LEGISLATIVE COMMITTEE MINUTES

SB71

Bill as Introduced

SB 71 - AS INTRODUCED

2021 SESSION

21-0610
08/05

SENATE BILL ***71***

AN ACT establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire.

SPONSORS: Sen. Sherman, Dist 24; Sen. Bradley, Dist 3; Sen. Reagan, Dist 17; Sen. Rosenwald, Dist 13; Sen. Soucy, Dist 18; Sen. Watters, Dist 4; Sen. Whitley, Dist 15; Sen. Perkins Kwoka, Dist 21; Sen. Cavanaugh, Dist 16; Rep. McGhee, Hills. 27; Rep. Oxenham, Sull. 1; Rep. Woods, Merr. 23; Rep. Knirk, Carr. 3

COMMITTEE: Energy and Natural Resources

ANALYSIS

This bill establishes a commission to develop science-based emissions reduction goals for the state of New Hampshire.

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Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

SB 71 - AS INTRODUCED

21-0610
08/05

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Twenty One

AN ACT establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire.

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

1 Findings. The general court finds that New Hampshire's public health, economy, natural resources and quality of life are threatened by increased air pollution and emissions impacting public health and climate change. The 2020 Ad Hoc Emissions Commission was convened in response to these concerns. The majority of that commission's members agreed, based on scientific evidence and health data presented, that New Hampshire should develop an emission reduction goal for 2050 of net zero emissions or a similar goal, provided that such goal or standard is clearly defined and allows for the development of programs that would effectively and equitably accomplish said goal in order to mitigate the impacts of climate change and protect public health, including the health of New Hampshire's most vulnerable residents. Other members of the commission believed that further analysis is warranted regarding the potential costs and benefits of implementation of such a goal. The general court finds therefore that while more work is needed on the strategy and process of implementation of any emission reduction goal, New Hampshire should seek these solutions that reduce emissions, protect public health, stimulate economic growth, protect the environment and communities, and retain New Hampshire's competitive advantage.

2 New Subdivision; Science Based Emissions Standards Study Commission. Amend RSA 125-C by inserting after section 21 the following new subdivision:

Science Based Emissions Standards Study Commission

125-C:22 Commission Established.

I. There is established a commission to develop science-based emissions reduction goals for the state of New Hampshire.

II. The members of the commission shall be as follows:

(a) Two members of the senate, one from the majority appointed by the senate president and one from the minority nominated by the senate minority leader and appointed by the senate president. One member shall be from the energy and natural resources committee, and one shall be from the health and human services committee.

(b) Three members of the house of representatives, 2 from the majority appointed by the speaker of the house of representatives and one from the minority nominated by the minority leader of the house of representatives and appointed by the speaker of the house of representatives. Of the 3, one member shall be from the science, technology and energy committee, and one shall be from the health and human services committee.

(c) The commissioner of the department of environmental services, or designee.

(d) The director of the office of strategic initiatives, or designee.

(e) The director of the division of public health services, department of health and human services, or designee.

(f) The commissioner of the department of transportation, or designee.

(g) The commissioner of the department of business and economic affairs, or designee.

(h) The chair of the public utilities commission, or designee.

(i) One member representing the New Hampshire Medical Society, appointed by that society.

(j) One member representing the New Hampshire Public Health Association, appointed by that association.

(k) One member representing the state's regulated utilities, appointed by the president of the senate.

(l) One member representing from the New Hampshire environmental community, appointed by the president of the senate.

(m) One member representing Clean Energy NH, appointed by that organization.

(n) One member representing the New Hampshire Municipal Association, appointed by that association.

(o) One member representing the New Hampshire Hospital Association, appointed by that association.

(p) One member representing the NAACP in New Hampshire, appointed by that organization.

(q) One member representing the New Hampshire Auto Dealers, appointed by that organization.

(r) One member representing the New Hampshire Chamber of Commerce, appointed by that organization.

(s) One member representing Stay Work Play New Hampshire, appointed by that organization.

(t) One member representing the university of New Hampshire, appointed by the chancellor.

III. Legislative members of the commission shall receive mileage at the legislative rate when attending to the duties of the commission.

IV. The commission may solicit input and receive public testimony from any person or entity the commission deems relevant to its study.

V. The committee shall consider and make specific recommendations on the following items:

(a) A science-based emissions reduction goal for the state to achieve by 2050.

(b) Interim goals for emission reductions in 2030 and 2040, necessary to meet the 2050 goal.

(c) The processes and timelines for developing implementation plans to achieve the science-based emissions reduction levels.

(d) Identify the state agencies responsible, including a lead agency, for developing, implementing and reporting on the emission reduction levels identified, as well as public health outcomes.

VI. For purposes of this study commission:

(a) "Public health" means the health and well-being of people and their communities to be achieved by preventing disease and injury and improving quality of life. Public health includes the protection of people and communities from diseases or injury caused directly or indirectly by air pollution from emissions including, but not limited to, extreme weather related illness such as dehydration, heat stroke, and from increases in diseases of the heart and lung, allergy-related illness, cases of vector-borne disease such as Lyme disease, Eastern Equine Encephalitis, and West Nile virus, and water borne illness.

(b) "Emissions" means any chemical or physical substance that is emitted into the air and that may reasonably be anticipated to cause or contribute to climate change, including its associated public health impacts. This includes, but is not limited to, carbon dioxide, mercury, methane, nitrous oxide, hydrofluorocarbons, hydrocarbons, perfluorocarbons, sulfur hexafluoride and particulates.

VII. The members of the study commission shall elect a chairperson from among the members. The first meeting of the commission shall be called by the first-named senate member. The first meeting of the commission shall be held within 30 days of the effective date of this section. Twelve members of the commission shall constitute a quorum.

VIII. The commission shall report its findings and any recommendations for proposed legislation to the president of the senate, the speaker of the house of representatives, the senate clerk, the house clerk, the governor, and the state library on or before December 1, 2021. The report shall describe the activities and findings of the commission and recommendations for proposed legislation and rulemaking by relevant agencies.

3 Repeal. RSA 125-C:22, relative to the commission to study science based emissions standards, is repealed.

4 Effective Date.

I. Section 3 of this act shall take effect December 1, 2021.

II. The remainder of this act shall take effect upon its passage.

Amendments

Sen. Avard, Dist 12
January 26, 2021
2021-0103s
08/04

Amendment to SB 71

Amend RSA 125-C:22, II as inserted by section 2 of the bill by inserting after subparagraph (t) the following new subparagraphs:

(u) One member representing the New Hampshire Motor Transport Association, appointed by that association.

(v) One member representing the Energy Marketers Association of New Hampshire, appointed by that association.

Sen. Watters, Dist 4
February 8, 2021
2021-0245s
08/05

Amendment to SB 71

Amend RSA 125-C:22 as inserted by section 2 of the bill by replacing it with the following:

125-C:22 Commission Established.

I. There is established a commission to develop science-based emissions reduction goals for the state of New Hampshire.

II. The members of the commission shall be as follows:

(a) Two members of the senate, one from the majority appointed by the senate president and one from the minority nominated by the senate minority leader and appointed by the senate president. One member shall be from the energy and natural resources committee, and one shall be from the health and human services committee.

(b) Two members of the house of representatives, one from the majority appointed by the speaker of the house of representatives and one from the minority nominated by the minority leader of the house of representatives and appointed by the speaker of the house of representatives. Of the 2, one member shall be from the science, technology and energy committee, and one shall be from the health and human services committee.

(c) The commissioner of the department of environmental services, or designee.

(d) The director of the office of strategic initiatives, or designee.

(e) The director of the division of public health services, department of health and human services, or designee.

(f) The commissioner of the department of transportation, or designee.

(g) The commissioner of the department of business and economic affairs, or designee.

(h) The chair of the public utilities commission, or designee.

(i) One member representing the New Hampshire Medical Society, appointed by that society.

(j) One member representing the New Hampshire Public Health Association, appointed by that association.

(k) One member representing the state's regulated utilities, appointed by the president of the senate.

(l) One member representing from the New Hampshire environmental community, appointed by the president of the senate.

(m) One member representing Clean Energy NH, appointed by that organization.

(n) One member representing the New Hampshire Municipal Association, appointed by that association.

(o) One member representing the New Hampshire Hospital Association, appointed by that association.

(p) One member representing the NAACP in New Hampshire, appointed by that organization.

(q) One member representing the New Hampshire Auto Dealers, appointed by that organization.

(r) One member representing a local chamber of commerce, appointed by the governor.

(s) One member representing Stay Work Play New Hampshire, appointed by that organization.

(t) One member representing the university of New Hampshire, appointed by the university President.

(u) One member representing the New Hampshire Motor Transport Association, appointed by that organization.

(v) One member representing the New Hampshire Business and Industry Association, appointed by that organization.

(w) One member representing the Energy Marketers Association of New Hampshire, appointed by that association.

III. Legislative members of the commission shall receive mileage at the legislative rate when attending to the duties of the commission.

IV. The commission may solicit input and receive public testimony from any person or entity the commission deems relevant to its study.

V. The commission shall receive testimony to better understand the costs and benefits associated with science-based emissions reduction in New Hampshire and in neighboring states.

VI. The committee shall consider and make specific recommendations on the following items:

(a) A science-based emissions reduction goal for the state to achieve by 2050.

(b) Interim goals for emission reductions in 2030 and 2040, necessary to meet the 2050 goal.

(c) The processes and timelines for developing implementation plans to achieve the science-based emissions reduction levels.

(d) Identify the state agencies responsible, including a lead agency, for transitioning New Hampshire towards the emissions reductions goals recommended by the commission, including developing, implementing and reporting on the emission reduction levels identified, as well as public health outcomes.

VII. For purposes of this study commission:

(a) "Public health" means the health and well-being of people and their communities to be achieved by preventing disease and injury and improving quality of life. Public health includes the protection of people and communities from diseases or injury caused directly or indirectly by air pollution from emissions including, but not limited to, extreme weather related illness such as dehydration, heat stroke, and from increases in diseases of the heart and lung, allergy-related illness, cases of vector-borne disease such as Lyme disease, Eastern Equine Encephalitis, and West Nile virus, and water borne illness.

(b) "Emissions" means any chemical or physical substance that is emitted into the air and that may reasonably be anticipated to cause or contribute to climate change, including its associated public health impacts. This includes, but is not limited to, carbon dioxide, mercury, methane, nitrous oxide, hydrofluorocarbons, hydrocarbons, perfluorocarbons, sulfur hexafluoride and particulates.

VIII. The members of the study commission shall elect a chairperson from among the members. The first meeting of the commission shall be called by the first-named senate member. The first meeting of the commission shall be held within 30 days of the effective date of this section. Twelve members of the commission shall constitute a quorum.

IX. The commission shall report its findings and any recommendations for proposed legislation to the president of the senate, the speaker of the house of representatives, the senate clerk, the house clerk, the governor, and the state library on or before December 1, 2021. The report shall describe the activities and findings of the commission and recommendations for proposed legislation and rulemaking by relevant agencies.

Sen. Giuda, Dist 2
February 10, 2021
2021-0321s
08/05

Amendment to SB 71

Amend RSA 125-C:22, II as inserted by section 2 of the bill by inserting after subparagraph (t) the following new subparagraphs:

(u) One member of the New Hampshire Timberland Owners Association, appointed by the association.

(v) One member of the New Hampshire Farm Bureau, appointed by the bureau.

(w) One member from the New Hampshire Home Heating Association, appointed by the association.

(x) One member from the Consumer Energy Alliance, appointed by the executive director of the alliance.

(y) One member from the business aviation industry, appointed by the governor.

(z) One member from the New Hampshire Snowmobile Association, appointed by the association.

(aa) One member from the New Hampshire Off-Highway Vehicle Association, appointed by the association.

(bb) One member of the New Hampshire Marine Trades Association, appointed by the association.

Amend RSA 125-C:22 as inserted by section 2 of the bill by inserting after paragraph VIII the following new paragraphs:

IX. All recommendations for changes to emissions standards shall include a comprehensive economic analysis of their impact on affected business sectors of the New Hampshire economy, and an estimate of the cost of such proposed changes to the average New Hampshire household.

X. The study shall provide data:

(a) Quantifying separately the emissions generated from sources outside the state and the emissions generated within the state; and

(b) Measuring the relative impact of any new New Hampshire standards and/or goals on the combined total of New Hampshire emissions generated within and outside the state.

Energy and Natural Resources
March 3, 2021
2021-0605s
08/05

Amendment to SB 71

Amend RSA 125-C:22 as inserted by section 2 of the bill by replacing it with the following:

125-C:22 Commission Established.

I. There is established a commission to develop science-based emissions reduction goals for the state of New Hampshire.

II. The members of the commission shall be as follows:

(a) Two members of the senate, one from the majority appointed by the senate president and one from the minority nominated by the senate minority leader and appointed by the senate president. One member shall be from the energy and natural resources committee, and one shall be from the health and human services committee.

(b) Two members of the house of representatives, one from the majority appointed by the speaker of the house of representatives and one from the minority nominated by the minority leader of the house of representatives and appointed by the speaker of the house of representatives. Of the 2, one member shall be from the science, technology and energy committee, and one shall be from the health and human services committee.

(c) The commissioner of the department of environmental services, or designee.

(d) The director of the office of strategic initiatives, or designee.

(e) The director of the division of public health services, department of health and human services, or designee.

(f) The commissioner of the department of transportation, or designee.

(g) The commissioner of the department of business and economic affairs, or designee.

(h) The chair of the public utilities commission, or designee.

(i) One member representing the New Hampshire Medical Society, appointed by that society.

(j) One member representing the New Hampshire Public Health Association, appointed by that association.

(k) One member representing the state's regulated utilities, appointed by the president of the senate.

(l) One member representing from the New Hampshire environmental community, appointed by the president of the senate.

(m) One member representing Clean Energy NH, appointed by that organization.

(n) One member representing the New Hampshire Municipal Association, appointed by that association.

(o) One member representing the New Hampshire Hospital Association, appointed by that association.

(p) One member representing the NAACP in New Hampshire, appointed by that organization.

(q) One member representing the New Hampshire Auto Dealers, appointed by that organization.

(r) One member representing a local chamber of commerce, appointed by the governor.

(s) One member representing Stay Work Play New Hampshire, appointed by that organization.

(t) One member representing the university of New Hampshire, appointed by the university President.

(u) One member representing the New Hampshire Motor Transport Association, appointed by that organization.

(v) One member representing the New Hampshire Business and Industry Association, appointed by that organization.

(w) One member representing the Energy Marketers Association of New Hampshire, appointed by that association.

(x) One member of the New Hampshire Timberland Owners Association, appointed by the association.

(y) One member of the New Hampshire Farm Bureau, appointed by the bureau.

(z) One member from the New Hampshire Home Heating Association, appointed by the association.

(aa) One member from the Consumer Energy Alliance, appointed by the executive director of the alliance.

(bb) One member from the business aviation industry, appointed by the governor.

(cc) One member from the New Hampshire Snowmobile Association, appointed by the association.

(dd) One member from the New Hampshire Off-Highway Vehicle Association, appointed by the association.

(ee) One member of the New Hampshire Marine Trades Association, appointed by the association.

III. Legislative members of the commission shall receive mileage at the legislative rate when attending to the duties of the commission.

IV. The commission may solicit input and receive public testimony from any person or entity the commission deems relevant to its study.

V. The commission shall consider and make specific recommendations on the following items:

(a) A science-based emissions reduction goal for the state to achieve by 2050.

(b) Interim goals for emission reductions in 2030 and 2040, necessary to meet the 2050 goal.

(c) The processes and timelines for developing implementation plans to achieve the science-based emissions reduction levels.

(d) Identify the state agencies responsible, including a lead agency, for transitioning New Hampshire towards the emissions reductions goals recommended by the commission, including developing, implementing and reporting on the emission reduction levels identified, as well as public health outcomes.

VI. For purposes of this study commission:

(a) "Public health" means the health and well-being of people and their communities to be achieved by preventing disease and injury and improving quality of life. Public health includes the protection of people and communities from diseases or injury caused directly or indirectly by air pollution from emissions including, but not limited to, extreme weather related illness such as dehydration, heat stroke, and from increases in diseases of the heart and lung, allergy-related illness, cases of vector-borne disease such as Lyme disease, Eastern Equine Encephalitis, and West Nile virus, and water borne illness.

(b) "Emissions" means any chemical or physical substance that is emitted into the air and that may reasonably be anticipated to cause or contribute to climate change, including its associated public health impacts. This includes, but is not limited to, carbon dioxide, mercury, methane, nitrous oxide, hydrofluorocarbons, hydrocarbons, perfluorocarbons, sulfur hexafluoride and particulates.

VII. The members of the study commission shall elect a chairperson from among the members. The first meeting of the commission shall be called by the first-named senate member. The first meeting of the commission shall be held within 30 days of the effective date of this section. Twelve members of the commission shall constitute a quorum.

VIII. The commission shall report its findings and any recommendations for proposed legislation to the president of the senate, the speaker of the house of representatives, the senate clerk, the house clerk, the governor, and the state library on or before December 1, 2021. The report shall describe the activities and findings of the commission and recommendations for proposed legislation and rulemaking by relevant agencies.

IX. All recommendations for changes to emissions standards shall include a comprehensive economic analysis of their impact on affected business sectors of the New Hampshire economy, and an estimate of the cost and benefit of such proposed changes to the average New Hampshire household.

X. The study shall provide data:

(a) Quantifying separately the emissions generated from sources outside the state and the emissions generated within the state; and

(b) Measuring the relative impact of any new New Hampshire standards and/or goals on the combined total of New Hampshire emissions generated within and outside the state.

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: January 20, 2021

HEARINGS

Tuesday	01/26/2021
(Day)	(Date)

Energy and Natural Resources	REMOTE 000	1:00 p.m.
(Name of Committee)	(Place)	(Time)

1:00 p.m.	**SB 78-FN**	relative to continually appropriating the renewable energy fund to the public utilities commission.
1:15 p.m.	**SB 71**	establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire.
1:45 p.m.	**SB 51**	relative to the sale of lobster meat.

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/94035190849
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: +19292056099,,94035190849# or +13017158592,,94035190849#
4. Webinar ID: 940 3519 0849
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 78-FN

Sen. Bradley

SB 71

Sen. Sherman	Sen. Bradley	Sen. Reagan	Sen. Rosenwald
Sen. Soucy	Sen. Watters	Sen. Whitley	Sen. Perkins Kwoka
Sen. Cavanaugh	Rep. McGhee	Rep. Oxenham	Rep. Woods
Rep. Knirk			

SB 51

Sen. Ricciardi Rep. Lang

Griffin Roberge 271-3042

Kevin A. Avard
Chairman

Senate Energy and Natural Resources Committee

Griffin Roberge 271-3042

SB 71, establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire.

Hearing Date: January 26, 2021.

Time Opened: 1:25 p.m. **Time Closed:** 2:17 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 establishes a commission to develop science-based emissions reduction goals for the state of New Hampshire.

Sponsors:

Sen. Sherman	Sen. Bradley	Sen. Reagan
Sen. Rosenwald	Sen. Soucy	Sen. Watters
Sen. Whitley	Sen. Perkins Kwoka	Sen. Cavanaugh
Rep. McGhee	Rep. Oxenham	Rep. Woods
Rep. Knirk		

Who supports the bill: Senator Tom Sherman, NH Senate District 24; Senator John Reagan, NH Senate District 17, Senator David Watters, NH Senate District 4; Senator Jeb Bradley, NH Senate District 3; Senator Cindy Rosenwald, NH Senate District 13; Senator Rebecca Perkins Kwoka, NH Senate District 21; Representative Janice Schmidt, Hillsborough - District 28; Representative Lee Oxenham, Sullivan - District 1; Sheila Vargas, The Nature Conservancy - NH; Dan Weeks, ReVision Energy; Kat Bourque, Unitil; Donna Gamache, Eversource; Howell Montgomery, Liberty; Mark Dean, NH Electric Cooperative; Tom Irwin, Conservation Law Foundation; Paula Minnehan, New Hampshire Hospital Association; Rob Werner, League of Conservation Voters; Michael Padmore, NH Medical Society; Madeleine Mineau, Clean Energy NH; Anne Huberman, Peterborough, NH; Josie Pinto, New Hampshire Youth Movement; Nicole Fordey; Erin Talcott; Kate Coon; Joel Huberman; Beatrice Burack; Thomas Burack; Emilie Burack; Larsen Burack; Frankie Getman; Bradley St. Laurent; Erin McCann; Caroline Luff; Tenley Nelson; Siona Jain; Emma Liu; Alia Bonanno; Warren Biggins; Bhargavi Chekuri; Alexander Brown; Amelie Bunnell; Gary Woods; Evan Oxenham; Mary Boyle; Jennifer Lenz; Susan Liebowitz; Ophelia Bentley; Tanya Das; Andrew Provencher; Joan Ascheim; Tom DeRosa; Jason Weisbrot; Joanna Sharf.

Who opposes the bill: None.

Who is neutral on the bill: David Creer, Business and Industry Association; Robert Sculley, New Hampshire Motor Transport Association.

Summary of testimony presented in support:

Senator Tom Sherman
NH Senate District 24

- SB 71 is a reintroduction of SB 590 (2020). SB 590 was tabled in the Senate due to the suspension of legislative activity due to the COVID-19 pandemic.
- There is a great national and international concern about carbon emissions and air pollution. What makes the proposed commission under SB 71 different is that the commission will review emissions from a public health perspective rather than a climate change perspective. There are various public health impacts from air pollution and carbon emissions such as asthma, COPD, and heart disease.
- SB 590 was the result of many organizations - health care, environmental, industry - coming together. While the bill was tabled and the commission was never formally created through law, the New Hampshire Ad Hoc Emissions Commission was formed and met over the summer of 2020. The Ad Hoc Emissions Commission's conclusion was that more work needed to be done through a statutory commission, resulting in SB 71.
- Senator Watters asked if it would be fair to say that the Ad Hoc Emissions Commission felt that an actual statutory commission would help create a New Hampshire-centric approach to addressing carbon emissions.
    - Senator Sherman agreed with Senator Watters. The Ad Hoc Emissions Commission agreed that the public health impact from carbon emissions was critical. SB 71 would form a commission to not only develop emission reduction goals, but how to achieve those goals.
- Senator Watters said NH is seeing an impact on public health in certain parts of the state due to respiratory illness. These illnesses are more frequent and lead to higher health care costs. He asked if Senator Sherman could comment on these increasing health care costs.
    - Senator Sherman said the total cost of cigarette smoking is roughly $1 billion to NH. That's not including the emissions people breathe in from transportation emissions or emissions that flow into NH from other states. Additionally, there are increased health care costs for newborns as pregnant mothers inhale these emissions that can impact the fetus. NH has an opportunity to be strategic and think long-term about creating emission reduction goals and develop a plan to achieve those goals.
- Senator Giuda said there are some constituencies that should be added to the proposed commission's membership - farmers, loggers, outdoor recreational interests - that impact emissions, but also have a beneficial impact on NH's economy. He did not see any requirement for an economic analysis, or an economist in the commission's membership. He asked if Senator Sherman would be open to an amendment.
    - Senator Sherman said he would be open to changes. The proposed commission should be inclusive. Having a degree of economic analysis would be helpful. Some of the industries Senator Giuda mentioned could be represented by one individual rather than having one representative for each industry. Having so many members could make the proposed commission unwieldy.
- Senator Watters said Senator Giuda's concern about an economic analysis was raised during the Ad Hoc Emissions Commission meetings. He referenced page 1, lines 10-11 that mentions the need to analyze costs and benefits. He asked Senator Sherman if that language was inserted to address the point raised by Senator Giuda.
    - Senator Sherman said Senator Watters was correct. Page 1, lines 10-11 are reflective of the concerns raised by the utilities and the business community during the Ad Hoc Emissions Commission meetings. Senator Sherman is open to any suggestions from Senator Giuda, including about where an economist may fit into the commission's membership.

Representative Kat McGhee
Hillsborough - District 27

- Served as a House member on the Ad Hoc Emissions Commission.
- NH should not delay in establishing emission reduction targets for NH. It would be worthwhile to have a baseline target for NH to operate from. She noted that the NH Department of Environmental Services provided data to the Ad Hoc Emissions Commission about emissions reductions in NH, but that those reductions would flat line in 2021.
- Senator Giuda asked if the proposed commission would study the impact of what NH could do to reduce its emissions relative to other regions like Canada, China, and neighboring New England states whose emissions migrate to NH. NH should not impose burdensome restrictions on itself if NH receives a lot of emissions from other regions.
    - Representative McGhee said the proposed commission should review emissions data from other regions. NH does not have the jurisdiction to lower emissions in other states or countries, but many

countries have plans to lower their emissions. The proposed commission needs to understand what is in NH's control to lower emissions and how NH can go about addressing those emissions.

Sheila Vargas - provided written testimony
Government and Community Relations Manager, The Nature Conservancy - NH

- During the Ad Hoc Emissions Commission's proceedings, the Nature Conservancy found the science-based public health and environmental evidence presented at the commission meetings to be clear and consistent in finding that net zero carbon emissions by 2050 is a necessary and achievable goal for NH. Such a goal will improve the health and wellness of all NH citizens, especially those disproportionately impacted by air pollutants and the impacts of climate change.
- While understanding and supportive of the efforts to file SB 71, the Nature Conservancy would have preferred to see legislation that would have moved NH one step closer to joining other New England states in adopting and achieving a comprehensive science-based emission reduction goal.
- Senator Avard asked what the definition of a "net zero goal" is.
    - Ms. Vargas said she could not offer a definitive answer. It was one that the Ad Hoc Emissions Commission worked with while it met. She deferred the question to Ms. Mineau.

Anne Huberman
Peterborough, NH

- The Peterborough Energy Action is working to transition the town to 100% clean, renewable energy by 2050.
- Passing SB 71 and allowing the creation of the proposed commission will help provide information to the town as it transitions to a clean energy future.

Beatrice Burack
Hopkinton, NH

- As a high schooler, she has seen weather become more severe and destructive. Action needs to be taken now to lessen the impacts on our health and economy.
- NH should act on any findings crafted by the proposed commission under SB 71. NH should not fall behind other New England states in combating climate change.

Dr. Bhargavi Chekuri - provided written testimony

- Climate change is impacting the public health already. Detailed an individual who she saw in a health clinic who was impacted by the summer 2020 drought, which dried out his dry well. This exacerbated the patient's health conditions.
- Climate change is a public health emergency. Current national air quality standards are associated with increased mortality and decreased life expectancy.

Madeleine Mineau - provided written testimony
Executive Director, Clean Energy NH

- NH is the only New England state without clear emission reduction goals in statute. The proposed commission can make significant findings and find solutions to lowering emissions.
- In response to Senator Avard's question to Ms. Vargas, a net zero goal means where the emissions produced is equal to the emissions sequestered. For example, emissions could be sequestered through the growth of forests in NH or some technological advancements in carbon capture technology.
- Senator Avard asked how the state would measure the amount of emissions sequestered.
    - Ms. Mineau said it would depend if carbon was captured through natural or technological means. NH would likely look at an ecosystem balance and the biological processes in a forest. Scientists could create carbon budgets for an ecosystem and calculate carbon inflows and outflows.

Tom Irwin - provided written testimony
Vice President, Conservation Law Foundation - New Hampshire

- The Ad Hoc Emissions Commission received compelling evidence about the public health impacts of climate change. The commission also heard compelling testimony about the scientific consensus that the climate crisis requires action to reduce greenhouse gas emissions to a level of net-zero by the year 2050.
- While supportive if SB 71, NH needs to respond to the problem of climate change and its significant threats with the urgency it demands. NH should adopt the target of net-zero emissions by 2050, with interim milestone targets in 2030 and 2040 to put NH on the path to that 2050 target, and develop implementation plans to achieve them.

Michael Padmore - provided written testimony
Director of Advocacy, NH Medical Society

- Reiterated testimony made by Dr. Chekuri.

Summary of testimony presented in opposition: None.

Neutral Information Presented:

David Creer - provided written testimony
Director of Public Policy, Business and Industry Association (BIA)

- The BIA served on the Ad Hoc Emissions Commission. The BIA is neutral on SB 71, but would offer the following recommendations:
    - On page 2, lines 25-26, SB 71 has a member from the New Hampshire Chamber of Commerce. The BIA assumed that meant to reference the BIA. The bill may need to be amended to reflect the BIA's official name.
    - The Ad Hoc Emissions Commission heard about the health impacts and severity of the impacts of climate change, but the commission did not discuss the costs associated with emission reduction goals. Those costs would likely be borne by ratepayers, including residential customers, automobile, truck and fleet owners, commercial property owners, and manufacturers. SB 71 should require the commission to conduct a thorough cost-benefit analysis as a charge of the commission for any state strategy to address climate change to ensure reasonable solutions are achieved without damaging the state's economy.
- Senator Watters asked how the commission under SB 71 would complete a cost-benefit analysis. He wanted to know what the BIA intended the commission to do.
    - Mr. Creer said completing a cost-benefit analysis would not be easy, given the complexity of climate change and all its implications. An analysis would take serious work, but one of the reasons commissions are created is to thoroughly study an issue. While the analysis would review costs, it would also review the benefits of emission reduction goals, such as in public health. An analysis could help develop good public policy going forward.
- Senator Watters said there are financial calculations on the cost of human life. He asked if the BIA was aware of any actual calculations on what wages would be lost by whom and how to quantify it.
    - Mr. Creer said he could try and find information on lost wages. This discussion could take place in the commission's analysis to review lost wages and any impact on unemployment.
- Senator Watters said that if the cost-benefit analysis was included in the proposed commission's duties, he would appreciate the BIA offering some verifiable and scientific ways to measure the cost of any policy proposed by the commission.
    - Mr. Creer said the BIA is willing to help do that, but the commission could review those costs. The Ad Hoc Emissions Commission very much explored the benefits of setting emission reduction goals, but at no point did it discuss the costs of implementing such a goal. The commission may want to invite an economist to testify on the costs of a proposed policy.
- Senator Watters noted that the proposed commission does not have a budget appropriation like the Commission to Study School Funding. Completing a cost-benefit analysis will require commission members to come in with experts like scientists and economists to have their information weighed by the commission.
- Senator Giuda said he saw the commission had a twofold project - the economic analysis should be done as part of establishing the framework for the policy changes recommended by the commission, and to provide specific analysis of each policy change as they are considered.

Bob Sculley
President, NH Motor Transport Association

- The NH Motor Transport Association and the Energy Marketers Association of New Hampshire would like to be added to the commission's membership. Trucking represents roughly 90% of all goods delivered within NH, while heating oil and propane accounts for 60% of how residents and businesses heat their properties. There may be significant impacts to those two industries depending on the commission's findings.

Speakers

Name	Title	Representing	Position	Testifying
Jain Siona	A Member of the Public	Myself	Support	Yes
Mineau Madeleine	A Lobbyist	Clean Energy NH	Support	Yes
Chekuri Bhargavi	A Member of the Public	Myself	Support	Yes
Padmore Michael	A Lobbyist	NH Medical Society	Support	Yes
Weeks Dan	A Member of the Public	ReVision Energy	Support	Yes
Creer David	A Lobbyist	BIA	Neutral	Yes
Kelly Chris	A Member of the Public	The Greater Manchester NAACP	Support	Yes
McGhee Kat	An Elected Official	Hillsborough 27	Support	Yes
Sculley Robert	A Lobbyist	Myself	Neutral	Yes
Vargas Sheila	A Lobbyist	The Nature Conservancy	Support	Yes
Sherman Senator Tom	An Elected Official	SD24	Support	Yes
Burack Beatrice	A Member of the Public	Myself	Support	Yes
Huberman Anne	A Member of the Public	Myself	Support	Yes
Irwin Tom	A Lobbyist	Conservation Law Foundation	Support	Yes
Burack Larsen	A Member of the Public	Myself	Support	No
Minnehan Paula	A Lobbyist	New Hampshire Hospital Association	Support	No
Huberman Joel	A Member of the Public	Myself	Support	No
Getman Frankie	A Member of the Public	Myself	Support	No
St. Laurent Bradley	A Member of the Public	Myself	Support	No
Liu Emma	A Member of the Public	Myself	Support	No
Bonanno Alia	A Member of the Public	Myself	Support	No
McCann Erin	A Member of the Public	Myself	Support	No
Nelson Tenley	A Member of the Public	Myself	Support	No
Burack Thomas	A Member of the Public	Myself	Support	No
Biggins Warren	A Member of the Public	Myself	Support	No
luff caroline	A Member of the Public	Myself	Support	No
Talcott Erin	A Member of the Public	Myself	Support	No
Coon Kate	A Member of the Public	Myself	Support	No
Rosenwald Cindy	An Elected Official	SD 13	Support	No
Provencher Andrew	A Member of the Public	Myself	Support	No
Stephenson Roger	A Lobbyist	Union of Concerned Scientists	Support	No
Wake Cameron	A Member of the Public	Myself; I was the UNH representative on the Ad Hoc Emissions Commission	Support	No
Werner Rob	A Lobbyist	League of Conservation Voters	Support	No
Pinto Josie	A Lobbyist	New Hampshire Youth Movement	Support	No
Reagan Senator John	An Elected Official	Senate District 17	Support	No
Fordey Nicole	A Member of the Public	Myself	Support	No
Arnold Susan	A Lobbyist	Appalachian Mountain Club	Support	No
Bennett Dan	A Lobbyist	NH Automobile Dealers Association	Support	No
Janeway Elizabeth	A Lobbyist	NH Audubon	Support	No
Janeway Betsy	A Member of the Public	League of Conservation Voters	Support	No

Sharf Joanna	A Member of the Public	Myself	Support	No
Molly Durawa	A Member of the Public	Myself	Support	No
Gamache Donna	A Lobbyist	Eversource	Support	No
Watters Senator David	An Elected Official	Myself (SD 4)	Support	No
Perkins Kwoka Senator Rebecca	An Elected Official	Myself (SD 21)	Support	No
Weisbrot Jason	A Member of the Public	Myself	Support	No
Fitzgerald Michael	State Agency Staff	NH DES	Neutral	No
Dean Mark	A Lobbyist	New Hampshire Electric Cooperative	Support	No
Bentley Ophelia	A Member of the Public	Myself	Support	No
Das Tanya	A Member of the Public	Myself	Support	No
Schmidt Jan	An Elected Official	Myself	Support	No
Oxenham Lee	An Elected Official	Sullivan Co. District 1	Support	No
Oxenham Evan	A Member of the Public	Myself	Support	No
Bourque Kat	A Lobbyist	Unitil	Support	No
Boyle Mary	A Member of the Public	Myself	Support	No
Lenz Jennifer	A Member of the Public	Myself	Support	No
Montgomery Huck	A Lobbyist	Liberty (formerly Liberty Utilities)	Support	No
DeRosa Tom	A Member of the Public	Myself	Support	No
Brown Alexander	A Member of the Public	Myself	Support	No
bunnell amelie	A Member of the Public	Myself	Support	No
WOODS GARY	An Elected Official	Myself	Support	No
Bradley Jeb	An Elected Official	Myself SD 3	Support	No
Liebowitz Susan	A Member of the Public	Myself	Support	No
Burack Emilie	A Member of the Public	Myself	Support	No
Ascheim Joan	A Member of the Public	NH Public Health Association	Support	No

Testimony

Griffin Roberge

From: Bhargavi Chekuri <bchekuri@crhc.org>
Sent: Tuesday, January 26, 2021 12:46 PM
To: Griffin Roberge
Subject: SB71 Hearing Jan 26 2021
Attachments: US_Call_to_Action.pdf; nejmoa1702747.pdf; nejmoa1817364.pdf

Hello,

I wanted to submit the following documents along with my verbal testimony today.

Warm Regards,
Bhargavi Chekuri, MD

Complete Document

Can Be Viewed

In Bill Folder

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 JUNE 29, 2017 VOL. 376 NO. 26

Air Pollution and Mortality in the Medicare Population

Qian Di, M.S., Yan Wang, M.S., Antonella Zanobetti, Ph.D., Yun Wang, Ph.D., Petros Koutrakis, Ph.D., Christine Choirat, Ph.D., Francesca Dominici, Ph.D., and Joel D. Schwartz, Ph.D.

ABSTRACT

BACKGROUND

Studies have shown that long-term exposure to air pollution increases mortality. However, evidence is limited for air-pollution levels below the most recent National Ambient Air Quality Standards. Previous studies involved predominantly urban populations and did not have the statistical power to estimate the health effects in underrepresented groups.

METHODS

We constructed an open cohort of all Medicare beneficiaries (60,925,443 persons) in the continental United States from the years 2000 through 2012, with 460,310,521 person-years of follow-up. Annual averages of fine particulate matter (particles with a mass median aerodynamic diameter of less than 2.5 μm [$PM_{2.5}$]) and ozone were estimated according to the ZIP Code of residence for each enrollee with the use of previously validated prediction models. We estimated the risk of death associated with exposure to increases of 10 μg per cubic meter for $PM_{2.5}$ and 10 parts per billion (ppb) for ozone using a two-pollutant Cox proportional-hazards model that controlled for demographic characteristics, Medicaid eligibility, and area-level covariates.

RESULTS

Increases of 10 μg per cubic meter in $PM_{2.5}$ and of 10 ppb in ozone were associated with increases in all-cause mortality of 7.3% (95% confidence interval [CI], 7.1 to 7.5) and 1.1% (95% CI, 1.0 to 1.2), respectively. When the analysis was restricted to person-years with exposure to $PM_{2.5}$ of less than 12 μg per cubic meter and ozone of less than 50 ppb, the same increases in $PM_{2.5}$ and ozone were associated with increases in the risk of death of 13.6% (95% CI, 13.1 to 14.1) and 1.0% (95% CI, 0.9 to 1.1), respectively. For $PM_{2.5}$, the risk of death among men, blacks, and people with Medicaid eligibility was higher than that in the rest of the population.

CONCLUSIONS

In the entire Medicare population, there was significant evidence of adverse effects related to exposure to $PM_{2.5}$ and ozone at concentrations below current national standards. This effect was most pronounced among self-identified racial minorities and people with low income. (Supported by the Health Effects Institute and others.)

From the Departments of Environmental Health (Q.D., Yan Wang, A.Z., P.K., J.D.S.) and Biostatistics (Yun Wang, C.C., F.D.), Harvard T.H. Chan School of Public Health, Boston. Address reprint requests to Dr. Dominici at Harvard T.H. Chan School of Public Health, Biostatistics Department, Bldg. 2, 4th Flr., 655 Huntington Ave., Boston, MA 02115, or at fdominic@hsph.harvard.edu.

N Engl J Med 2017;376:2513-22.
DOI: 10.1056/NEJMoa1702747

Risk estimates of mortality attributed to low concentrations of ambient fine particulate matter in the Canadian Community Health Survey cohort. Environ Health 2016;15:18.
18. Shi L, Zanobetti A, Kloog I, et al. Low-concentration PM2.5 and mortality: estimating acute and chronic effects in a population-based study. Environ Health Perspect 2016;124:46-52.
19. Di Q, Kloog I, Koutrakis P, Lyapustin A, Wang Y, Schwartz J. Assessing PM2.5 exposures with high spatiotemporal resolution across the continental United States. Environ Sci Technol 2016;50:4712-21.
20. Di Q, Rowland S, Koutrakis P, Schwartz J. A hybrid model for spatially and temporally resolved ozone exposures in the continental United States. J Air Waste Manag Assoc 2017;67:39-52.
21. Kalnay E, Kanamitsu M, Kistler R, et al. The NCEP/NCAR 40-Year Reanalysis Project. Bull Am Meteorol Soc 1996;77:437-71.
22. Lee EW, Wei L, Amato DA, Leurgans S. Cox-type regression analysis for large numbers of small groups of correlated failure time observations. In: Klein JP, Goel PK, eds. Survival analysis: state of the art. Berlin: Springer, 1992:237-47.
23. Makar M, Antonelli J, Di Q, Cutler D, Schwartz J, Dominici F. Estimating the causal effect of low levels of fine particulate matter on hospitalization. Epidemiology, May 25, 2016 (http://journals.lww.com/epidem/Abstract/publishahead/Estimating_the_Causal_Effect_of_Low_Levels_of_Fine.98844.aspx).
24. Kioumourtzoglou MA, Schwartz J, James P, Dominici F, Zanobetti A. PM2.5 and mortality in 207 US cities: modification by temperature and city characteristics. Epidemiology 2016;27:221-7.
25. Dockery DW, Pope CA III, Xu X, et al. An association between air pollution and mortality in six U.S. cities. N Engl J Med 1993;329:1753-9.
26. Lepeule J, Laden F, Dockery D, Schwartz J. Chronic exposure to fine particles and mortality: an extended follow-up of the Harvard Six Cities study from 1974 to 2009. Environ Health Perspect 2012;120:965-70.
27. Pope CA III, Burnett RT, Thurston GD, et al. Cardiovascular mortality and long-term exposure to particulate air pollution: epidemiological evidence of general pathophysiological pathways of disease. Circulation 2004;109:71-7.
28. Eftim SE, Samet JM, Janes H, McDermott A, Dominici F. Fine particulate matter and mortality: a comparison of the six cities and American Cancer Society cohorts with a Medicare cohort. Epidemiology 2008;19:209-16.
29. Pope CA III, Burnett RT, Krewski D, et al. Cardiovascular mortality and exposure to airborne fine particulate matter and cigarette smoke: shape of the exposure-response relationship. Circulation 2009;120:941-8.
30. Schwartz J, Coull B, Laden F, Ryan L. The effect of dose and timing of dose on the association between airborne particles and survival. Environ Health Perspect 2008;116:64-9.
31. Smith RL, Xu B, Switzer P. Reassessing the relationship between ozone and short-term mortality in U.S. urban communities. Inhal Toxicol 2009;21:Suppl 2: 37-61.
32. Zanobetti A, Schwartz J. Mortality displacement in the association of ozone with mortality: an analysis of 48 cities in the United States. Am J Respir Crit Care Med 2008;177:184-9.
33. Regulatory impact analysis of the final revisions to the National Ambient Air Quality Standards for ground-level ozone. Research Triangle Park, NC: Environmental Protection Agency, 2015 (https://www.epa.gov/naaqs/regulatory-impact-analysis-final-revisions-national-ambient-air-quality-standards-ground-level).
34. Spiegelman D. Evaluating public health interventions. 4. The Nurses' Health Study and methods for eliminating bias attributable to measurement error and misclassification. Am J Public Health 2016;106: 1563-6.

Complete Document

Can Be Viewed

In Bill Folder

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 AUGUST 22, 2019 VOL. 381 NO. 8

Ambient Particulate Air Pollution and Daily Mortality in 652 Cities

C. Liu, R. Chen, F. Sera, A.M. Vicedo-Cabrera, Y. Guo, S. Tong, M.S.Z.S. Coelho, P.H.N. Saldiva, E. Lavigne, P. Matus, N. Valdes Ortega, S. Osorio Garcia, M. Pascal, M. Stafoggia, M. Scortichini, M. Hashizume, Y. Honda, M. Hurtado-Díaz, J. Cruz, B. Nunes, J.P. Teixeira, H. Kim, A. Tobias, C. Íñiguez, B. Forsberg, C. Åström, M.S. Ragettli, Y.-L. Guo, B.-Y. Chen, M.L. Bell, C.Y. Wright, N. Scovronick, R.M. Garland, A. Milojevic, J. Kyselý, A. Urban, H. Orru, E. Indermitte, J.J.K. Jaakkola, N.R.I. Ryti, K. Katsouyanni, A. Analitis, A. Zanobetti, J. Schwartz, J. Chen, T. Wu, A. Cohen, A. Gasparrini, and H. Kan

ABSTRACT

BACKGROUND

The systematic evaluation of the results of time-series studies of air pollution is challenged by differences in model specification and publication bias.

METHODS

We evaluated the associations of inhalable particulate matter (PM) with an aerodynamic diameter of 10 μm or less (PM_{10}) and fine PM with an aerodynamic diameter of 2.5 μm or less ($PM_{2.5}$) with daily all-cause, cardiovascular, and respiratory mortality across multiple countries or regions. Daily data on mortality and air pollution were collected from 652 cities in 24 countries or regions. We used overdispersed generalized additive models with random-effects meta-analysis to investigate the associations. Two-pollutant models were fitted to test the robustness of the associations. Concentration–response curves from each city were pooled to allow global estimates to be derived.

RESULTS

On average, an increase of 10 μg per cubic meter in the 2-day moving average of PM_{10} concentration, which represents the average over the current and previous day, was associated with increases of 0.44% (95% confidence interval [CI], 0.39 to 0.50) in daily all-cause mortality, 0.36% (95% CI, 0.30 to 0.43) in daily cardiovascular mortality, and 0.47% (95% CI, 0.35 to 0.58) in daily respiratory mortality. The corresponding increases in daily mortality for the same change in $PM_{2.5}$ concentration were 0.68% (95% CI, 0.59 to 0.77), 0.55% (95% CI, 0.45 to 0.66), and 0.74% (95% CI, 0.53 to 0.95). These associations remained significant after adjustment for gaseous pollutants. Associations were stronger in locations with lower annual mean PM concentrations and higher annual mean temperatures. The pooled concentration–response curves showed a consistent increase in daily mortality with increasing PM concentration, with steeper slopes at lower PM concentrations.

CONCLUSIONS

Our data show independent associations between short-term exposure to PM_{10} and $PM_{2.5}$ and daily all-cause, cardiovascular, and respiratory mortality in more than 600 cities across the globe. These data reinforce the evidence of a link between mortality and PM concentration established in regional and local studies. (Funded by the National Natural Science Foundation of China and others.)

The authors' full names, academic degrees, and affiliations are listed in the Appendix. Address reprint requests to Dr. Kan at P.O. Box 249, 130 Dong-An Road, Shanghai 200032, China, or at kanh@fudan.edu.cn.

Drs. Liu and R. Chen and Drs. Gasparrini and Kan contributed equally to this article.

N Engl J Med 2019;381:705-15.
DOI: 10.1056/NEJMoa1817364

lic Health, Cuernavaca, Mexico (M.H.-D., J. Cruz); the Department of Epidemiology, Instituto Nacional de Saúde Dr. Ricardo Jorge, Lisbon (B.N., J.P.T.), and the Epidemiology Research Unit–Instituto de Saúde Pública, Universidade do Porto, Porto (J.P.T.) — both in Portugal; the Department of Public Health Science, Graduate School of Public Health and Institute of Health and Environment, Seoul National University, Seoul, South Korea (H. Kim); the Institute of Environmental Assessment and Water Research, Spanish Council for Scientific Research, Barcelona (A.T.), and the Department of Statistics and Computational Research, University of Valencia Environmental Health Joint Research Unit Fundación para el Fomento de la Investigación Sanitaria y Biomédica de la Comunitat Valenciana–Universitat de València–Universitat Jaume I de Castellón Biomedical Research Center Network for Epidemiology and Public Health, Valencia (C.I.) — both in Spain; the Swiss Tropical and Public Health Institute and the University of Basel, Basel, Switzerland (M.S.R.); Environmental and Occupational Medicine, National Taiwan University (Y.-L.G., B.-Y.C.), and the College of Medicine and National Taiwan University Hospital (Y.-L.G.), Taipei City; the School of Forestry and Environmental Studies, Yale University, New Haven, CT (M.L.B.); the Environment and Health Research Unit, South African Medical Research Council (C.Y.W.), the Department of Geography, Geo-informatics, and Meteorology, University of Pretoria (C.Y.W., R.M.G.), and the Natural Resources and the Environment Unit, Council for Scientific and Industrial Research (R.M.G.), Pretoria, and the Unit for Environmental Sciences and Management, North-West University, Potchefstroom (R.M.G.) — all in South Africa; the Department of Environmental Health, Rollins School of Public Health, Emory University, Atlanta (N.S.); the Institute of Atmospheric Physics, Czech Academy of Sciences, (J.K., A.U.), and the Faculty of Environmental Sciences (J.K.), Czech University of Life Sciences, Prague, Czech Republic; the Institute of Family Medicine and Public Health, University of Tartu, Tartu, Estonia (H.O., E.I.); the Center for Environmental and Respiratory Health Research, University of Oulu, Medical Research Center Oulu, and Oulu University Hospital and University of Oulu, Oulu, Finland (J.J.K.J., N.R.I.R.); the Department of Hygiene, Epidemiology and Medical Statistics, School of Medicine, National and Kapodistrian University of Athens, Athens (K.K., A.A.); the Department of Environmental Health, Harvard T.H. Chan School of Public Health (A.Z., J.S.), and the Health Effects Institute (A.C.), Boston; and the Institute for Health Metrics and Evaluation, University of Washington, Seattle (A.C.).

REFERENCES

1. Rückerl R, Schneider A, Breitner S, Cyrys J, Peters A. Health effects of particulate air pollution: a review of epidemiological evidence. Inhal Toxicol 2011; 23:555-92.
2. Brunekreef B, Holgate ST. Air pollution and health. Lancet 2002;360:1233-42.
3. Héroux ME, Anderson HR, Atkinson R, et al. Quantifying the health impacts of ambient air pollutants: recommendations of a WHO/Europe project. Int J Public Health 2015;60:619-27.
4. WHO air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide: global update 2005: summary of risk assessment. Geneva: World Health Organization, 2006.
5. Dai L, Zanobetti A, Koutrakis P, Schwartz JD. Associations of fine particulate matter species with mortality in the United States: a multicity time-series analysis. Environ Health Perspect 2014;122:837-42.
6. Lu F, Xu D, Cheng Y, et al. Systematic review and meta-analysis of the adverse health effects of ambient PM2.5 and PM10 pollution in the Chinese population. Environ Res 2015;136:196-204.
7. Wong CM, Vichit-Vadakan N, Kan H, Qian Z. Public Health and Air Pollution in Asia (PAPA): a multicity study of short-term effects of air pollution on mortality. Environ Health Perspect 2008;116:1195-202.
8. Romieu I, Gouveia N, Cifuentes LA, et al. Multicity study of air pollution and mortality in Latin America (the ESCALA study). Res Rep Health Eff Inst 2012;171: 5-86.
9. Katsouyanni K, Samet JM, Anderson HR, et al. Air pollution and health: a European and North American approach (APHENA). Res Rep Health Eff Inst 2009; 142:5-90.
10. Gasparrini A, Guo Y, Hashizume M, et al. Temporal variation in heat-mortality associations: a multicountry study. Environ Health Perspect 2015;123:1200-7.
11. Guo Y, Gasparrini A, Armstrong B, et al. Global variation in the effects of ambient temperature on mortality: a systematic evaluation. Epidemiology 2014;25: 781-9.
12. Gasparrini A, Guo Y, Hashizume M, et al. Mortality risk attributable to high and low ambient temperature: a multicountry observational study. Lancet 2015; 386:369-75.
13. International statistical classification of diseases and related health problems. Geneva: World Health Organization, 2004.
14. Samet JM, Dominici F, Curriero FC, Coursac I, Zeger SL. Fine particulate air pollution and mortality in 20 U.S. cities, 1987–1994. N Engl J Med 2000;343:1742-9.
15. Bell ML, Dominici F, Samet JM. A meta-analysis of time-series studies of ozone and mortality with comparison to the National Morbidity, Mortality, and Air Pollution Study. Epidemiology 2005;16:436-45.
16. Chen R, Yin P, Meng X, et al. Fine particulate air pollution and daily mortality: a nationwide analysis in 272 Chinese cities. Am J Respir Crit Care Med 2017;196:73-81.
17. Dominici F, Peng RD, Bell ML, et al. Fine particulate air pollution and hospital admission for cardiovascular and respiratory diseases. JAMA 2006;295:1127-34.
18. Shah AS, Langrish JP, Nair H, et al. Global association of air pollution and heart failure: a systematic review and meta-analysis. Lancet 2013;382:1039-48.
19. Samoli E, Analitis A, Touloumi G, et al. Estimating the exposure-response relationships between particulate matter and mortality within the APHEA multicity project. Environ Health Perspect 2005; 113:88-95.
20. Samoli E, Peng R, Ramsay T, et al. Acute effects of ambient particulate matter on mortality in Europe and North America: results from the APHENA study. Environ Health Perspect 2008;116:1480-6.
21. Dominici F, Peng RD, Zeger SL, White RH, Samet JM. Particulate air pollution and mortality in the United States: did the risks change from 1987 to 2000? Am J Epidemiol 2007;166:880-8.
22. Di Q, Dai L, Wang Y, et al. Association of short-term exposure to air pollution with mortality in older adults. JAMA 2017; 318:2446-56.
23. Atkinson RW, Kang S, Anderson HR, Mills IC, Walton HA. Epidemiological time series studies of $PM_{2.5}$ and daily mortality and hospital admissions: a systematic review and meta-analysis. Thorax 2014; 69:660-5.
24. Kim KH, Kabir E, Kabir S. A review on the human health impact of airborne particulate matter. Environ Int 2015;74:136-43.
25. Chen R, Kan H, Chen B, et al. Association of particulate air pollution with daily mortality: the China Air Pollution and Health Effects Study. Am J Epidemiol 2012;175:1173-81.
26. Martins MCH, Fatigati FL, Véspoli TC, et al. Influence of socioeconomic conditions on air pollution adverse health effects in elderly people: an analysis of six regions in São Paulo, Brazil. J Epidemiol Community Health 2004;58:41-6.

Griffin Roberge

From: Madeleine Mineau <madeleine@cleanenergynh.org>
Sent: Monday, January 25, 2021 11:01 AM
To: Griffin Roberge
Subject: CENH written testimony on SB78 and SB71
Attachments: CENH testimony SB78 20210126.pdf; CENH SB71 Testimony 20210126.pdf

Hi Griffin,
Here is our written testimony for SB78 and SB71 for tomorrow's hearings.
Should I also send this directly to the Senators or are you compiling written testimonies for them?
Thank you,
Madeleine

--
Madeleine Mineau
Executive Director
Clean Energy NH (formerly NHSEA)
Cell phone: 607-592-6184

January 25, 2021

The Honorable Kevin Avard, Chair
Senate Energy and Natural Resources Committee
Submitted via email

RE: SB71, relative to establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire.

Dear Chairman Avard and Members of the Committee:

Clean Energy NH (CENH) is a non-profit member-based organization. We are New Hampshire's leading clean energy advocate that is dedicated to supporting policies and programs that strengthen our state's economy by encouraging a transition to renewable energy and promoting energy efficiency.

Thank you for the opportunity to comment on SB71, relative to establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire. CENH supports SB71 and its goals.

CENH supported and similar bill last session (SB590) and participated in the 2020 Ad Hoc Emission Commission. In order to make formal recommendations to the General Court on these emission reduction goals, the Ad Hoc Commission found that it is necessary to convene the Commission under a legislative mandate. SB71 would allow for those recommendations to be made in a timely manner.

In particular, CENH would like to highlight the consistent urgency echoed by expert presenters in the 2020 Ad Hoc Emission Commission that New Hampshire needs to act quickly to implement a clear, aggressive transition to a clean energy economy as a method to reduce emissions. It should be the policy of the State of NH to reduce greenhouse gas and other polluting emissions urgently to avoid negative consequences on public health, the environment, and our economy.

Furthermore, New Hampshire lags behind our neighboring states in New England when it comes to established emissions reduction and clean energy goals, and the longer our state stalls, the higher the chance of irreparable economic and environmental harm to our citizens and our environment. Conversely, a clear state policy directive to reduce emissions will spur the growth and expansion of the state's clean energy economy, which provides opportunities for new jobs and new investments for our residents, businesses, and communities.

The opportunity for the clean energy industry to build a resilient, clean, equitable future for New Hampshire is demonstrated by the energy independence, public health, and economic benefits detailed by many presenters in the 2020 Ad Hoc Emission Commission. By passing SB71, the valuable information gathering process started by the Ad Hoc Emission Commission will be

continued and translated into formal, comprehensive recommendations to the General Court. This process will enable New Hampshire to make considerable progress towards the aforementioned opportunities. CENH members stand ready and willing to employ Granite Staters and build the projects, but they need the state to issue clear support and policies that enable them to do so.

We urge you and the Senate Energy & Natural Resources Committee to vote "ought to pass" on SB71 to ensure New Hampshire makes meaningful progress in protecting public health, reducing emissions, and making the transition to a clean energy future.

Sincerely,

Madeleine Mineau
Executive Director
Clean Energy NH
14 Dixon Avenue Suite 202
Concord, NH 03301
madeleine@cleanenergynh.org

Griffin Roberge

From: Roger Stephenson <rstephenson@ucsusa.org>
Sent: Monday, January 25, 2021 3:45 PM
To: Kevin Avard; Bob Giuda; James Gray; Rebecca Perkins Kwoka; David Watters; Griffin Roberge
Subject: Written testimony on SB 71 (establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire)
Attachments: Testimony SB71 January 2021 Union of Concerned Scientists.pdf

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

Please accept this attached written testimony in advance of your hearing tomorrow on SB 71 (establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire).

Thank you,

Roger W. Stephenson, APR
Northeast Regional Advocacy Director
Union of Concerned Scientists
(603) 770-9484
Twitter: @RogerAPR

Written Testimony in Support of SB71 (establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire)
Provided to the members of the NH Senate Committee on Energy & Natural Resources
Submitted by Roger Stephenson, APR Regional Advocacy Director for Climate and Energy
Union of Concerned Scientists
January 26, 2021

The Union of Concerned Scientists strongly supports the majority consensus from the 2020 Ad Hoc Emissions Commission that New Hampshire should develop an emission reduction goal for 2050 of net zero emissions, and that the goal be binding. Health experts today acknowledge the health and welfare of New Hampshire children and adults are influenced by climate change.

We have made some progress since 2010 when a small number of professionals in New Hampshire began to study local climate-health connections. At that time, I served on the Climate Change and Health Improvement Planning Committee convened by the Division of Public Health Services (DPHS) and Department of Environmental Services (DES) to begin to bring climate into focus within the state.

In 2014 the University of New Hampshire issued an assessment of climate change and public health. Armed with this report and funding and guidance from the Center for Disease Control, DPHS offered small grants to our Regional Public Health Networks and I worked with them to investigate potential climate impacts and associated health burdens within their service areas. Resulting climate and health adaptation plans from the Monadnock region focused on extreme weather, the Upper Valley on heat stress, and the Lakes and Seacoast Networks on Lyme disease.

Since 2014 science has made even more clear the many connections between climate change and the health of New Hampshire residents. Indeed, the associated public health impacts of unchecked emissions of co-pollutants from fossil fuel combustion in the transportation and electricity generation sectors alone are cause for action.

Our health system needs to be prepared for higher future average temperatures.

Heat stress incidents are projected to increase. Extreme heat is measured according to the heat index, the combination of temperature and humidity that creates the "feels like" temperature. The years between 1998 and 2009 averaged 125 heat-related hospital visits in New Hampshire.[1] A 2019 study by the Union of Concerned Scientists on extreme heat[2] found that while New Hampshire has only experienced **3** days per year on average with a "feels like" temperature that exceeds 90 degrees Fahrenheit, that number will increase to **23** days per year on average by midcentury and **49** by the century's end under a business-as-usual scenario.

Greenhouse gas emissions are tied to higher temperatures which are tied to ozone pollution.

Scientists have identified a "climate penalty" on ozone pollution. Warmer temperatures create more ozone; future increases in summertime ozone days and a longer summer ozone season will result in more pollution-related cardiorespiratory illnesses including asthma. At the present rate of emissions, the annual costs of climate-driven, premature ozone-related deaths nationwide are estimated to be $9.8 billion in 2050 and $26 billion by 2090. Science tells us that by reducing emissions we can expect to reduce the annual costs of premature deaths by 30 percent.[3] In 2015, there were 18,000 New Hampshire children living with asthma, and ozone

[1] NH Wisdom online database via Upper Valley Climate Adaptation Plan p. 23 https://uvpublichealth.org/wp-content/uploads/2015/12/UVClimate-Health-Adaptation-Plan-_-Nov2015.pdf

[2] *Killer Heat in the United States: Climate Choices and the Future of Dangerously Hot Days*, www.ucsusa.org/killerheat

[3] EPA. 2017. Multi-Model Framework for Quantitative Sectoral Impacts Analysis: A Technical Report for the Fourth National Climate Assessment. U.S. Environmental Protection Agency, EPA 430-R-17-001.https://cfpub.epa.gov/si/si_public_file_download.cfm?p_download_id=537327&Lab=OAP

can affect their ability to breathe.[4] New Hampshire leads the nation in adult asthma rates at 13.1%.

Immediate health burdens can be mitigated through emissions reductions.

Fine airborne particles—less than one-twentieth the diameter of a human hair— are termed "PM2.5" and pose a serious threat to human health, as some of these particles can penetrate deep into the lungs. Some PM2.5 is formed during the burning of gasoline and diesel in an engine, while additional PM2.5 is created in the atmosphere from the reaction of exhaust gases and other air pollutants. Diesel exhaust is a major contributor to PM pollution. Scientists have found that globally PM2.5 in particular is responsible for roughly 95% of health consequences from air pollution.[5] These health impacts include cardiovascular and lung ailments, asthma, diabetes, developmental impacts on children, and premature death. Policies that reduce PM can also contribute to reductions in heat-trapping gases.

The New Hampshire Public Health Association is aware of the connection between climate emissions and human health. In 2016 NHPHA revised its climate change policy statement to include greenhouse gas emissions: "... current policy tools do not adequately address the root causes through vigorous efforts to reduce greenhouse gases. ... We must find additional ways to reduce our dependence on fossil fuels...". [6]

Transportation sector emissions are not addressed in the state's 2018 10-year state energy strategy. The associated public health impacts of unchecked emissions of co-pollutants from fossil fuel combustion in the transportation and electricity generation sectors alone are cause for action.

---

[4] New Hampshire Asthma Burden report 2019 https://www.dhhs.nh.gov/dphs/cdpc/asthma/documents/asthma-burden-2019.pdf

[5] https://blog.ucsusa.org/cecilia-moura/numbers-that-take-your-breath-away-covid-19-air-pollution-and-equity

[6] NH Public Health Association Public Health and Climate Change January 2016

While New Hampshire's share of the United States' carbon emissions may be low, that does not insulate it from the local impacts of fossil fuel combustion nor climate change. New Hampshire must clean up its transportation sector, the major source of ground-level ozone, 42 percent of New Hampshire's greenhouse gas emissions[7] and most of the PM2.5.

Reducing air pollution addresses public health burdens and creates a climate co-benefit. New Hampshire must act to protect the welfare of its citizens, and act as boldly as the science suggests is necessary at the state level. The commission envisioned by SB71 must consider both the benefits to air quality that will come from curbing fossil fuel emissions as well as the known climate benefits of keeping warming "well below 2.0 degrees Celsius."

Today, circumstances demand that we strive to rapidly reduce heat-trapping emissions, the root cause of climate change, and alleviate climate related health burdens – and do so simultaneously.

Recent reports, such as the 2018 IPCC special 1.5°C report and the 2018 National Climate Assessment, have shown that reducing emissions by 80% from 1990 levels by 2050 is not ambitious enough to avoid the serious climate impacts that will stem from more than 1.5°C warming. Given decades of inaction and delay the science indicates we must take strong initial steps now in order to be on a trajectory to be "net zero" by 2050. Stabilizing global temperatures is necessary to protect public health and welfare. Improved and protected public health and welfare determine economic health; we need not search beyond the current pandemic to see this evidence. The debate is no longer, "What target should we choose that protects our economy?" Rather, the debate must be, "What solutions that can get us to net zero will best support our economy?"; this is the debate that requires analysis, study and economy-wide implementation of the best and most cost-effective solutions by

[7] NH Dept. of Environmental Services https://www.des.nh.gov/organization/divisions/air/tsb/tps/climate/ghg-emissions.htm

governments, businesses and people. Pollution reduction is good for the economy, and many climate solutions are also proven job creators.

Commensurate with the science, to protect New Hampshire's people, public health, and economy, the Union of Concerned Scientists strongly supports the majority consensus from the 2020 Ad Hoc Emissions Commission that New Hampshire should develop an emission reduction goal for 2050 of net zero emissions, and that the goal be binding.

Thank you for the opportunity to provide this testimony. I can be reached at rstephenson@ucsusa.org 603 770 9484

The Union of Concerned Scientists is a national organization with 50 years of experience advocating for a healthier planet and a safer world. We have a proven record of putting science into action: we conduct rigorous technical analyses, develop policies to address some of today's most pressing problems, and advocate for change by educating decisionmakers and mobilizing our half-million supporters—everyday people as well as some of the nation's top scientists, working with us to advance science-based solutions. Our UCS Science Network comprises more than 25,000 scientists and technical experts who assist our local, state, and national efforts. www.ucsusa.org

U.S. CALL TO ACTION
ON CLIMATE, HEALTH, AND EQUITY: A POLICY ACTION AGENDA

2019

Climate change is one of the greatest threats to health America has ever faced—it is a true public health emergency. The health, safety and wellbeing of millions of people in the U.S. have already been harmed by human-caused climate change, and health risks in the future are dire without urgent action to fight climate change. As former Surgeon Generals Richard Carmona and David Satcher said: "We're all at risk and our leaders must lead on global warming. Now." But the health crisis caused by climate change also presents a major health opportunity. Building healthy energy, transportation, land use, and agriculture systems now will deliver immediate and sustained health benefits to all and reduce future health risks from climate change.

Our organizations represent physicians, nurses, health and public health professionals and health workers, hospitals and health care systems, health education institutions, and public, environmental, mental, and community-based health agencies and organizations. We have dedicated our lives to improving the health of our patients and communities.

Therefore, we call on government, business, and civil society leaders, elected officials, and candidates for office to recognize climate change as a health emergency and to work across government agencies and with communities and businesses to prioritize action on this Climate, Health and Equity Policy Action Agenda.

Climate change is the "greatest public health challenge of the 21st century." Extreme heat, powerful storms and floods, year-round wildfires, droughts, and other climate-related events have already caused thousands of deaths and displaced tens of thousands of people in the U.S. from their homes, with significant personal loss and mental health impacts especially for first responders and children. Air pollution, whose primary driver—fossil fuel combustion—is also the primary driver of climate change, causes hundreds of thousands of deaths in the U.S. annually. Mosquito and tick-borne diseases are spreading to new communities. The agricultural, food, and water systems we depend on for our survival are under threat. Without an urgent and effective response, these harms will greatly increase.

Action to reduce climate change can dramatically improve health. Many policies that move us towards safe climate goals have demonstrable and significant health benefits. Climate action in the energy, transportation, land use, housing, agricultural, and other sectors has the potential to avoid thousands of deaths in the U.S. and millions of deaths each year globally. A just transition to clean, safe renewable energy and energy efficiency, sustainable food production and diets, active transportation, and green cities will lower climate pollution while simultaneously reducing the incidence of communicable and non-communicable disease, improving mental health, and promising significant health care cost savings.

Equity must be central to climate action. Climate change threatens everyone in the U.S., but is a more immediate danger to some. Climate change exacerbates health inequities, disproportionately harming the most vulnerable among us—children and pregnant women, people with low income, the aged and people with disabilities and chronic illnesses, some communities of color, indigenous people and tribal communities, immigrants, marginalized people of all races and ethnicities, and outdoor workers, Communities that have experienced systemic neglect and environmental racism have the least responsibility for climate pollution, but are the most affected. These communities have less access to the political, economic, social and environmental

resources that enable them to cope with climate threats and face potentially unmanageable pressures as the impacts of climate change mount.

Choices that we make now will determine the magnitude of climate impacts on our children and grandchildren, and whether future generations will have access to the natural resources and environments that will enable them to be healthy. If we fail to take urgent action now, options for limiting global warming and averting catastrophic impacts will no longer be available. U.S. climate policies and investments must serve to remedy existing inequities and address our moral responsibility to current and future generations.

Without transformational action, climate change will be increasingly severe, leading to more illness, injury, and death; mass migration and violent conflict; and worsening health inequities. By **mobilizing climate action for health and health action for climate**, the U.S. can reduce climate pollution and build healthy communities that are resilient in the face of climate risks.

This is a crucial moment. We need to ratchet-up commitments to climate action and accelerate action to protect our health and that of future generations. **With the right policies and investments today, we have the opportunity to realize our vision of *healthy people in healthy places on a healthy planet.*** The priority actions outlined below are urgent and essential steps to protect and promote health and advance the well-being of all people in the era of climate change.

CLIMATE ACTION FOR HEALTH

Making health integral to climate policymaking at all levels and across all sectors offers a major opportunity to engender greater support for climate action, advance climate solutions, and achieve ambitious health targets through win-win strategies that promote climate justice, health and health equity, resilience, and a sustainable economy. We urge government leaders to advance the following priorities.

PRIORITY ACTIONS

1. **Meet and strengthen U.S. commitments under the Paris agreement.** A large and rapid reduction in carbon emissions is essential for our health and the health of future generations. The U.S. must re-commit to the Paris Agreement and to aggressive emissions reductions sufficient to limit global temperature increases to 1.5°C above pre-industrial levels, and continue to engage with international and national leaders, business, and civil society to encourage and support others to develop multilateral, binding commitments to do the same, The US must ratify and implement the Kigali Amendment to reduce the use of hydrofluorocarbons.

2. **Transition rapidly away from the use of coal, oil and natural gas to clean, safe, and renewable energy and energy efficiency.** With the technology available today, we can dramatically change U.S. energy use and systems to meet growing energy needs affordably, while reducing climate and air pollution. Key policies include:

   - Establish ambitious goals and timelines for renewable energy, energy efficiency and energy conservation.
   - Support financing for the technologies and infrastructure needed to transition to zero carbon emissions, including development, adoption, and scale-up of renewable energy sources and investments in energy efficiency. Put a price on carbon that reflects its true social costs and phase out investments in and subsidies for fossil fuels for energy extraction and generation.
   - Ensure that climate policies support sustainable energy for all by promoting distributed renewable energy and zero emission transportation technologies, with a priority on disadvantaged communities.
   - Support a rapid reduction of petroleum and natural gas use in transportation through steady investment and regulations to increase fuel efficiency and transition to zero emission vehicle technologies as quickly as possible across the transportation sector.

- Establish ambitious goals for building efficiency and move toward a zero carbon future by reducing carbon impacts from new and existing buildings. Transition away from wood burning, oil, and natural gas use for home heating and cooking.

- Reduce conventional air pollutants alongside reductions in carbon and short-lived climate pollutants to maximize health benefits in communities impacted by pollution.

- Assess and address the health impacts of fossil fuels (coal, oil and gas) extraction, production, transport and infrastructure on urban and rural communities, for example through "setbacks" for sensitive populations and stronger protections against fossil fuel industry impacts on clean air and water.

- Develop a plan and timeline for reduction of fossil fuel extraction in the U.S.

- Support research on strategies to draw down climate pollution from the atmosphere and store it in the ground, and on the potential health and equity impacts of these strategies.

3 **Emphasize active transportation in the transition to zero-carbon transportation systems.** Shifting from driving to active modes of travel—walking, bicycling, and public transit—can substantially reduce rates of non-communicable diseases (e.g. obesity, cardiovascular disease, diabetes, osteoporosis), and injuries. Key policies include:

- Make transportation carbon reductions central to the mission of transportation agencies and align transportation expenditures with the goals of reducing climate pollution and vehicle miles traveled and supporting healthier communities and travel choices for all.

- Significantly increase the percentage of transportation investments for infrastructure and programs to promote safe walking and cycling, and for affordable, accessible and convenient public transit infrastructure, maintenance, and operations, including in rural communities.

- Invest in affordable housing to avoid displacement and very long-distance commuting based on families' ability to afford housing near jobs.

4 **Promote healthy, sustainable and resilient farms and food systems, forests, and natural lands.** By changing what we eat, and how we grow, harvest and transport our food, we can protect our health, reduce obesity, diabetes, and heart disease, and significantly reduce our carbon footprint. Properly managed and protected forests, farms, rangelands, and wetlands can serve as resilient carbon sinks and protect the communities that depend on them from climate impacts. Practices that reduce food waste, conserve and regenerate our soil, conserve and protect our water, sustain our fisheries, conserve productive agricultural land from urban sprawl, and protect those who grow our food are essential to safeguard our food supply and our safety in the face of climate impacts. Building resilient, ecologically sustainable, local food systems can support the livelihoods of agricultural communities and the people that grow and produce our food, expand access to healthy food, improve air and water quality and biodiversity, and reduce carbon emissions. Key policies include:

- Invest in programs and encourage practices that protect, manage, conserve, and expand natural and working lands to increase carbon sequestration and reduce catastrophic wildfires, floods, and mudslides.

- Expand tree canopy, parks, green spaces, and green infrastructure to sequester carbon, increase cooling in urban areas and reduce the impacts of flooding.

- Use agricultural funding and programs to prioritize and enable a rapid shift to diversified and

sustainable agro-ecological and regenerative practices that reduce reliance on chemical- and energy-intensive industrial monoculture and animal-based agriculture and environmentally damaging agricultural and fisheries practices. Support urban and peri-urban agriculture.

- Integrate urban and agricultural land use planning to maximize transit-oriented infill development while conserving productive agricultural lands on urban edges.
- Establish incentives and supports for reduction of food waste.
- Incentivize livestock manure management practices that reduce potent methane emissions and produce valuable compost for soil fertility.
- Encourage America's children to enjoy healthy plant-based diets and reduce consumption of red and processed meat by implementing a strategy to provide meat-free options in all school meals.

5 **Ensure that everyone in the U.S. has access to safe and affordable drinking water and a sustainable water supply.** There is nothing more fundamental to human existence than water. Key policies include:

- Enhance regulations to prevent water contamination from agricultural, mining, industrial, and energy production sources.
- Invest in programs for water conservation and efficiency, water resources management, infrastructure maintenance, protection from flooding and salt-water inundation, and in research on sustainable and ecologically safe alternative water resources such as desalination and reuse.

6 **Invest in policies that support a just transition for workers and communities adversely impacted by climate change and the transition to a low-carbon economy.** A sustainable and equitable low-carbon economy requires shared prosperity including fair employment and economic opportunities for workers and communities that are affected by climate change and climate-related policies and programs. Investment in green jobs builds community economic well-being and improves health. Key policies include:

- Assess and alleviate impacts on workers and communities affected by job or economic losses related to climate change and climate policy, using inclusive engagement with stakeholders
- Advance a just transition through greater investments in workforce training and development, local hiring programs, and community-driven infrastructure.

HEALTH ACTION FOR CLIMATE

Proactive support is required to expand health sector efforts to reduce greenhouse gas emissions in health facilities; build resilience through the integration of climate considerations in health systems, policies, programs, and investments; and effectively communicate the health threats of climate change together with the health benefits of climate action.

PRIORITY ACTIONS

7 **Engage the health sector voice in the call for climate action.** Proactive health sector leadership in climate communications can significantly increase public support for transformative climate action. Key policies include:

- Implement local and national campaigns, using lessons from public health campaigns such as tobacco control, to inform about the health impacts of climate change and the health benefits of climate action.

8 **Incorporate climate solutions into all health care and public health systems.** Public health agencies must address climate change as a health emergency to protect and promote the health of communities Hospitals and health care systems must implement climate-smart health care, build facility resilience, and leverage their economic power to decarbonize the supply chain and promote equitable local economic development. Key policies include:

- Proactively support integration of climate change into all relevant federal, state, and local public health programs.
- Establish a public-private task force to assess the current state of the nation's health care system resilience to extreme weather and recommend strategies and investments to improve it.
- Support policies to advance implementation of climate-smart energy, water, transportation, food, anesthetic gas and waste management practices in U.S. health care facilities, including clinics and provider offices.

  Develop low-carbon health care delivery models, utilizing community-based care sites, telemedicine and mobile technologies.
- Support redesign of all health professional curricula to better prepare the health workforce to lead in climate change mitigation and adaptation.

9 **Build resilient communities in the face of climate change.** Climate change is a global phenomenon, but it is people and communities at the local level that experience its consequences. Climate and health action will be most effective when those most impacted have the voice, power, and capacity to be full partners in building a healthy, equitable, and climate resilient future. Key policies include:

- Deeply engage communities most impacted by climate change and poor health outcomes in planning, policy development and budgeting, offering meaningful roles and power in decision-making processes, and respecting history, traditional ecological knowledge and community-directed solutions.
- Support adequate planning and funding to protect all communities from the adverse health impacts of climate change, including robust heat island mitigation; expansion of tree canopy, green space, and green infrastructure; cool roofs and cool pavements; rainwater and gray water capture; strategies to reduce the occurrence and impacts of catastrophic wildfires and floods; community preparedness and resilience training; and increased availability of climate-adapted housing.
- Integrate and provide guidance on assessment of the health and health equity benefits (or risks) of proposed climate solutions and investments.

FINANCING CLIMATE ACTION FOR HEALTH AND HEALTH ACTION FOR CLIMATE

Achieving goals for climate, health, and equity will require that climate investments consider health impacts and benefits, and that investments in health take climate change considerations into account. Investing in the health of people and our communities saves money over time and makes the nation stronger. Current investments fall far short.

PRIORITY ACTION

10 **Invest in climate and health.**

- Allocate resources to enable the health sector to effectively protect health in the face of climate change, starting with support for local and state health departments and a resilient hospital infrastructure.

- Fund and implement national, state and local climate-health risk assessments, expanded disease surveillance systems, early warning systems, and research on climate and health that enable an effective health response to climate threats. Make all data publicly available.

Together, these ten policy recommendations provide a roadmap to develop coordinated strategies for simultaneously tackling climate change, health, and equity.

Climate change is a health emergency. We call on local, state, and national leaders to act now to stop climate pollution, promote resilient communities, and support healthy people in healthy places on a healthy planet.

ENDORSING ORGANIZATIONS

A current list of endorsing organizations is available at climatehealthaction.org

Griffin Roberge

From: Rob Werner <rob_werner@lcv.org>
Sent: Tuesday, January 26, 2021 9:33 AM
To: Kevin Avard; Bob Giuda; James Gray; David Watters; Rebecca Perkins Kwoka
Cc: Griffin Roberge
Subject: Testimony for SB 71 - LCV
Attachments: SB71 testimony.docx

Good morning, members of the Senate Energy and Natural Resources Committee:

Please find the attached testimony in support of SB 71, relative to establishing a commission to develop science-based emissions reductions goals for the state of New Hampshire.

Thank you for your efforts and service to the state of New Hampshire.

Best,

Rob Werner

Rob Werner
New Hampshire State Director
League of Conservation Voters
(603) 674-9810

LCV

January 26, 2021

RE: Senate Bill 71, Establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire

Dear Chairman Avard and members of the Senate Energy and Natural Resources Committee:

The League of Conservation Voters (LCV) strongly supports SB 71, the establishment of the commission to develop science-based emissions reductions goals for the state of New Hampshire. LCV was in support of previous legislation during the 2020 session of the legislature to establish an emissions reduction commission (SB 590) and was a member of the ad hoc emissions commission that was formed in 2020 when SB 590 was tabled.

Reflecting upon the compelling scientific evidence regarding the impacts of climate change presented to the ad hoc emissions reduction commission during its deliberations, its important that the Senate Energy and Natural Resources take the next step and vote to support SB 71, as doing so will provide a forum and process for additional data and policy options to be considered. The final report of the 2020 New Hampshire Ad Hoc Emissions Commission does provide a basis for the adoption of significant policy actions, but it is only a start.

The impacts of climate change on our natural resources, our wildlife, and our residents is unfortunately becoming increasingly evident, particularly as it relates to public health. The science is clear, and it is long past time to respond with an evidence-based approach to reduce emissions.

While the impacts of climate change are increasingly worrisome and harmful, the benefits of taking clear and decisive action present significant opportunities to improve public health and further spark the development of a clean energy economy that will produce economic development opportunities for New Hampshire communities and jobs for our residents. Now is the time for New Hampshire to join the other states in the New England region to establish specific goals to reduce emissions, protect public health, and build our clean energy economy future. The passage of SB 71 is but the next step in this important work but certainly not the last.

LCV urges the Senate Committee to vote "ought to pass" on SB 71.

Sincerely,

Rob Werner
New Hampshire State Director
League of Conservation Voters

Griffin Roberge

From: David Creer <dcreer@biaofnh.com>
Sent: Tuesday, January 26, 2021 9:48 AM
To: Griffin Roberge
Subject: SB 71 Written Testimony
Attachments: BIA SB71 Testimony.pdf

Hi Griffin,

Attached is my written testimony for today's hearing on SB 71.

Thanks,
Dave

David J. Creer
Director of Public Policy

BUSINESS & INDUSTRY ASSOCIATION
New Hampshire's Statewide Chamber of Commerce

603-224-5388 x112 | (m) 603-931-2444
dcreer@BIAofNH.com

122 North Main Street, Concord, NH 03301

BIAofNH.com

Check out BIA's COVID-19 Information & Resources for Employers packed with targeted information and resources for employers and employees.

BUSINESS & INDUSTRY ASSOCIATION
New Hampshire's Statewide
Chamber of Commerce

Testimony of David Creer
Business & Industry Association
SB 71
Senate Energy and Natural Resources Committee
January 26, 2021

Dear Members of the Senate Energy and Natural Resources Committee: My name is David Creer and I'm Director of Public Policy for the Business and Industry Association (BIA), New Hampshire's statewide chamber of commerce and leading business advocate. BIA represents more than 400 members in a variety of industries. Member firms employ 89,000 people throughout the state, which represents one in seven private workforce jobs, and contribute $4.5 billion annually to the state's economy.

While we take no position on SB 71, BIA does recommend the commission conduct a thorough cost-benefit analysis on the impact of setting emissions reduction goals. BIA was an active participant on the Ad Hoc Emissions Commission last year. The Commission recommended that its work be continued in an official capacity this year.

Last year, the commission heard about the health impacts and severity of the effects of climate change, but at no point did it discuss costs associated with reaching target emissions goals. Those costs would be borne by ratepayers, including residential customers, automobile, truck and fleet owners, commercial property owners, and manufacturers (New Hampshire's most important economic sector). BIA believes a thorough cost-benefit analysis is a prerequisite for any state strategy to address climate change to ensure that reasonable solutions to climate change are achieved without damaging the state's economy.

This concludes my testimony and I am happy to address any questions from the committee.

Griffin Roberge

From: Tom Irwin <tirwin@clf.org>
Sent: Tuesday, January 26, 2021 11:19 AM
To: Griffin Roberge
Subject: SB 71 -- written comments
Attachments: 2021-1-26 SB 71_CLF Comments_pdf (4813-2959-1769.1).pdf

Dear Mr. Roberge,

Attached, in advance of the Energy & Natural Resources Committee's hearing today, please find Conservation Law Foundation's comments supporting SB 71.

Many thanks,

Tom Irwin
Vice President
Director, CLF New Hampshire

27 North Main Street
Concord, NH 03301-4930

P: 603-573-9139
E: tirwin@clf.org

clf
conservation law foundation

clf
conservation law foundation

For a thriving New England

CLF New Hampshire 27 North Main Street
Concord, NH 03301
P: 603.225.3060
F: 603.225.3059
www.clf.org

January 26, 2021

Via Electronic Mail (Griffin.Roberge@leg.state.nh.us)

The Hon. Kevin Avard, Chair
Energy & Natural Resources Committee
N.H. State House
Concord, NH 03301

Re: SB 71, An act establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire

Dear Chairman Avard and Honorable Committee Members:

Conservation Law Foundation ("CLF") appreciates the opportunity to comment on SB 71, an act establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire. CLF is a non-profit environmental advocacy organization working to tackle the problem of climate change, and other environmental problems, facing our communities in New Hampshire and across New England.

CLF was pleased to participate as a member of the Ad Hoc New Hampshire Emissions Commission ("Commission"), comprised of a broad-based group of stakeholders, to develop science-based recommendations for the reduction of greenhouse gas emissions in New Hampshire by the year 2050. Over the course of its work, spanning five months beginning in August 2020, the Commission was presented with compelling evidence about the public health impacts of climate change, ranging from an increase in heat-related injuries and deaths, to increases in vector-borne diseases, to the disproportionate impacts of climate change that will be borne by New Hampshire's most vulnerable communities.

The Commission also heard compelling testimony about the scientific consensus that the climate crisis requires action to reduce greenhouse gas emissions to a level of net-zero by the year 2050. In light of the harmful impacts of climate change and the scientific consensus about what is needed to mitigate those impacts, the majority of the Commission concluded that "New Hampshire should develop an emission reduction goal for 2050 of net zero emissions or a similar goal, provided that such goal or standard is clearly defined and allows for the development of programs that would effectively and equitably accomplish said goal in order to mitigate the impacts of climate change and protect public health, including the health of New Hampshire's most vulnerable residents."

We appreciate the work of Senators Sherman, Bradley, and Watters on the Ad Hoc Emissions Commission, and for their desire to advance this critical matter in the Legislature. However, we are greatly concerned that New Hampshire is not responding to the problem of climate change,

clf

conservation law foundation

and its significant threats, with the urgency the crisis demands. Just as local communities in New Hampshire are taking a leadership role in reducing greenhouse gas emissions, and neighboring states are doing the same by adopting 2050 mandatory emission reduction targets and implementation plans to achieve them, it is essential that New Hampshire, as a state, step up and do its share, and do so expeditiously.

As a result of the work of the Ad Hoc Emissions Commission, as well as the expertise of scientists and experts in the Granite State and across the globe, we know what New Hampshire must do if it is serious about science-based emission reductions: it must adopt the target of net-zero emissions by 2050, with interim milestone targets in 2030 and 2040 to put us on the path to that 2050 target, and develop the implementation plans to achieve them.

We believe the Legislature has the information it needs already and, therefore, would prefer to see it proceeding this session with the adoption of a 2050 greenhouse gas emission target of net zero and an implementation plan to achieve that target. CLF nonetheless supports SB 71, if necessary to proceed to the adoption of science-based emission targets, provided it retains its focus on science-based recommendations and its December 1, 2021 reporting deadline, with the intent to legislatively adopt those science-based recommendations no later than next legislative session. The severity and urgency of the climate crisis requires no less.

Respectfully,

Tom Irwin
Vice President, CLF New Hampshire

Griffin Roberge

From: Michael Padmore <Michael.Padmore@nhms.org>
Sent: Tuesday, January 26, 2021 11:52 AM
To: Griffin Roberge
Subject: SB71 Written Testimony
Attachments: Climate Changes Health Sign On Letter - Final Draft.pdf

Good morning,

I'm submitting a letter that was in support of SB590 from the 2020 legislative session that I think is still very relevant for SB71. I will reference it during my spoken testimony for SB71.

Thanks,
Mike Padmore
Director of Advocacy
New Hampshire Medical Society
7 North State St, Concord NH
(603) 858-4744 (cell)
michael.padmore@nhms.org

To: New Hampshire Senate Energy and Natural Resources Committee

From:
New Hampshire Medical Society
New Hampshire Public Health Association
New Hampshire Nurses Association
New Hampshire Nurse Practitioner Association
Breathe New Hampshire
American Lung Association in New Hampshire
American Heart Association - New Hampshire
National Association Social Workers – New Hampshire Chapter
New Hampshire Psychiatric Society
New Hampshire Academy of Family Physicians
New Hampshire Chapter – American Academy of Pediatrics
New Hampshire Chapter - American College of Physicians
New Hampshire Chapter - American College of Obstetricians and Gynecologists
Nashua Division of Public Health and Community Services
Union of Concerned Scientists
National Association Social Workers – New Hampshire Chapter
Students for a National Health Program, Geisel School of Medicine at Dartmouth
Geisel Students for Harm Reduction
Geisel Family Medicine Interest Group

Re: HB 590 - establishing a committee to develop science-based emissions reduction goals for the state of New Hampshire

Date: March 3rd, 2020

Dear Members of the Senate Energy and Natural Resources Committee,

New Hampshire's public health and health care professionals are increasingly aware of and concerned with the public health effects of our changing climate and are thus writing to pledge our support for SB 590. A growing body of scientific evidence points to human activities that result in emissions from the burning of fossil fuels as a primary driver of a changing climate and observed trends of increased incidence of heat and heavy precipitation that lead to direct and indirect adverse public health outcomes. We believe that SB 590 and the work of the study subcommittee should pay particular attention to the public health aspects of the changing New Hampshire climate.

The direct public health effects associated with climate issues are a primary and immediate concern of health care and public health professionals in our state. These include respiratory illnesses, higher incidences of asthma, and other health conditions which are heightened by pollution and climate changes. Rising temperatures and changes in seasonality in New Hampshire increase exposure to ticks and mosquitoes thereby increasing the risk of contracting

diseases such as Lyme disease and West Nile Virus. Excessive heat exposure also leads to dehydration and heat stroke and which can aggravate cardiovascular and respiratory illnesses and be lethal. Extreme weather leading to storms and flooding will contribute to increased outbreaks of water-borne diseases. It is critical to note that these ill-health effects will be disproportionately experienced by children, the elderly the sick, and lower income individuals. Efforts must be made to protect those most vulnerable in our state.

Public health professionals in New Hampshire are responding to the health consequences of climate change to address the hazards of rising temperatures, extreme weather events, and rising sea levels. A number of state and local agencies help communities prepare for climate events by providing heat wave warnings, air quality index alerts, water safety testing, mosquito control programs, storm warnings and coordinate detection, tracking and management of public health emergencies. Such efforts will need to expand as the health effects of climate change intensify.

As New Hampshire increases its study of and policy preparedness for climate health, we also must recognize that as an industry, the health care sector impacts the volume of greenhouse gases. The operation of hospitals and medical equipment, transportation to and from doctors' appointments, and even how we heat and cool health providers' offices can contribute to the negative effects of climate health. In fact, a 2018 study by the Commonwealth Fund shows that hospitals in the United States are associated with nearly 10% of carbon pollution.[1] While this number is significant, it also offers a meaningful opportunity to look to the health care community as a critical part of the solution to our emissions challenges and an important part of community-wide efforts to seek a net zero carbon economy in New Hampshire over time.

Addressing these critical public health issues needs to be a priority for all of New Hampshire's communities and all sectors of our economy. The organizations in support of this letter recognize both the responsibility to be engaged and the important public health effects of carbon and other greenhouse gas pollutants have in New Hampshire. SB 590 is an important first step and the health care community needs to be a part of this dialogue and planning process.

We stand ready to help.

[1] https://www.commonwealthfund.org/blog/2018/be-high-performing-us-health-system-will-need-adapt-climate-change

Griffin Roberge

From: Dan Weeks <dweeks@revisionenergy.com>
Sent: Tuesday, January 26, 2021 12:21 PM
To: Griffin Roberge
Subject: SB 71 testimony
Attachments: SB 71 Testimony - 20210126.pdf

Thank you for receiving the attached testimony in support of SB 71 for today's Committee hearing, at which I plan to briefly testify.

Dan

REVISION ENERGY

Dan Weeks | Employee-Owner | Director of Market Development
ReVision Energy, a Certified B Corp

603.679.1777 office
603.264.2877 mobile

Locations in New Hampshire, Maine, and Massachusetts
Enjoy the Sun with us: Blog | Facebook | Twitter | Instagram

"Be the change you wish to see in the world."

REVISION ENERGY

NH Senate Environment and Natural Resources Committee

Testimony in Support of Senate Bill 71

Relative to establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire.

Thank you for the opportunity to submit testimony in support of SB 71 today. This bill, perhaps more than any other under consideration in New Hampshire today, is critical for the long-term future health of our state. The implications of the proposed creation of a full legislative commission will have effects on multiple generations of Granite Staters and the environmental and economic conditions in which they will live.

The overwhelming consensus among scientists the world over, including at New Hampshire's leading universities and Department of Environmental Services, is that the climate is rapidly changing as a result of human behaviors. Most notable among these behaviors is the burning of fossil fuels, although it is certainly not the only contributing activity. Less well known is the mounting public health cost that Granite Staters and the country at large pay for our carbon emissions, which the National Academy of Sciences pegs at over 100,000 deaths and $886 billion a year from air pollution alone,

We believe there is no better time than now to form a commission to hear directly from the experts about the scope of the climate crisis and how it is affecting New Hampshire specifically. These experts will be able to present the best available science so that New Hampshire's legislators can make the most informed decisions for their constituents and secure a livable, equitable, prosperous future for our state.

We are already behind in this endeavor and risk falling even further back, to the detriment of our state's citizens. Our three neighboring states as well as our friends in Québec have already created their own road maps to decarbonize in years to come. Without a proactive, evidence-based plan, New Hampshire is in jeopardy of losing the valuable opportunities that will come along with a transition to a sustainable, clean energy economy.

Thousands of new jobs, billions of dollars in new investment, and enormous reductions in healthcare costs await the Granite State if we are bold enough to act and become a leader in this fight, rather than bringing up the rear. Indeed, we cannot afford to allow the rest of our region to capitalize on all the benefits this transition to a low-emissions economy will provide. We must act now to fortify our communities against the impacts we know the climate crisis is already delivering to New Hampshire's doorstep in the form of increased droughts, coastal flooding, Lyme disease, respiratory ailments, and economic losses to skiing, maple sugaring, and other vital industries. We have a moral obligation to protect the future of our state for the generations to come.

This includes special attention and direct consideration for the communities we know bear the heaviest burdens of these impacts. New Hampshire's Black, Indigenous, P.O.C., Refugee and

Immigrant communities are too often ignored and not given a seat at the table when decisions of great consequence are made. That cannot be the case in this situation. It is vital that New Hampshire give all communities the consideration they deserve when planning for our shared future.

Listening to the experts is the absolute bare-minimum the state can do at this point. The subsequent choices on how to act, guided by their expertise, will require courage. Courage, however, is not something that Granite Staters lack. Courage is something we have in abundance here in New Hampshire. Let us use this natural resource of ours to ensure our children, grandchildren, and generations to follow have the future they deserve. Please vote to support SB 71.

Respectfully submitted,

Dan Weeks, Director of Market Development
On behalf of ReVision Energy's 275 Employee-Owners

ReVision Energy
7 Commercial Drive
Brentwood, NH 03833

Griffin Roberge

From: Chris Kelly <ctkelly4@gmail.com>
Sent: Tuesday, January 26, 2021 12:27 PM
To: Griffin Roberge
Subject: SB 71 Testimony - Greater Manchester NAACP
Attachments: NAACP Statement on SB 71.docx; NAACP Statement on SB 71 PDF.pdf

Hi Griffin,
Please find the Greater Manchester NAACP's written testimony in support of SB 71. Please let me know if you need anything else from me.

--
Best,
Chris
860-670-6667

To: Senator Kevin Avard and the Senate Environment and Natural Resources Committee

RE: Senate Bill 71

Dear Chairman Avard & colleagues,

The Greater Manchester NAACP was pleased to have participated in the ad-hoc emissions commission over the past few months and we wish to convey our support for SB 71.

New Hampshire cannot waste another day in getting on track to deal with human caused climate change, and its consequences for the planet and our local communities. This bill would provide a forum for our legislators to hear about those consequences from experts, in their own words. With the best, most current understanding of the science presented by those most knowledgeable on the subject, our elected officials will have the opportunity to make the appropriate choices to secure an equitable, peaceful and healthy future for all.

The consequences of the climate crisis are already being felt here in our state and all it takes is a quick look around the world to see the devastation that is being visited on our fellow humans right now. This is not just a future crisis. This is a current AND future crisis. One that will continue to escalate, resulting in increasing human and economic costs.

As is often the case, these costs will fall most heavily on those who are least equipped to deal with them. We have seen the disparities in healthcare laid bare during the past year, as the pandemic has ravaged communities of color around our country and here in New Hampshire alike. Without meaningful, intentional action, the climate crisis will produce similar results. Therefore, it is essential that New Hampshire's BIPOC communities have a seat at the table as we explore the ways we can get on the road to decarbonizing our state's economy.

Make no mistake, this is an opportunity with myriad benefits for all Granite Staters. The businesses and jobs that can be created, all while saving billions in energy and healthcare costs, can power New Hampshire's economy for decades to come. We can use our transition away from fossil fuels to empower and lift up our most vulnerable, while making the state healthier, more resilient and prosperous for everyone.

The good news is that it is not too late to act. The state of New Hampshire has the opportunity to act intentionally to reduce risk and prepare for the future. More specifically you, Senator Avard and your colleagues on the Environment and Natural Resources committee, have the opportunity to act today. Your support for SB 71 can get that ball rolling on a path informed by science, to a better New Hampshire for future generations. We hope you seize this moment, support SB 71 and secure a brighter tomorrow for ALL Granite Staters.

Thank you for your consideration,

The Greater Manchester NAACP

Griffin Roberge

From: Sheila Vargas <sheila.vargas@TNC.ORG>
Sent: Tuesday, January 26, 2021 12:44 PM
To: Griffin Roberge
Subject: Testimony in support of SB 71 - The Nature Conservancy
Attachments: 2021 SB 71 Emission Commission Testimony .pdf

Hi Griffin –

I hope this email finds you well and you are not too swamped today. Below and attached is my written testimony. I did sign in in support and plan to testify briefly. I also will send this to each committee member right now.

Best,

Sheila

January 26, 2021
Senator Avard
Chair, Senate Energy & Natural Resources Committee

RE: SB 71, Establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire.

Dear Chairman Avard and members of the Committee:

Thank you for this opportunity to provide testimony on behalf of the Nature Conservancy in support of SB 71.

The Nature Conservancy's support for this legislation should not come as a surprise to the committee. Last session we also supported, SB 590 – the predecessor to today's proposed legislation – which was tabled due to the ongoing COVID-19 pandemic. Shortly after SB 590 was tabled, an ad hoc commission was formed and convened, with members representing a variety of stakeholder groups. Each member volunteered at least two hours a month for five months, to carry forward the intent of what SB 590 was seeking to achieve – exploring the critically important intersection between lowering emissions and improving public health in New Hampshire.

After five months of discussion and presentations from climate, energy, and public health experts, the 2020 ad hoc emission commission made it clear in its final report that New Hampshire should establish net zero emission reduction goals. That same ad hoc commission received public comments from residents all over the state. Those public comments, which can still be found on the ad hoc commission's website, were universal in expressing the public's demand for action on reducing emissions to be taken by this general court. As a member of the ad hoc commission, The Nature Conservancy found the science-based public health and environmental evidence presented at the commission meetings to be clear and consistent in the finding that net zero carbon emissions by 2050 is a necessary and achievable goal for New Hampshire. The science clearly states that such a goal will improve the health and wellness of all New Hampshire residents – especially those disproportionately impacted by air pollutants and the impacts of climate change.

At The Nature Conservancy, we are driven by science and the science is clear, that in order for New Hampshire to mitigate the impacts of climate change on its residents, establish a sustainable, vibrant and necessary clean energy economy and ensure a high quality of life, especially for our state's most vulnerable residents, it is critical for the state to set goals in statute to achieve net zero emissions by 2050. We understand that legislators, and others, believe more time and conversation is needed before emission reduction targets are set for our state – hence the introduction of this bill. While we are thankful to Senators Sherman, Bradley and Watters for their leadership on the ad hoc commission over the past year, and for their efforts to re-introduce SB 590 as SB 71, The Nature Conservancy, along

with the majority of members of the ad hoc commission, would have preferred to see legislation introduced this session that would have moved New Hampshire one step closer to joining our fellow New England states in adopting, and ultimately achieving, a comprehensive science-based emission reduction goal.

With that said, The Nature Conservancy asks the members of this committee to support SB 71. While not everything we would have liked, we understand that the establishment of this commission will continue to move this critical conversation forward, bring additional voices to the table and assist in establishing a concrete plan to curb emissions in our state to ensure the health and wellness of all Granite Staters.

Thank you for your time, and we are happy to answer questions.

Sincerely,

Sheila Vargas

Sheila Vargas
Government and Community Relations Manager
The Nature Conservancy in New Hampshire

Please consider the environment before printing this email.

Sheila Vargas (*She / Her)*
Government & Community Relations Manager

Sheila.Vargas@tnc.org
(603) 230-9223 (Office direct line)
(603) 848-3229 (Cell)
@Nature_NH

nature.org/newhampshire
Join the conversation!

The Nature Conservancy
New Hampshire Chapter
22 Bridge St.
4th Floor
Concord, NH 03301

The Nature Conservancy
New Hampshire

The Nature Conservancy in New Hampshire
22 Bridge Street, 4th Floor
Concord, New Hampshire 03301-4987

sheila.vargas@tnc.org
tel [603] 224.5853
nature.org/newhampshire

Senator Avard
Chair, Senate Energy & Natural Resources Committee

January 26, 2021

RE: SB 71, Establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire.

Dear Chairman Avard and members of the Committee:

Thank you for this opportunity to provide testimony on behalf of the Nature Conservancy in support of SB 71.

The Nature Conservancy's support for this legislation should not come as a surprise to the committee. Last session we also supported, SB 590 – the predecessor to today's proposed legislation – which was tabled due to the ongoing COVID-19 pandemic. Shortly after SB 590 was tabled, an ad hoc commission was formed and convened, with members representing a variety of stakeholder groups. Each member volunteered at least two hours a month for five months, to carry forward the intent of what SB 590 was seeking to achieve – exploring the critically important intersection between lowering emissions and improving public health in New Hampshire.

After five months of discussion and presentations from climate, energy, and public health experts, the 2020 ad hoc emission commission made it clear in its final report that New Hampshire should establish net zero emission reduction goals. That same ad hoc commission received public comments from residents all over the state. Those public comments, which can still be found on the ad hoc commission's website, were universal in expressing the public's demand for action on reducing emissions to be taken by this general court. As a member of the ad hoc commission, The Nature Conservancy found the science-based public health and environmental evidence presented at the commission meetings to be clear and consistent in the finding that net zero carbon emissions by 2050 is a necessary and achievable goal for New Hampshire. The science clearly states that such a goal will improve the health and wellness of all New Hampshire residents – especially those disproportionately impacted by air pollutants and the impacts of climate change.

At The Nature Conservancy, we are driven by science and the science is clear, that in order for New Hampshire to mitigate the impacts of climate change on its residents, establish a sustainable, vibrant and necessary clean energy economy and ensure a high quality of life, especially for our state's most vulnerable residents, it is critical for the state to set goals in statute to achieve net zero emissions by 2050. We understand that legislators, and others, believe more time and conversation is needed before emission reduction targets are set for our state – hence the introduction of this bill. While we are thankful to Senators Sherman, Bradley and Watters for their leadership on the ad hoc commission over the past year, and for their efforts to re-introduce SB 590 as SB 71, The Nature Conservancy, along with the majority of members of the ad hoc commission, would have preferred to see legislation introduced this session that would have moved New Hampshire one step closer to joining our fellow New England states in adopting, and ultimately achieving, a comprehensive science-based emission reduction goal.

With that said, The Nature Conservancy asks the members of this committee to support SB 71. While not everything we would have liked, we understand that the establishment of this commission will continue to move this critical conversation forward, bring additional voices to the table and assist in establishing a concrete plan to curb emissions in our state to ensure the health and wellness of all Granite Staters.

Thank you for your time, and we are happy to answer questions.

Sincerely,

Sheila Vargas

Sheila Vargas
Government and Community Relations Manager
The Nature Conservancy in New Hampshire

Voting Sheets

Senate Energy & Natural Resources Committee
EXECUTIVE SESSION RECORD
2021-2022 Session

Bill # SB 71

Hearing Date: 01/26/2021

Executive Session Date: 03/01/2021

Motion of: Committee Amendment - Combine amendments 0245s + 0321s w/changes **Vote:** 4 - 1

Committee Member	Present	Made by	Second	Yes	No
Sen. Avard, Chair	☑	☐	☐	☑	☐
Sen. Giuda, Vice Chair	☑	☐	☑	☑	☐
Sen. Gray	☑	☐	☐	☐	☑
Sen. Watters	☑	☑	☐	☑	☐
Sen. Perkins Kwoka	☑	☐	☐	☑	☐

Motion of: OTPA **Vote:** 4 - 1

Committee Member	Present	Made by	Second	Yes	No
Sen. Avard, Chair	☑	☐	☐	☑	☐
Sen. Giuda, Vice Chair	☑	☑	☐	☑	☐
Sen. Gray	☑	☐	☐	☐	☑
Sen. Watters	☑	☐	☑	☑	☐
Sen. Perkins Kwoka	☑	☐	☐	☑	☐

Motion of: _____ **Vote:** _____

Committee Member	Present	Made by	Second	Yes	No
Sen. Avard, Chair	☐	☐	☐	☐	☐
Sen. Giuda, Vice Chair	☐	☐	☐	☐	☐
Sen. Gray	☐	☐	☐	☐	☐
Sen. Watters	☐	☐	☐	☐	☐
Sen. Perkins Kwoka	☐	☐	☐	☐	☐

Motion of: _____ **Vote:** _____

Committee Member	Present	Made by	Second	Yes	No
Sen. Avard, Chair	☐	☐	☐	☐	☐
Sen. Giuda, Vice Chair	☐	☐	☐	☐	☐
Sen. Gray	☐	☐	☐	☐	☐
Sen. Watters	☐	☐	☐	☐	☐
Sen. Perkins Kwoka	☐	☐	☐	☐	☐

Reported out by: Perkins Kwoka

Notes: _____

Committee Report

STATE OF NEW HAMPSHIRE

SENATE

REPORT OF THE COMMITTEE

Monday, March 1, 2021

THE COMMITTEE ON Energy and Natural Resources

to which was referred **SB 71**

AN ACT establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire.

Having considered the same, the committee recommends that the Bill

OUGHT TO PASS WITH AMENDMENT

BY A VOTE OF: 4-1

AMENDMENT # 0605s

Senator Rebecca Perkins Kwoka
For the Committee

Griffin Roberge 271-3042

ENERGY AND NATURAL RESOURCES

SB 71, establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire.

Ought to Pass with Amendment, Vote 4-1.

Senator Rebecca Perkins Kwoka for the committee.

General Court of New Hampshire - Bill Status System

Docket of SB71

Docket Abbreviations

Bill Title: establishing a commission to develop science-based emissions reduction goals for the state of New Hampshire.

Official Docket of **SB71.**:

Date	Body	Description
1/19/2021	S	**Introduced** 01/06/2021 and Referred to Energy and Natural Resources; **SJ 3**
1/21/2021	S	Remote **Hearing:** 01/26/2021, 01:15 pm; Links to join the hearing can be found in the Senate Calendar; **SC 8**
3/3/2021	S	Committee Report: Ought to Pass with Amendment **#2021-0605s**, 03/11/2021; **SC 14**
3/11/2021	S	Sen. Avard Moved Laid on Table, **RC** 24Y-0N, MA; 03/11/2021; **SJ 7**
3/11/2021	S	Pending Motion Committee Amendment **#2021-0605s**; 03/11/2021; **SJ 7**

NH House	NH Senate

Other Referrals

Senate Inventory Checklist for Archives

Bill Number: SB 71 **Senate Committee:** ENR

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

X Final docket found on Bill Status

Bill Hearing Documents: (Legislative Aides)

X Bill version as it came to the committee

X All Calendar Notices

X Hearing Sign-up sheet(s)

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

X 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):

X - amendment # 0103s X - amendment # 0321s

X - amendment # 0245s X - amendment # 0605s

X Executive Session Sheet

X 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 _____