



For a thriving New England

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Testimony of Conservation Law Foundation in support of L.D. 1679, An Act to Establish the Maine Climate Change Council to Assist Maine to Mitigate, Prepare for and Adapt to Climate Change

Conservation Law Foundation (CLF) strongly supports LD 1679, which would provide Maine with a clear path for addressing climate change and transitioning to a strong, low-carbon economy.

CLF is a leading New England non-profit organization focused on protecting our environment and safeguarding the health of our communities. We recognize climate change as the most pressing issue of our time and have been working to decarbonize the region for decades. We advocate for policies and projects that advance clean energy and reduce energy demand while saving families and businesses money and creating jobs. We work to reduce the region's reliance on fossil fuels, to beneficially electrify our transportation and building sectors, and to modernize the region's electricity grid to better serve the needs of our changing society.

CLF's work in six states and across transportation, building, and energy sectors informs our support for LD 1679. For too long, policy-makers across the country have spoken about climate change without undertaking meaningful action to forestall its devastating impacts. Even sound decarbonization policies are often inadequately ambitious, tied to arbitrary goals, or uncoordinated with other measures. LD 1679 presents lawmakers with an opportunity to tackle climate change in a thoughtful, comprehensive manner, guided by science and a plan of action. The bill would effectively and equitably reduce carbon pollution in the state, address the impacts of climate change, and strengthen Maine's economy.

I. Maine must act now to avoid the worst impacts of human-caused climate change

In 2018, climate change exacerbated natural disasters that devastated the country, causing enormous losses – not only in terms of human lives, but in dollars spent on health care, personal property and public infrastructure maintenance and replacement, productivity losses, agricultural

assets and more. More than 1.8 million acres burned in wildfires in California, the most in the state's recorded history.¹ It was the nation's third wettest recorded year, and also saw the greatest verified amount of precipitation ever observed in 24 hours (nearly 50 inches).² The third most intense hurricane to make landfall in the contiguous United States hit Florida.³ All told, last year there were 14 weather and climate disasters costing the country more than \$1 billion each, more than doubling the long-term average—which has been exceeded in each of the last eight years.⁴

In a year of record-breaking weather extremes, multiple scientific reports underscored the critical nature of acting quickly and on a large scale to avoid the most severe impacts of climate change. Scientists can now increasingly point to human-induced global warming as exacerbating these weather events.⁵ Climate change has already increased both land and ocean temperatures in terms of annual averages as well as more frequent heatwaves.⁶ Superlative weather events are becoming the new normal – “2014 became the warmest year on record globally; 2015 surpassed 2014 by a wide margin; and 2016 surpassed 2015. Sixteen of the last 17 years have been the warmest ever recorded by human observations.”⁷ And temperature changes are linked to innumerable “alterations to human and natural systems,”⁸ including “melting glaciers and ice sheets, shrinking snow cover and sea ice, rising sea levels . . . and heavy precipitation events.”⁹

The impacts of climate change are observable not only at national or global scales, but also right here in Maine. With regard to temperature, for instance, average annuals increased by about

¹ Serna, J. “2018 was California’s worst year of fire ever, federal report confirms.” *Los Angeles Times*. (Mar. 2019). Available at <https://www.latimes.com/local/lanow/la-me-ln-california-fires-record-report-20190309-story.html>.

² National Centers for Environmental Information, National Oceanic and Atmospheric Administration. “Assessing the U.S. Climate in 2018.” Available at <https://www.ncei.noaa.gov/news/national-climate-201812>.

³ *Id.* “Hurricane Michael . . . was the third most intense hurricane to make landfall in the contiguous U.S. based on central pressure and the fourth most intense based on wind speed.”

⁴ *Id.*

⁵ Hoegh-Guldberg, O., D. Jacob, M. Taylor, M. Bindi, S. Brown, I. Camilloni, A. Diedhiou, R. Djalante, K.L. Ebi, F. Engelbrecht, J.Guiot, Y. Hijioka, S. Mehrotra, A. Payne, S.I. Seneviratne, A. Thomas, R. Warren, and G. Zhou, 2018: Impacts of 1.5°C Global Warming on Natural and Human Systems. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)], at 177. Available at https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15_Chapter3_Low_Res.pdf.

⁶ *Id.*

⁷ USGCRP, 2018: *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II* [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 1515 pp. doi: 10.7930/NCA4.2018, (“Fourth National Climate Assessment”), Chapter 2. Available at <https://nca2018.globalchange.gov/chapter/2/>.

⁸ Allen, M.R., O.P. Dube, W. Solecki, F. Aragón-Durand, W. Cramer, S. Humphreys, M. Kainuma, J. Kala, N. Mahowald, Y. Mulugetta, R. Perez, M. Wairiu, and K. Zickfeld, 2018: Framing and Context. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)], at 53. Available at https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15_Chapter1_Low_Res.pdf.

⁹ Fourth National Climate Assessment, Chapter 2, available at <https://nca2018.globalchange.gov/chapter/2/>.

3.0°F between 1895 and 2014, extending Maine’s warm season by approximately two weeks over the same period.¹⁰ Such a seemingly small temperature differential has far-reaching consequences, including, for instance, creating more suitable habitat for deer ticks, resulting in more than a ten-fold increase in incidences of Lyme disease in the last 18 years alone.¹¹ Further, the spread of winter ticks threatens Maine’s iconic moose population.¹² And our moose are not alone in their susceptibility to climate change; a 2013 report concluded that two-thirds of Maine’s plant and animal species are either highly or moderately vulnerable to climate change.¹³ Meanwhile, higher annual precipitation levels as well as more intense rain events present myriad implications including more stormwater runoff contaminating our water ways. These changes have significant costs for people and businesses in the state—from property value reductions due to flooding,¹⁴ to increased challenges for Maine’s agricultural industries due to variable weather and more pests,¹⁵ to winter-sport businesses suffering from unreliable snowpack.¹⁶

At the global, national, and state-level, recent scientific reports coalesce around some important themes: we are already experiencing the impacts of human-caused climate change, which is costing us in terms of our health and welfare, our traditional industries, our natural resources, our infrastructure, and our property values, among other losses.¹⁷ In the absence of significant mitigation action, these impacts are projected to worsen, and dramatically. The projected costs associated with climate change on our current trajectory are staggering; by the turn of the century in the United States, climate change will cost some sectors more than hundreds of billions of dollars each year.¹⁸ Yet, despite the alarming nature of these reports, perhaps their most

¹⁰ Fernandez, I.J., C.V. Schmitt, S.D. Birkel, E. Stancioff, A.J. Pershing, J.T. Kelley, J.A. Runge, G.L. Jacobson, and P.A. Mayewski. 2015. *Maine’s Climate Future: 2015 Update*. Orono, ME: University of Maine, at 2-4. Available at <http://tinyurl.com/yyfl29u3>.

¹¹ Maine Tracking Network, “Number of Lyme Disease Cases Maine 2001-2017.” Available at <http://tinyurl.com/y62unwf5>.

¹² See, e.g., Hushaw, J. et al., *Manomet, Climate Change and Wildlife Part II: Species Highlights* (Mar. 2016), available at https://www.manomet.org/wp-content/uploads/old-files/Wildlife_Bulletin_PartII%5b1%5d.pdf.

¹³ Fernandez, I.J., C.V. Schmitt, S.D. Birkel, E. Stancioff, A.J. Pershing, J.T. Kelley, J.A. Runge, G.L. Jacobson, and P.A. Mayewski. 2015. *Maine’s Climate Future: 2015 Update*. Orono, ME: University of Maine (citing Whitman, A., et al. 2013. *Climate Change and Biodiversity in Maine: Vulnerability of Habitats and Priority Species*. Brunswick, ME: Manomet Center for Conservation Sciences. manomet.org/publications-tools/climate-services), at 5. Available at <http://tinyurl.com/yyfl29u3>.

¹⁴ First Street Foundation, “Flood iQ Adds New England States” (Jan. 2019) (“Homes in the state have lost more than \$69 million in unrealized relative property values since 2005.”). Available at <https://medium.com/firststreet/fiq-new-england-states-629e5311911a>.

¹⁵ Fernandez, I.J., C.V. Schmitt, S.D. Birkel, E. Stancioff, A.J. Pershing, J.T. Kelley, J.A. Runge, G.L. Jacobson, and P.A. Mayewski. 2015. *Maine’s Climate Future: 2015 Update*. Orono, ME: University of Maine, at 8-11. Available at <http://tinyurl.com/yyfl29u3>.

¹⁶ *Id.* at 11.

¹⁷ For extensive discussion of impacts and costs of climate change to Maine, see generally Fernandez, I.J., C.V. Schmitt, S.D. Birkel, E. Stancioff, A.J. Pershing, J.T. Kelley, J.A. Runge, G.L. Jacobson, and P.A. Mayewski. 2015. *Maine’s Climate Future: 2015 Update*. Orono, ME: University of Maine. Available at <http://tinyurl.com/yyfl29u3>. For extensive discussion of impacts and costs of climate change globally, see generally the IPCC Special Report on Global Warming of 1.5oC, available at <https://www.ipcc.ch/sr15/>. For extensive discussion of impacts and costs of climate change to the United States, see generally the U.S. Fourth National Climate Assessment, available at <https://nca2018.globalchange.gov/downloads/>.

¹⁸ See generally U.S. Fourth National Climate Assessment, available at https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf.

important take-away is not how bad the consequences might be if we do nothing, but that we still have the opportunity to avoid the worst-case scenarios—if we act now.

II. LD 1679 would harness Maine’s natural resources to grow the state’s economy while tackling climate change

Maine’s economy and way of life are inextricably tied to the “health and productivity of Maine’s forests, fields, lakes, rivers, and the marine waters of the Gulf of Maine.”¹⁹ The science is clear; our natural assets are disrupted by climate change, with impacts projected to increase to dire levels if we continue along our current trajectory. Incremental or piecemeal action to stave off climate change is not enough. The state needs an over-arching strategy for achieving society-wide emissions reductions. LD 1679 presents the Legislature with just such an approach. This bill would create a thoughtful, comprehensive path forward to ensure climate change mitigation necessary to achieve science-based emissions levels while developing adaptation strategies and pursuing opportunities to grow Maine’s economy and benefit Maine people and businesses.

LD 1679 would build on and improve a framework already in existence under Maine’s Climate Change chapter, enacted in 2003. The statute created goals for reducing greenhouse gas pollution, including a long-term reduction goal of 75% to 80% as may be required.²⁰ It also initiated development and adoption of a climate action plan to meet those goals.²¹ This directive resulted in a year-and-a-half-long process involving around 100 diverse stakeholders who worked together to study and explore more than 90 options for reducing carbon pollution from the state.²² For each alternative, the 2004 climate action plan identifies emissions reductions as well as costs or savings in financial terms.

Under LD 1679, the state’s greenhouse gas goals would be strengthened to align with prevailing science. A climate change council composed of government officials and Mainers—fishermen, scientists, and tribes, to name a few represented interests—would oversee a quantitative analysis of various pathways for achieving those targets, which would inform development of a new climate action plan. This framework would ensure that integrated policies to combat and adapt to climate change are implemented, while accounting for the many diverse needs of Mainers and their varied communities. A well-charted trajectory would guide future state decisions, such that policies could build on and complement one another, rather than adding layers of complexity due to isolated development. This comprehensive structure, driven by defined carbon pollution reduction levels, would move the state toward a better informed, more cohesive approach to climate change.

The process of developing a climate action plan would accomplish several things *in addition* to effectively tackling climate change. First, by establishing long-term goalposts and directing analysis of cost-effective and technologically feasible methods for achieving those over a thirty-

¹⁹ Jacobson, G.L., I.J. Fernandez, P.A. Mayewski, and C.V. Schmitt (editors). 2009. *Maine’s Climate Future: An Initial Assessment*. Orono, ME: University of Maine, at 3. Available at <http://www.climatechange.umaine.edu/mainesclimatefuture/>.

²⁰ 38 M.R.S. § 576.

²¹ 38 M.R.S. § 577.

²² Maine Department of Environmental Protection, “A Climate Action Plan for Maine” (Dec. 2004).

year time period (with interim targets), it would facilitate understanding and selection of the most economic path forward. The chosen path could even be a gradual one, allowing for transitions to occur over time rather than as the result of unplanned regulation that becomes abruptly necessary. Businesses, industries, and markets could rely on the trajectory and the mechanisms plotted out in advance and could comport themselves with anticipated regulatory action. With thoughtful, integrated and long-term planning, the state could foster an environment in which existing businesses and industries can transition, adapt and thrive.

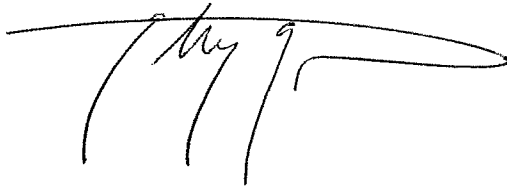
LD 1679 also presents substantial opportunities for *new* businesses within the state. The bill's foundation would provide a powerful catalyst for innovative approaches to meeting the state's climate goals and building a clean future in energy, transportation and heating technology, creating new jobs and saving consumers money. Renewable technologies, energy efficiency, battery storage, and electrification of our cars, trucks and buildings all offer growth opportunities that are driven by the bill's emphasis on growing Maine's economy while using our natural resources. These fields offer good jobs and economic development opportunities to homeowners and businesses interested in energy independence, freedom from volatile fossil fuels, and investment opportunities. Further, LD 1679 allows for development of new revenue streams for Maine's forestry industries, farmers, and landowners who could profit by managing their lands to better absorb carbon into plants and soils.

Finally, LD 1679 would safeguard an equitable process. The climate change council would ensure that Maine people and businesses would have a say in formulating the state's path forward, and the bill prioritizes the welfare of Maine's citizens. In formulating the climate action plan, the climate change council would consider minimizing deleterious effects on low-income and moderate-income persons and supporting economic sectors facing the biggest barriers to emissions reductions.

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CLF thanks the Committee for this opportunity to present testimony in support of LD 1679. Please do not hesitate to contact me with any questions or for further information.

Sincerely,

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

Emily K. Green