law (RPS) by setting the alternative compliance payment (ACP) at \$55/MW. In addition to supporting independent power plants, this bill also supports biomass thermal by setting the ACP at the \$55/MW rate. The RPS law has been instrumental in keeping the few remaining power plants open and operating.

We have been the sole supplier to Crotched Mountain Rehabilitation Center in Greenfield for well over a decade and are the sole supplier to the state-run facility, Rockingham County Complex (nursing home and prison). These facilities have heated and cooled their facilities with green energy and by doing so they have helped the market for low-grade wood which in turn allows for good forest management for healthy future forests.

The state encouraged the implementation of these and many other wood-burning facilities to help reach our green energy goals. It would be a very sad day if the State now decides that they will pull the rug out from under them. This infrastructure will be crippled possibly to the point of no return!

If the *RPS* is not allowing a viable payment, we will be forced to park or sell our chippers. We need the remaining chip plants and heating facilities that use wood chips to stay open and be able to pay us a rate that is sustainable. If the *RPS* is no longer available, even the small facilities; Schools, and other heating plants that consume the wood chips will cease to exist. The millions of dollars the state encouraged them to invest in will be mothballed (if they can't get a supply at a reasonable price) and they would have to revert to oil. Which is not green and is not following the plan of diversification, which is important more than ever in the world we live in today. **Please allow this much-needed diverse energy and heating source to remain in our state. You saw what happened in Texas, we need options and diversified energy and heat! We need the RPS to be modified to keep these places running and not just running but being able to pay us, loggers, what is needed to support the remaining infrastructure we invested so much to create. We have Literally been dying a slow death over the past couple of years and are nearing the end of sustainable harvesting techniques that have taken decades to establish.**

Please consider the trickle effect of further reduction of forest industry markets will have. Sawlogs will become a much higher value (costly to consumers) and these high-quality sawlogs will become less available as the forests can no longer be managed for future saw lumber growth. The forests will be high-graded (only the best trees cut) leaving no good young growth stock that can be used for saw lumber in the future. **Which will definitely have a further impact on the affordable housing crisis.** Our grandchildren need your support. It is complex and there is so much more to say about how one issue like addressing this Bill 113 will affect so many other areas of our economy and the health of our future forests and the costs of goods in the future for forest products (I pray we are even allowed the good stewardship tools we have been able to utilize in the past).

***We will all pay one way or another for decisions that are made today.**

Please consider my comments as we desperately.

You know the history of this issue and the huge support that came out in the past. These same people are still very desperate and have very little time to show up to speak out.

We are all hanging on by our fingertips (complications not caused by Covid but instead by the lack of diversified markets). We have no place to bring this wood!!

I know of two good logging companies that have just closed their doors forever. The lack of low-grade markets is killing our once vibrant forest products industry here in NH. Remember we are the second most forested state in our nation and have a responsibility to manage this great resource for our children's children. Ask yourself, will your grandchildren be able to afford a home if the costs of lumber keep skyrocketing? Will our management tools like having a low-grade market be sufficient to grow quality forest products for the future? Not likely unless we change some things!

I doubt they all know it but ALL citizens need you to support this bill!

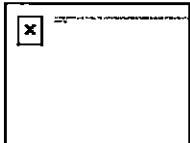
Thank you for your time and for your service.

PS

AGAIN ... This issue is not a Northern NH issue it affects our Hillsborough County immensely. A bigger percentage of wood fiber comes from our area than up north. (last time around there was a BIG misunderstanding about where wood comes from in NH.)

--

Teri Hardwick
D.H. Hardwick & Sons, Inc.
P.O Box 430, Antrim NH 03440
603-588-6618



<https://www.dhhardwick.com>

<https://www.facebook.com/dhhardwick/>

It's okay to print this email! Paper is a sustainable product made from trees. Sustainably managed forests are good for the environment, providing clean air and water, wildlife habitat and carbon storage. Thanks to responsible forest management, we have more trees in America today than we had 100 years ago. Please do continue to recycle, our earth has limited landfill space.

Griffin Roberge

From: Jasen Stock <jstock@nhtoa.org>
Sent: Friday, March 12, 2021 5:38 PM
To: Griffin Roberge
Subject: SB 113 NHTOA testimony
Attachments: sb 113 NHTOA testimony - Senate.pdf

Griffin,

I am attaching NHTOA's testimony for SB 113. Because I already registered earlier in the week for the hearing I was unable to go back in and submit it through the registration process.

Call if you have any questions or if you would like me to send this elsewhere.

Jasen



March 15, 2021

Senator Avar, Chairman
N.H. Senate Energy and Natural Resources Committee
Senate Chamber, State House
Concord, NH 03301

RE: Senate Bill 113, *AN ACT relative to the alternative compliance payments for renewable energy obligations not met through the purchase of renewable energy credits*

Dear Chairman Avar and members of the Committee:

The New Hampshire Timberland Owners Association (NHTOA) appreciates the opportunity to voice our support for Senate Bill 113.

Founded in 1911, the NHTOA represents forest landowners and the forest products industry in New Hampshire. This sector of New Hampshire's economy represents the third-largest sector of manufacturing in the state. The forest products industry in New Hampshire employs more than 10,000 people directly, with an annual payroll of more than \$330 million. The foundation of this industry are New Hampshire's timberland owners and their forests. As the second most forested state in the country (according to the U.S. Forest Service), New Hampshire's forest sees an average of 2,500 timber harvests per year. These occur in every county and in almost every town and city. Unfortunately, due to the nature of our timber types and soils, two-thirds of these forests are growing low-grade timber (timber unable to produce quality lumber).

Senate Bill 113's support of New Hampshire's renewable portfolio standard (RPS) law's class 3 (existing biomass) and thermal power projects also supports low-grade wood markets. Adoption of Senate Bill 113 will provide much needed stability to the remaining operational power plants and incentives for the development of additional thermal projects.

Over the past two years New Hampshire has lost low-grade wood markets with the idling of 4 biomass power plants and the loss of a major pulp wood market with the explosion of the pulp/paper mill in Jay, Maine. In late 2020, using timber tax reports and biomass power plant consumption data I was able to estimate the loss of New Hampshire low-grade wood market at 1,255,176 tons. To put this in perspective in a typical year New Hampshire's total wood market (low-grade and high-grade wood products, all species) is between 3 and 3.5 million tons.

The immediate impacts from the loss of this market are being felt by the loggers and timberland owners. Unable to market low-grade timber these landowners and land managers are unable to economically improve forest health and vigor, and in many instances entire woodlots go unmanaged; weeding and thinning of diseased and malformed timber does not occur, weakening these woodlots both environmentally and ecologically. Worse, timber lots are sometimes "high-graded," where the logger "cuts the best and leaves the rest," resulting in genetically inferior timber stands with poor growing stock.

54 PORTSMOUTH ST., CONCORD, NH 03301
603-224-9699 • FAX 603-225-5898 • WWW.NHTOA.ORG

Growing Leadership for New Hampshire's Forests

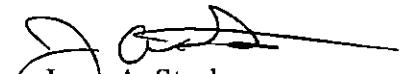
By managing for healthier and more vigorous woodlots timber quality improves resulting in greater economic value to the landowner, forest products businesses and local community.

Second to feel the impact from the loss of low-grade wood markets are New Hampshire's solid wood processing facilities (a.k.a. sawmills). New Hampshire's 50 sawmills support 2,593 jobs and generate \$447.7 million annually in economic activity. The impact on sawmills from the loss of low-grade wood markets is three-fold. First, these mills need markets for their chipped slabs. An average size Eastern White Pine Sawmill produces eight to eleven tractor trailer loads of wood chips per week. These have traditionally gone to paper mills and biomass power plants. With the closures, mill chips are traveling further and what was once considered a product (asset) has now become a disposal issue (liability). The second impact felt by sawmills is on log procurement. With loggers downsizing and fewer acres seeing management, sawmills are either decreasing production (to match lower log supply) or spend more transporting logs from neighboring states. The third impact is a long-term impact -- future saw log quality. As discussed above, with the loss of low-grade wood markets performing sustainable forestry to improve forest health and quality is more difficult. This impact will be felt 20, 30 or 50 years from now as timber stands that should be thinned and improved now are not.

As I mention above, passage of Senate Bill 113 will provide much needed stability to a large sector of the state's forest products industry. Stability that will help stem the further erosion of forest products supply chain and forest management work. This stability will also enable the industry and infrastructure to adapt as other uses and markets for low-grade wood get developed.

For all the reasons articulated above the NHTOA and its members request you vote Senate Bill 113 Ought to Pass.

Thank you,



Jason A. Stock
Executive Director

Griffin Roberge

From: niebling@inrslc.com
Sent: Sunday, March 14, 2021 8:34 PM
To: Kevin Avard; Bob Giuda; James Gray; Rebecca Perkins Kwoka; David Watters; Griffin Roberge
Cc: CHARLIE LEVESQUE; 'ERIC KINGSLEY'
Subject: Testimony of Charlie Niebling in Support of SB113
Attachments: SB113 testimony Niebling 3.15.21.pdf

Charles Niebling
Innovative Natural Resource Solutions LLC
10 Queen Street
Boscawen NH 03303
603.965.5434, niebling@inrslc.com

March 15, 2021

The Honorable Kevin Avard
Chair, Senate Energy and Natural Resources Committee
NH State Senate
Concord NH 03301

Re: Senate Bill 113

Dear Chairman Avard and Members of the Committee:

I submit this testimony in support of Senate Bill 113. I am a forester by profession, and I have expertise in modern wood biomass heating. I am supportive of the role the thermal renewable energy carve out in the NH RPS Class I has played in encouraging commercial, institutional, and industrial investment in renewable heating systems.

Since 2014, when the thermal REC ("T-REC") incentive created by the passage of SB218 (laws of 2012) became effective, the T-REC incentive has had a significant beneficial impact on thermal renewable energy development in the state. As of December 2020, there are 58 projects that are qualified to produce and sell T-RECs. These include 46 biomass or biofuel projects and 12 geothermal projects. Some facts:

- The total installed capacity is over 53 mega-watts.
- The biomass projects – of which I am most familiar - include 4 county facilities, 4 non-profit rural hospitals, 22 public school facilities, 3 college campus facilities, 2 private school facilities and 7 businesses.
- The biomass projects spend approximately \$5 million annually on wood chips and wood pellets sourced from within New Hampshire, and have created a new market for about 70,000 tons per year of low grade wood.
- The 58 projects have displaced the need for over 3.3 million gallons of heating oil equivalent on an annual basis, thus reducing export of fuel dollars by about \$ 8.5 million annually (based on current heating oil prices per NHOSI).

I have attached a list of all the qualified T-REC projects in the state. You will note that the trend in new qualified projects has declined in recent years as low oil and propane prices have reduced the incentive to invest capital in renewable heating technologies, such as those fueled by wood pellet and wood chips.

IF SB113 becomes law, the levelized alternative compliance payment of \$55 per mega-watt hour of heat energy will spur significant new interest in this heating option. This in turn will create new markets for low grade wood. As this

committee knows well from prior debates about biomass energy, markets for low-grade timber are essential to performing sustainable forestry and timberland management. Lacking pulp and paper mills, NH's primary market for this material has been biomass wood chips and wood pellet feedstock for energy production. Biomass electric generation has contracted in NH because of inability to compete against cheap natural gas electricity. A positive development has been the modest growth we are seeing in biomass heating projects using both wood chips and wood pellets.

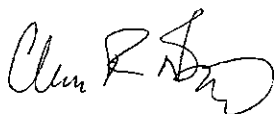
For these reasons, I urge your favorable consideration of SB113.

Sincerely,

Charles R. Niebling
 Partner, INRS
 NH Licensed Professional Forester #268

List of thermal REC eligible projects in NH as of December 2020 (provided by NH PUC):

<u>Facility Name</u>	<u>City</u>	<u>System Size MW</u>	<u>REC Eligibility Date</u>
Campton Elementary School	Campton	0.4500	11/17/2020
Monadnock Humane Society	Swanzy	0.1500	10/16/2020
Weeks Medical Center	Lancaster	0.8339	08/26/2020
Maplewood Nursing Home	Westmoreland	1.2000	01/15/2020
Memorial Hospital	North Conway	3.9240	11/15/2019
Sullivan County Complex	Unity	1.4654	03/19/2019
John Stark High School	Weare	0.4900	01/25/2019
Sanbornton Central School	Sanbornton	0.1680	01/15/2019
Maple Street School	Hopkinton	0.1500	11/05/2018
UNH Northwest Heat Plant	Durham	0.7350	10/19/2018
Rockingham County Biomass Boiler Plant	Brentwood	0.9810	06/06/2018
Conant High School/Jaffrey Rindge Middle School	Jaffrey	0.4982	04/10/2018
Bantam Realty Trust	Keene	0.5862	02/12/2018
Merrimack Cty Correctional Facility	Boscawen	1.2499	01/18/2018
ALLWELL North	Holderness	0.9870	12/11/2017
Orford Ridge Business Park	Orford	0.2052	12/06/2017
Doug Pominville	Nashua	0.0160	09/27/2017
White Mountain Regional High School	Whitefield	0.3000	09/14/2017
Bedford Public Library	Bedford	0.1100	09/13/2017
Randall Costa	Andover	0.0490	09/11/2017
Keene State College Heat Plant	Keene	19.6200	07/03/2017
Froling Energy Chip Drying System	Peterborough	0.9501	06/23/2017
Whelen Engineering Building 3	Charlestown	0.9915	11/29/2016
Hollis Police Station	Hollis	0.0560	11/16/2016



Hollis Town Hall	Hollis	0.0560	11/16/2016
Plymouth Regional High School	Plymouth	0.7200	11/07/2016
Claremont Middle School	Claremont	0.3000	08/31/2016
Stevens High School	Claremont	0.3000	08/31/2016
Cheshire Mills Complex	Harrisville	0.2998	08/29/2016
Lyme Elementary School	Lyme	0.2052	07/15/2016
Eric Christian	Nashua	0.0090	06/27/2016
Troy Brown	Nottingham	0.0123	06/27/2016
The Holderness School	Plymouth	1.4650	05/04/2016
Belmont Middle School	Belmont	0.3000	04/11/2016
Inter-Lakes Elementary School	Meredith	0.4982	04/11/2016
Inter-Lakes High School	Meredith	0.4982	04/11/2016
Belmont Elementary School	Belmont	0.1500	04/11/2016
Belmont High School	Belmont	0.3000	04/11/2016
Canterbury Elementary School	Canterbury	0.1500	04/11/2016
Whelen Engineering - Bldg 5	Charlestown	0.5861	02/16/2016
233 Vaughan Street, NEO Geothermal, LLC	Portsmouth	0.1882	02/10/2016
Whelen Engineering Bldg #1	Charlestown	0.5861	02/01/2016
High Mowing School	Wilton	0.2931	01/11/2016
Piehler Geothermal	Hampton Falls	0.0160	11/13/2015
North Country Environmental Services	Bethlehem	0.0273	11/13/2015
Neubauer-Geo	Salem	0.0160	11/13/2015
Walpole Elementary School	Walpole	0.2005	10/19/2015
Charlestown Middle School	Charlestown	0.2005	10/19/2015
Warwick Mills, Inc	New Ipswich	1.9900	07/10/2015
Enfield Village School	Enfield	0.5598	02/27/2015
Indian River School	Canaan	0.1120	02/27/2015
Mascoma Regional High School	Canaan	0.3000	02/27/2015
Canaan Elementary School	Canaan	0.1120	02/27/2015
Michael Krinsky	Marlborough	0.0478	12/01/2014
Tara & Tom Mack	Rye	0.0160	08/05/2014
Androscoggin Valley Hospital	Berlin	3.5170	03/21/2014
Littleton Regional Healthcare	Littleton	3.5170	01/15/2014
Rolling Dog Farm	Lancaster	0.0210	01/01/2014

TOTAL MEGAWATTS of TREC Generation

53.73

Charles Niebling
Innovative Natural Resource Solutions LLC
10 Queen Street
Boscawen NH 03303
603.965.5434, niebling@inrslc.com

March 15, 2021

The Honorable Kevin Avard
Chair, Senate Energy and Natural Resources Committee
NH State Senate
Concord NH 03301

Re: Senate Bill 113

Dear Chairman Avard and Members of the Committee:

I submit this testimony in support of Senate Bill 113. I am a forester by profession, and I have expertise in modern wood biomass heating. I am supportive of the role the thermal renewable energy carve out in the NH RPS Class I has played in encouraging commercial, institutional, and industrial investment in renewable heating systems.

Since 2014, when the thermal REC ("T-REC") incentive created by the passage of SB218 (laws of 2012) became effective, the T-REC incentive has had a significant beneficial impact on thermal renewable energy development in the state. As of December 2020, there are 58 projects that are qualified to produce and sell T-RECs. These include 46 biomass or biofuel projects and 12 geothermal projects. Some facts:

- The total installed capacity is over 53 mega-watts.
- The biomass projects – of which I am most familiar - include 4 county facilities, 4 non-profit rural hospitals, 22 public school facilities, 3 college campus facilities, 2 private school facilities and 7 businesses.
- The biomass projects spend approximately \$5 million annually on wood chips and wood pellets sourced from within New Hampshire, and have created a new market for about 70,000 tons per year of low grade wood.
- The 58 projects have displaced the need for over 3.3 million gallons of heating oil equivalent on an annual basis, thus reducing export of fuel dollars by about \$ 8.5 million annually (based on current heating oil prices per NHOSI).

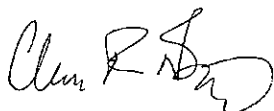
I have attached a list of all the qualified T-REC projects in the state. You will note that the trend in new qualified projects has declined in recent years as low oil and propane prices have reduced the incentive to invest capital in renewable heating technologies, such as those fueled by wood pellet and wood chips.

IF SB113 becomes law, the levelized alternative compliance payment of \$55 per mega-watt hour of heat energy will spur significant new interest in this heating option. This in turn will create new markets for low grade wood. As this committee knows well from prior debates about biomass energy, markets for low-grade timber are essential to performing sustainable forestry and timberland management. Lacking pulp and paper mills, NH's primary market for this material has been biomass wood chips and wood pellet feedstock for energy production. Biomass electric generation has contracted in NH because of

inability to compete against cheap natural gas electricity. A positive development has been the modest growth we are seeing in biomass heating projects using both wood chips and wood pellets.

For these reasons, I urge your favorable consideration of SB113.

Sincerely,



Charles R. Niebling
Partner, INRS
NH Licensed Professional Forester #268

List of thermal REC eligible projects in NH as of December 2020 (provided by NH PUC):

<u>Facility Name</u>	<u>City</u>	<u>System Size MW</u>	<u>REC Eligibility Date</u>
Campton Elementary School	Campton	0.4500	11/17/2020
Monadnock Humane Society	Swanzey	0.1500	10/16/2020
Weeks Medical Center	Lancaster	0.8339	08/26/2020
Maplewood Nursing Home	Westmoreland	1.2000	01/15/2020
Memorial Hospital	North Conway	3.9240	11/15/2019
Sullivan County Complex	Unity	1.4654	03/19/2019
John Stark High School	Weare	0.4900	01/25/2019
Sanbornton Central School	Sanbornton	0.1680	01/15/2019
Maple Street School	Hopkinton	0.1500	11/05/2018
UNH Northwest Heat Plant	Durham	0.7350	10/19/2018
Rockingham County Biomass Boiler Plant	Brentwood	0.9810	06/06/2018
Conant High School/Jaffrey Rindge Middle School	Jaffrey	0.4982	04/10/2018
Bantam Realty Trust	Keene	0.5862	02/12/2018
Merrimack Cty Correctional Facility	Boscawen	1.2499	01/18/2018
ALLWELL North	Holderness	0.9870	12/11/2017
Orford Ridge Business Park	Orford	0.2052	12/06/2017
Doug Pominville	Nashua	0.0160	09/27/2017
White Mountain Regional High School	Whitefield	0.3000	09/14/2017
Bedford Public Library	Bedford	0.1100	09/13/2017
Randall Costa	Andover	0.0490	09/11/2017
Keene State College Heat Plant	Keene	19.6200	07/03/2017
Froling Energy Chip Drying System	Peterborough	0.9501	06/23/2017
Whelen Engineering Building 3	Charlestown	0.9915	11/29/2016
Hollis Police Station	Hollis	0.0560	11/16/2016
Hollis Town Hall	Hollis	0.0560	11/16/2016
Plymouth Regional High School	Plymouth	0.7200	11/07/2016

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Stevens High School	Claremont	0.3000	08/31/2016
Cheshire Mills Complex	Harrisville	0.2998	08/29/2016
Lyme Elementary School	Lyme	0.2052	07/15/2016
Eric Christian	Nashua	0.0090	06/27/2016
Troy Brown	Nottingham	0.0123	06/27/2016
The Holderness School	Plymouth	1.4650	05/04/2016
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Inter-Lakes Elementary School	Meredith	0.4982	04/11/2016
Inter-Lakes High School	Meredith	0.4982	04/11/2016
Belmont Elementary School	Belmont	0.1500	04/11/2016
Belmont High School	Belmont	0.3000	04/11/2016
Canterbury Elementary School	Canterbury	0.1500	04/11/2016
Whelen Engineering - Bldg 5	Charlestown	0.5861	02/16/2016
233 Vaughan Street, NEO Geothermal, LLC	Portsmouth	0.1882	02/10/2016
Whelen Engineering Bldg #1	Charlestown	0.5861	02/01/2016
High Mowing School	Wilton	0.2931	01/11/2016
Piehler Geothermal	Hampton Falls	0.0160	11/13/2015
North Country Environmental Services	Bethlehem	0.0273	11/13/2015
Neubauer-Geo	Salem	0.0160	11/13/2015
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Charlestown Middle School	Charlestown	0.2005	10/19/2015
Warwick Mills, Inc	New Ipswich	1.9900	07/10/2015
Enfield Village School	Enfield	0.5598	02/27/2015
Indian River School	Canaan	0.1120	02/27/2015
Mascoma Regional High School	Canaan	0.3000	02/27/2015
Canaan Elementary School	Canaan	0.1120	02/27/2015
Michael Krinsky	Marlborough	0.0478	12/01/2014
Tara & Tom Mack	Rye	0.0160	08/05/2014
Androscoggin Valley Hospital	Berlin	3.5170	03/21/2014
Littleton Regional Healthcare	Littleton	3.5170	01/15/2014
Rolling Dog Farm	Lancaster	0.0210	01/01/2014
TOTAL MEGAWATTS of TREC Generation		53.73	

Griffin Roberge

From: Bruce Berke <bberke@sheehan.com>
Sent: Monday, March 15, 2021 10:11 AM
To: Kevin Avard; Bob Giuda; Bob Giuda; J Gray NH; David Watters; Rebecca Perkins Kwoka
Cc: Griffin Roberge
Subject: Senate Bill 113 - Section 2 re: Hydrogen

Good morning, Senators,

At this afternoon's hearing on Senate Bill 113 in the Energy & Natural Resources Committee, Whit Irvin of **Q Hydrogen** will be supporting section 2 of the bill which aims to include hydrogen derived from water in NH's Renewable Portfolio Standard.

You will hear that Q Hydrogen has a project under construction in Groveton, NH; a project that could be transformative for the energy world.

Below is a link to a slide deck that explains some of what will be presented this afternoon.

<https://link.zixcentral.com/u/a1fceb5/-FT8CheF6xGDWlThgNRvyg?u=https%3A%2F%2F1drv.ms%2Fp%2Fs%21ApIBR13Uj8J9iz57Q9XemcfYXsb>

Sheehan Phinney Capitol Group represents Q Hydrogen in NH and we look forward to working with you on the proposal in SB 113. If you have any questions or would like further information, please do not hesitate to contact me.

Thank you.

Bruce Berke
603-496-8092, mobile
www.spcapitolgroup.com



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SENATE ENERGY AND NATURAL RESOURCES COMMITTEE HEARING

March 15, 2021

SB *113*, relative to the alternative compliance payments for renewable energy obligations not met through the purchase of renewable energy credits.

WHITAKER IRVIN, JR. TESTIMONY

CEO, Q Hydrogen Commercialization, LLC

Thank you, Mr. Chairman and Members of the Committee.

Good afternoon. My name is Whit Irvin. I am the CEO of Q Hydrogen Commercialization, LLC and I am testifying in support of SB 113.

For decades, hydrogen has been talked about as an alternative source of energy. At Q Hydrogen, we have taken this concept and developed it into a reality. Q Hydrogen's plan for clean power generation is unhindered by the numerous limitations faced by current renewable sources, as the methods we utilize are economical and clean; in fact carbon-free. Our proprietary method generates hydrogen from water using hydrodynamic forces created within a turbine featuring a unique design and metallurgy.

Research and development started by my father in the mid-1990s focuses on a new relationship between energy and matter. Over the last 25 years, these efforts have led to technology creation based on science entirely new to hydrogen and will dramatically reduce the production cost of hydrogen. This in turn makes it far easier to produce, while quickly moving hydrogen into a low-cost fuel source category.

Beyond its competitive economics, Q Hydrogen's breakthrough development in carbon-free hydrogen production will allow for lower capital and operating costs

to produce this method of energy when compared to other technologies. Clearly, this is a new technology but more importantly it is an incredibly clean technology with absolute potential to favorably impact our environment.

While Q Hydrogen is a Utah based company, we have property and a business plan in New Hampshire that includes local investors from the north country. Q Hydrogen purchased a property in Groveton, within the town of Northumberland. On that property stood a former paper mill, and we purchased the former power plant on this site. Q Hydrogen is converting this facility into the world's first power plant fueled by clean, economical Q Hydrogen.

Why New Hampshire? We selected NH for two key reasons. First, the State of NH has a deregulated energy generation law. And second, with NH state government's laws, rules and state agency personnel, there is a business friendly environment where an innovative business like Q Hydrogen can thrive.

As we begin this process in NH, we certainly want to make sure it is done correctly. By participating in the State of NH's RPS process, the State of NH will in essence be partnering with us to provide this new and dynamic energy source. We view New Hampshire, and our facility in Groveton, to be a global showcase. This location will attract attention from partners we are already in negotiations with, including countries like Sweden, Germany and Singapore. Further, we see this facility as the beginning of our New Hampshire footprint. Beyond creating jobs for the north country on this site, which will provide economic and environmentally friendly power to users, it will be the model we use for connecting our facilities to the grid. There are many locations throughout the State of New Hampshire where we could retrofit pre-existing assets that are no longer in use, and further expand the amount of clean, renewable energy added into the grid.

In order for carbon-free hydrogen production to advance, we are requesting your help as we move forward in this exciting and dynamic endeavor. In particular, there is one word we are asking you to consider inserting into current law.

Just below the Findings in Section 2 of the bill, relative to NH's renewable portfolio standards, we respectfully ask this Committee to support a change to the existing sub-section (c) on hydrogen. Today, the statute permits hydrogen derived from biomass fuels and methane gas to be eligible for RPS and Renewable Energy Credits. We ask you to consider that if hydrogen is also derived from water that it, too, be eligible for inclusion in NH's RPS. This is how sub-section (c) reads in the legislation and would read if enacted into law.

(c) Hydrogen derived from biomass fuels, water, or methane gas.

Thank you all for your time. I greatly appreciate your consideration for the opportunities each of you can help unleash with the passage of this bill, by just adding the word "water" to the State's RPS.

INFO PACKET: **SB 113**

NEW HAMPSHIRE SENATE
ENERGY AND NATURAL RESOURCE COMMITTEE

15 March 2021



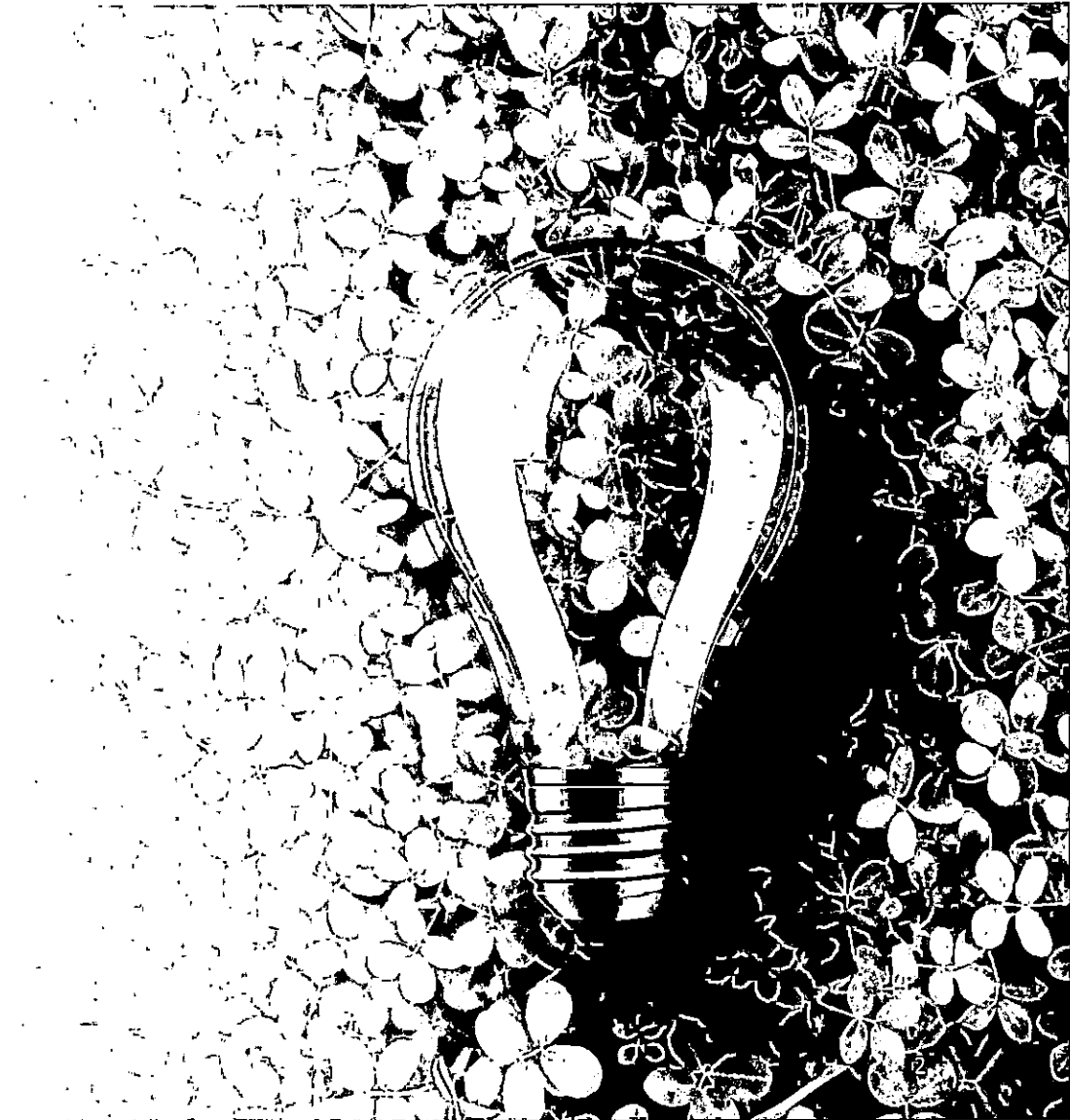
Q HYDROGEN COMMERCIALIZATION

Revolutionizing Hydrogen Energy Production

Achieving “net zero” not possible without some “clean molecule” solutions

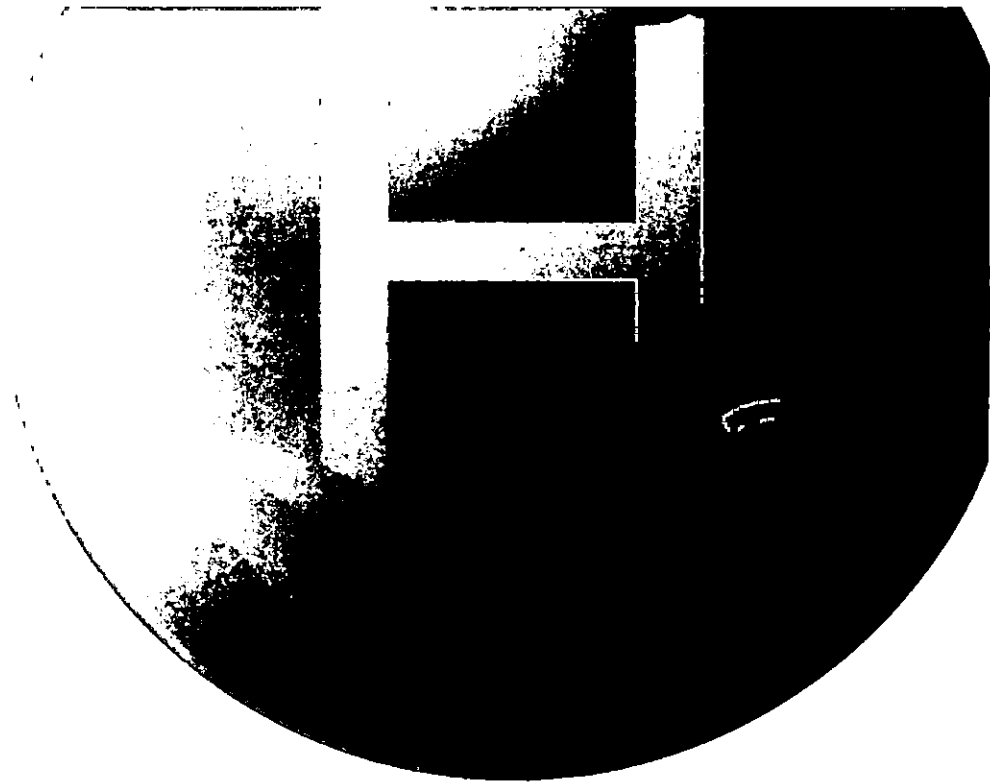
The majority of global energy consumed is still derived from fossil fuels: 81% in 2018 (IEA).

- Electrification can be a key alternative for many sectors, but it cannot currently solve for areas like processing and chemical industries
- These so-called “hard to abate” sectors, such as steel, aluminum and cement, need molecule-based energy sources.
- This is where clean hydrogen can potentially play a role in reducing or eliminating emissions; up to a third of global carbon emissions could be in scope depending on enabling policies (BNEF 2020).



Hydrogen is widely recognized as an essential component to address climate change

Not just an element; but also a future store of renewable energy, Hydrogen – the lightest, smallest element on the periodic table – can act as a clean burning, zero emission fuel for storing and releasing energy.



“Clean hydrogen has a major role to play in the path towards net zero carbon. It is gaining strong political and business momentum, emerging as a major component in governments' net zero plans. This is why we believe that the hydrogen value chain deserves serious focus.”

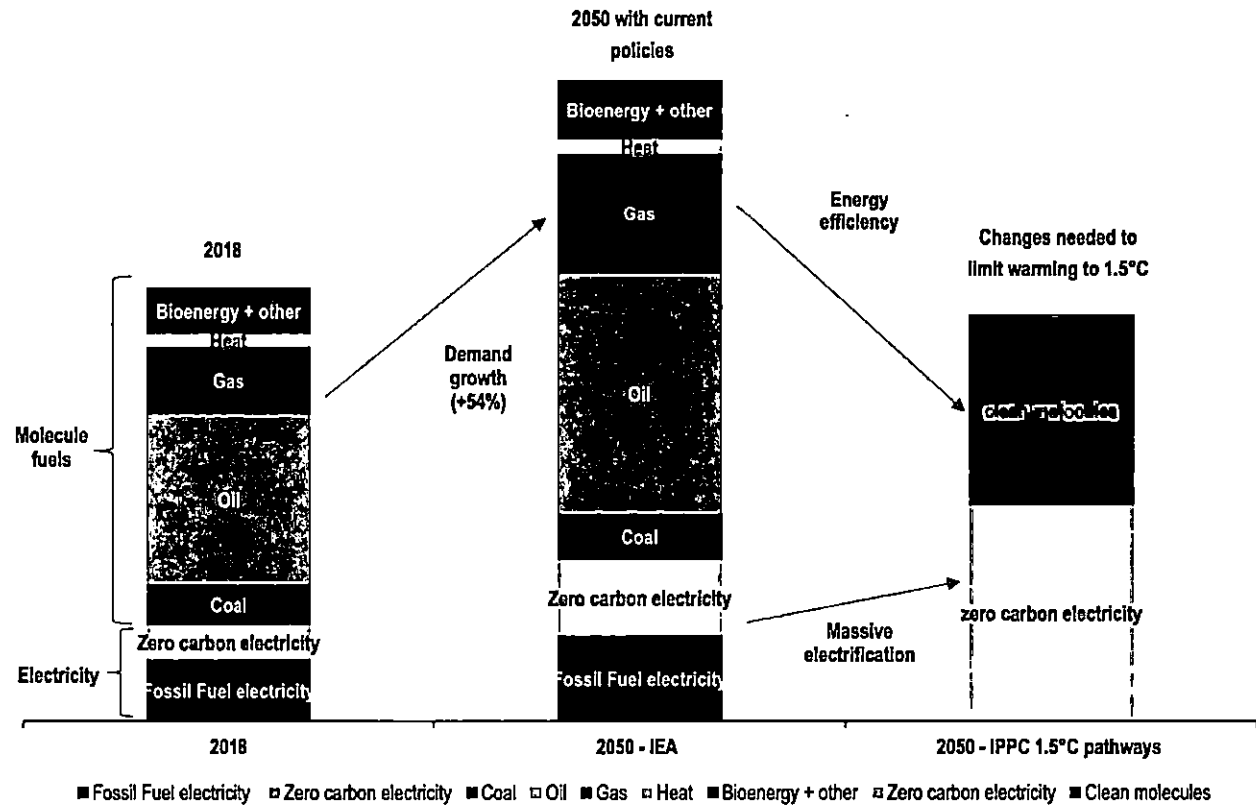
Goldman Sachs Equity Research, “Carbonomics, the Rise of Clean Hydrogen”, 2020

Hydrogen is estimated to generate 24% of our energy needs by 2050, vs. 4% right now

The market for clean hydrogen is estimated to become \$11 trillion

(sources: BNEF, IEA)

Chart 10: Global Energy Demand outlook to 2050: Clean Electricity vs. Clean Molecules Scenario



Source: Bloomberg New Energy Finance (BNEF), IEA, IPCC

Production costs are the major constraint on market growth

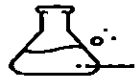
MARKETS AT CURRENT PRICING



AMMONIA



REFINING



CHEMICALS

MARKETS AT PROJECTED LOWER PRICE POINTS



TRANSPORTATION



ELECTRICITY



STEEL



MINING



INDUSTRIAL

- Hydrogen produced by fossil fuels is currently used for ammonia, refining, and chemical production

- At lower production costs, hydrogen can be used for transportation, electrical generation, steel production, mining, and myriad industrial uses

Revolutionizing Hydrogen Energy Production

Dramatically cleaner and cheaper than any alternative

- Q Hydrogen's clean power generation is unhindered by the same widespread limitations faced by current renewable sources.
- Its proprietary technology allows for hydrogen production at a lower cost and without the carbon impact of conventional methods that utilize natural gas and other fossil fuel sources.

Q Hydrogen has developed a carbon-free process

- ✓ Over Two Decades of Research and Development
- ✓ Methods are based on developing science; not improvement of any existing process
- ✓ Protected by patents and trade secrets



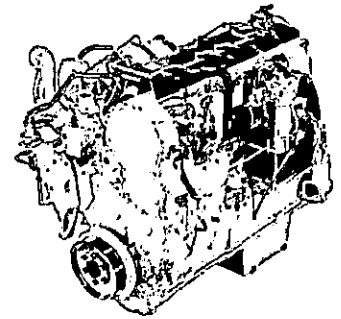
We produce hydrogen using water
Not natural gas or electrolysis

Clear Hydrogen is produced by extracting hydrogen from water, like green hydrogen, but rather than using electrolysis to “zap” the hydrogen away from the oxygen, a new technology does so with water that is subjected to external influences coupled with extremely rapid variations in pressure, temperature and motion.

- There is no heat, and more importantly, no carbon used or generated in the process.
- If independently powered by the energy it produces, the output generated by a Clear Hydrogen plant would be 100% carbon free as would the industrial processes powered by that energy. Using Clear Hydrogen, “green steel” could be achievable within this decade.

Commercialization

The technology's economic viability is well-suited for use in energy, electricity production, transportation and industry. The company aims to further develop and commercialize hydrogen as a low-cost fuel source that is readily available to the world.



Our system's economics are better because of breakthroughs in physics.

Q Hydrogen's carbon-free, low-cost fuel will be a leading competitor within the emergent clean hydrogen market.

- Energy density 4x diesel
- Easy to store and transport
- Can be used in hydrogen fuel cells
- Has been used directly as fuel in reciprocating engines

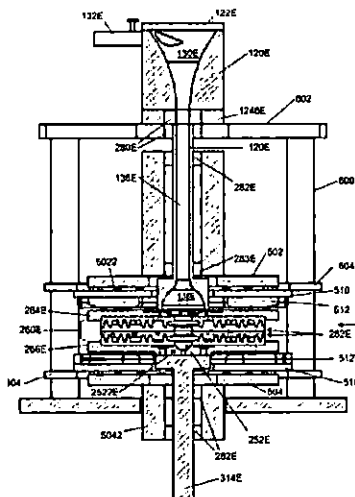


FIG. 14

Q Hydrogen is producing hydrogen today

Q Hydrogen's operational test facility in Park City, Utah has been operational since 2016. It can be configured to produce between 10,000 and 50,000 kgs of hydrogen per day.

- At 15,000 kgs of hydrogen per day, it provides sufficient fuel to generate about 12.5 Megawatts of electricity.
- Our hydrogen is analyzed in real time via dual on-line gas process mass spectrometers and is directly used as fuel for the facility's test engine.

Our newest commercial implementation in New Hampshire will be the world's first power plant fueled by clean, economical Q Hydrogen.

- We will utilize the Q Hydrogen Generator, which will produce sufficient low-cost hydrogen to fuel the facility's initial generating capacity of around seven megawatts.
- Someday, up to 100 megawatts may be generated at this facility on a total industrial footprint of approximately five acres.



Est. completion: Q2 2021

Senate Bill 113

- ✓ Q Hydrogen supports this bill because the change proposed in section 2 of the bill (*below*) is in line with the technology to be deployed at our facility in Groveton, NH.

Proposed language under

2 ELECTRIC RENEWABLE PORTFOLIO STANDARDS;
ELECTRIC RENEWABLE ENERGY CLASSES

Amend RSA 362-F:4, I (c) to read as follows:
(c) Hydrogen derived from biomass fuels, **water**, or methane gas.

The “Findings and Purpose” of Senate Bill 113 sets forth that renewable energy policies should be technology neutral, so that one resource is not arbitrarily favored over another.

- Consistent with that goal, SB 113 seeks to amend a section within NH’s “Electric Renewable Energy Classes.”
- Specifically, NH RSA 362-F:4 establishes the State’s Electric Renewable Energy Classes.
- RSA 362-F:4 outlines Class I. renewables, which includes the production of electricity or useful thermal energy from Hydrogen. Currently Hydrogen is recognized in law if it is derived from biomass fuels or methane gas.

Q HYDROGEN
COMMERCIALIZATION

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Park City, UT 84098
www.QHydrogen.com

Whitaker B. Irvin, Jr.

Chief Executive Officer

(240) 593-6968

wirvin2@quasarwave.com

Michael Zumwalt

Chief Financial Officer

(801) 550-5102

mzumwalt@quasarwave.com



Griffin Roberge

From: Matt Leahy <mleahy@forestsociety.org>
Sent: Monday, March 15, 2021 10:40 AM
To: Kevin Avard; Bob Giuda; James Gray; Rebecca Perkins Kwoka; David Watters; Griffin Roberge
Subject: SB 113
Attachments: SB 113 Forest Society support testimony 3-15-2021.pdf

Members of the Committee: Please find attached to this email testimony from the Forest Society in support of SB 113. Thank you.

Matt Leahy, Public Policy Manager
Society for the Protection of NH Forests
54 Portsmouth Street
Concord, NH 03301
mleahy@forestsociety.org
603-224-9945, ext. 355
603-731-8455



March 15, 2021

54 Portsmouth Street
Concord, NH 03301
Tel. 603.224.9945
Fax 603.228.0423
Info@forestsociety.org
www.forestsociety.org

The Honorable Kevin Avard, Chairman
Committee on Energy and Natural Resources
New Hampshire Senate
State House
Concord, NH 03301

Dear Mr. Chairman and Members of the Committee:

Thank you for this opportunity to register the Society for the Protection of NH Forest's support for Senate Bill 113, legislation to increase the alternative compliance payments for certain classes in the Renewable Portfolio Standard.

As you know, the Forest Society is a 120-year-old land trust whose mission is to protect the state's most important landscapes while promoting the wise use of its renewable natural resources. It is the second part of that mission statement which most directly connects us to New Hampshire's forest-based economy. We own about 57,000 acres of forestland on 190 reservations and actively manage a portion of these lands. In fact, each year we conduct an average of 8 to 12 timber harvesting operations. In 2020, we treated about 522 acres, harvested approximately 1.64 million board feet of saw logs and 12,342 tons of low grade wood.

Those statistics highlight our belief in the important role sustainable forest management plays in keeping our state's forests as forests. We see it as a conservation strategy – a family able to derive income from sustainable forest management of their land is more likely to permanently conserve it.

That model depends on a vibrant market for all the timber that is harvested here. Much of the standing timber in New Hampshire is low-grade wood. Specifically, according to the 2020 NH Forest Action Plan, between 2000 and 2017, at least 70-80% of the total volume of timber harvested in the state came from lower value products of pulpwood, firewood and biomass which has a limited market. With the decline in paper manufacturing in New England, energy markets – using wood biomass for electricity or heat – have become the primary end user for the volume of low-grade wood our forests currently produce.

This is why we support SB 113. Disruptions in the operations of the biomass power plants or in the use of thermal biomass will undermine the outlets which loggers, landowners, and wood processors rely on for their low-grade timber. Increasing the value of the alternative compliance payments, as proposed in the bill, will certainly benefit the economic viability of those markets.

Just as importantly, we believe state policy should encourage landowners to care for and maintain their forestlands. For the families and other organizations that own this resource, maintaining the markets for low-grade timber reinforces their ability to protect New Hampshire's iconic forest landscapes. There are many reasons for this beyond how important the forest products industry is to our state. Careful and sustainable timber harvesting can result in more diverse and therefore more resilient forests. It is also

often used as a method of meeting other goals for management including the creation of wildlife habitats, maintenance of plant biodiversity, and promotion of recreational opportunities.

SB 113 will be a helpful step towards ensuring our forests continue to play a central role in the overall quality of life which has made New Hampshire so unique. We would urge you to support this legislation. Thank you for considering this testimony.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Leahy', with a long horizontal flourish extending to the right.

Matt Leahy, Public Policy Manager
Society for the Protection of New Hampshire Forests

Griffin Roberge

From: Jasen Stock <jstock@nhtoa.org>
Sent: Tuesday, March 16, 2021 10:59 AM
To: Kevin Avard; Bob Giuda; James Gray; David Watters; Rebecca Perkins Kwoka
Cc: Griffin Roberge
Subject: Senate Bill 113

Chairman Avard and members of the Senate Energy and Natural Resources Committee,

I appreciate the opportunity to testify in support of Senate Bill 113 on Monday (3/15).

After the hearing, while you were in Executive Session, Senator Gray raised a great question asking what efforts are underway to look at alternative markets for low-grade timber. I want to take this opportunity to explain the work the New Hampshire Timberland Owners Association (NHTOA) is doing to help identify and attract new markets for low-grade timber to New Hampshire. It is important to note that the work underway could take three – five years before new market(s) are established and operating. The reason SB 113 is important is the need to retain our forest products industry infrastructure and supply chains in the interim, so we do not experience further deterioration of the industry.

Since 2017, there have been several efforts to engage economic development agencies, forestry, and forest industry professionals to help explore new opportunities for adding value and utilizing New Hampshire's low-grade wood resource. These efforts have been met with limited success. However, last summer the NHTOA, working with the North East *State* Foresters Association (NEFA), stepped up our efforts to explore and develop new markets for low-grade timber. NEFA is a regional forestry non-profit whose members include Patrick Hackley, NH's State Forester, his counterparts from Maine, New York, and Vermont, along with the USDA Forest Service, UNH Cooperative Extension, and the N.H. Division of Forest and Lands.

These states possess a similar forest resource, forest products infrastructure, and a need to expand markets for low-grade timber. Mirroring a similar effort started in Maine in 2017 (Forest Opportunity Roadmap for Maine, FOR/Maine), New Hampshire, New York, and Vermont organized the Forest Opportunity Roadmap for NH/NY/VT ("FOR-NH/NY/VT"). This project will attract new forest products markets to the region (especially markets for low-grade timber) while expanding current markets. FOR-NH/NY/VT will do this by:

1. Conducting a detailed assessment of the region's timber, labor, and infrastructure resources,
2. Assessing current and emerging forest products technologies well suited to the region, and
3. Attracting new private capital investments to expand existing forest products markets and create new ones.

FOR-NH/NY/VT is currently working to secure funding for this multi-year project. New Hampshire's Department of Business and Economic Development, along with our natural resource/forestry agencies, are committed to this effort and working with us to secure funds from state programs or state philanthropic organizations. The other states in the partnership are doing the same. In addition, FOR-NH/NY/VT is also seeking funds from the U.S. Department of Commerce Economic Development Agency's programs to help fund this work.

We are learning from FOR/Maine's experience. As mentioned above, FOR/Maine received federal funding beginning in 2017 and they began phase 3 – attracting new capital investments - when COVID-19 hit. Despite the COVID-19 setback FOR/Maine is proceeding. Learning from FOR/Maine's experience we know the FOR-NH/NY/VT project will take at least three to five years before a new market is attracted and operating. In the meantime, there is an urgent need to retain our forest products industry infrastructure and supply chains (land managers, loggers, truckers, sawmills, etc.). This is why Senate Bill 113 is important. Passage of Senate Bill 113 will provide stability to New Hampshire's forest products infrastructure giving the FOR-NH/NY/VT project time to yields results.

If you would like more information on the FOR-NH/NY/VT project, please contact me.

I hope this answers the Committee's question and is helpful in your deliberations.

Thank you,

Jasen

Jasen Stock
Executive Director
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C: 603-674-8148
F: 603-225-5898
www.nhtoa.org

Voting Sheets

Senate Energy & Natural Resources Committee

EXECUTIVE SESSION RECORD

2021-2022 Session

Bill # <i>SB 113</i>

Hearing Date: 03/15/2021

Executive Session Date: 03/22/2021

Motion of: OTA Vote: 5-0

Committee Member	Present	Made by	Second	Yes	No
Sen. Avard, Chair	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sen. Giuda, Vice Chair	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sen. Gray	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sen. Watters	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sen. Perkins Kwoka	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Motion of: Consent Vote: 5-0

Committee Member	Present	Made by	Second	Yes	No
Sen. Avard, Chair	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sen. Giuda, Vice Chair	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sen. Gray	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sen. Watters	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sen. Perkins Kwoka	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Motion of: _____ Vote: _____

Committee Member	Present	Made by	Second	Yes	No
Sen. Avard, Chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sen. Giuda, Vice Chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sen. Gray	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sen. Watters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sen. Perkins Kwoka	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Motion of: _____ Vote: _____

Committee Member	Present	Made by	Second	Yes	No
Sen. Avard, Chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sen. Giuda, Vice Chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sen. Gray	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sen. Watters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sen. Perkins Kwoka	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Reported out by: Watters

Notes: _____

Committee Report

STATE OF NEW HAMPSHIRE

SENATE

REPORT OF THE COMMITTEE
FOR THE CONSENT CALENDAR

Monday, March 22, 2021

THE COMMITTEE ON Energy and Natural Resources

to which was referred **SB 113**

AN ACT

relative to the alternative compliance payments for renewable energy obligations not met through the purchase of renewable energy credits.

Having considered the same, the committee recommends that the Bill

OUGHT TO PASS

BY A VOTE OF: 5-0

Senator David Watters
For the Committee

This bill creates consistency in the state's Renewable Portfolio Standard, or RPS, which helps benefit in-state renewable electric generators. The bill sets the Alternative Compliance Payment, or ACP, across all RPS classes at \$55. Over the past few years, NH has seen the closure or suspended operation of many of its biomass facilities. Biomass facilities have acted as major outlets for low-grade wood and their closure has adversely impacted NH's forest products industry. Increasing the ACPs will assist NH's renewable generators, stem the loss of economic activity within the forest products industry, and enable this industry to adapt and find other uses for low-grade wood. The bill also includes hydrogen derived from water within the RPS. This policy change will permit an innovative business to further develop a low-cost fuel resource in Groveton.

Griffin Roberge 271-3042

FOR THE CONSENT CALENDAR

ENERGY AND NATURAL RESOURCES

SB 113, relative to the alternative compliance payments for renewable energy obligations not met through the purchase of renewable energy credits.

Ought to Pass, Vote 5-0.

Senator David Watters for the committee.

This bill creates consistency in the state's Renewable Portfolio Standard, or RPS, which helps benefit in-state renewable electric generators. The bill sets the Alternative Compliance Payment, or ACP, across all RPS classes at \$55. Over the past few years, NH has seen the closure or suspended operation of many of its biomass facilities. Biomass facilities have acted as major outlets for low-grade wood and their closure has adversely impacted NH's forest products industry. Increasing the ACPs will assist NH's renewable generators, stem the loss of economic activity within the forest products industry, and enable this industry to adapt and find other uses for low-grade wood. The bill also includes hydrogen derived from water within the RPS. This policy change will permit an innovative business to further develop a low-cost fuel resource in Groveton.

Docket of SB113

Docket Abbreviations

Bill Title: relative to the alternative compliance payments for renewable energy obligations not met through the purchase of renewable energy credits.

Official Docket of SB113.:

Date	Body	Description
1/29/2021	S	Introduced 01/06/2021 and Referred to Energy and Natural Resources; SJ 3
3/9/2021	S	Remote Hearing: 03/15/2021, 01:45 pm; Links to join the hearing can be found in the Senate Calendar; SC 15
3/23/2021	S	Committee Report: Ought to Pass, 04/01/2021; Vote 5-0; CC; SC 17
4/1/2021	S	Ought to Pass: RC 23Y-1N, MA; OT3rdg; 04/01/2021; SJ 10
4/13/2021	H	Introduced (in recess of) 04/09/2021 and referred to Science, Technology and Energy HJ 7 P. 100
4/20/2021	H	Public Hearing: 05/03/2021 10:00 am Members of the public may attend using the following link: To join the webinar: https://www.zoom.us/j/93424176488 / Executive session on pending legislation may be held throughout the day (time permitting) from the time the committee is initially convened.
5/18/2021	H	Executive Session: 05/24/2021 10:00 am Members of the public may attend using the following link: To join the webinar: https://www.zoom.us/j/94155532481
5/25/2021	H	Retained in Committee
9/10/2021	H	Subcommittee Work Session: 09/29/2021 10:00 am LOB 302-304
10/26/2021	H	Executive Session: 10/26/2021 10:00 a.m. LOB302-304
11/16/2021	H	Committee Report: Refer for Interim Study SB113 11/15/2021 (Vote 19-2; CC) HC 48 P. 16
1/11/2022	H	Refer for Interim Study: MA VV 01/05/2022 HJ 1

NH House

NH Senate

Other Referrals

Senate Inventory Checklist for Archives

Bill Number: SB 113

Senate Committee: ENR

Please include all documents in the order listed below and indicate the documents which have been included with an "X" beside

Final docket found on Bill Status

Bill Hearing Documents: (Legislative Aides)

Bill version as it came to the committee

All Calendar Notices

Hearing Sign-up sheet(s)

Prepared testimony, presentations, & other submissions handed in at the public hearing

Hearing Report

N/A Revised/Amended Fiscal Notes provided by the Senate Clerk's Office

Committee Action Documents: (Legislative Aides)

All amendments considered in committee (including those not adopted):

___ - amendment # _____ ___ - amendment # _____

___ - amendment # _____ ___ - amendment # _____

Executive Session Sheet

Committee Report

Floor Action Documents: (Clerk's Office)

All floor amendments considered by the body during session (only if they are offered to the senate):

___ - amendment # _____ ___ - amendment # _____

___ - amendment # _____ ___ - amendment # _____

Post Floor Action: (if applicable) (Clerk's Office)

___ Committee of Conference Report (if signed off by all members. Include any new language proposed by the committee of conference):

___ Enrolled Bill Amendment(s)

___ Governor's Veto Message

All available versions of the bill: (Clerk's Office)

___ as amended by the senate ___ as amended by the house

___ final version

Completed Committee Report File Delivered to the Senate Clerk's Office By:

Committee Aide

Date

Senate Clerk's Office _____