Written testimony to Senate Education Committee -- April 12, 2022 Submitted by Andrew M. Shapiro -- andy.shapiro@veep.org -- 802-522-0165 Vermont Energy Education Program (VEEP) Board member and Energy Engineer

The Importance of Funding Energy and Climate Education: The Climate Action Plan identifies an investment in energy and climate education as a core strategy within its cross-cutting pathways (pg. 227). We echo the Climate Action Plan's sentiment that energy and climate education offers <u>"many benefits and huge cost of inaction" and that an "investment in education, especially climate education is a no regrets policy"</u>. While this is an area where it is inherently hard to measure impact over time, we know from our 4 decades of experience in Vermont and from research¹ that high-quality energy and climate education moves the needle toward sustainability by empowering young people to be conscious consumers and engaged advocates.

About VEEP

VEEP has a staff that now includes 6 educators in Vermont, delivering exemplary energy and climate change educational resources to teachers and schools. We have been in existence almost 40 years, starting with a single founder, then a second for about 10 years, then gradually building our offerings and staff and reach to all of Vermont. Our VEEP educators reside across the state and provide locally-based support to schools in their regions. This model ensures that we can develop relationships with schools and educators across the state. We also have another two staff in New Hampshire, but funds requested here are for Vermont work only. We offer programs for modest fees, but are always careful to let schools know that we will offer services regardless of schools' ability to pay. Our mission statement is: "to build a deep understanding of energy through education, encouraging choices that result in sustainability in our communities, economy and environment." VEEP does not promote any point of view about energy sources – we provide data and understanding of the underlying science so that students may build informed viewpoints. We always offer ways for students to explore what they can do, as a way to counteract the gloom youth feel about climate change. See more at www.veep.org

Ready to Act: We believe that \$900,000 will be the resource injection we need to <u>launch an</u> <u>ambitious plan of offering every single Vermont K-12 school impactful energy and climate</u> <u>education by 2030</u>. We are in a fortunate position as a state to not have to build a climate and energy education program from scratch. VEEP offers a robust portfolio of programs that are:

- Next Generation Science Standards-aligned
- Tried and tested with a large network of engaged educators and students
- Tailored to meet educators needs to lessen their burden during a challenging moment
- Built to reach a wide range of audiences from elementary, middle, and high school to CTEs (Career and Technical Education centers)
- Vermont-relevant, including topics including climate and energy science, renewables, transportation, home heat, electricity, youth climate and energy action.
- Based on 40 years of mission-driven experience in building a deep understanding of energy and climate.

¹(Cordero, E. C., Centeno, D., Todd, A. M., & Pausata, F. S. R. (2020). The role of climate change education on individual lifetime carbon emissions. PLoS ONE, 15(2) doi:10.1371/journal.pone.020626)



During the pandemic, teachers have been tapped beyond measure. Despite the challenges, we have been heartened by teachers' sustained commitment to bringing energy and climate education to their students, and we have been honored to support them toward that goal. Across virtual, hybrid, and in-person formats, VEEP has continued to bring professional learning opportunities, interactive workshops, equipment, and action programs to schools for a hands-on/minds-on learning experience. Federal funds were used to help us keep all our staff and to pivot toward virtual learning, but we are still recovering from the loss of ability to actually be present in schools. The pandemic has served to move us in the direction of equitable access and given us the confidence to reach further across the state. We have regional educators serving all parts of the state and developing lasting relationships with schools in their regions. With the right funding and staffing, we know that we can reach further and make a deeper impact.

Why \$900,000? In the last decade, we have worked with hundreds of teachers and thousands of students in more than 80% of Vermont's schools. We have diligently administered Efficiency Vermont's Energy Literacy Program (ELP) for the state of Vermont. While our ELP funding has gradually reduced from roughly \$230,000 in 2015 to \$140,000 in 2022, our programs have steadily grown in scope, reach, and impact with supplementary support from foundations and other organizations. <u>Striving toward our goal of reaching all Vermont schools with climate and energy education programs</u> is an ambitious but achievable goal and our modeling anticipates a need of \$900,000. We have modelled the cost for us to reach all Vermont K-12 schools by 2030. We anticipate that a funding injection of \$900,000 is what will help us achieve this goal. We would still strive toward the goal of working with all Vermont K-12 schools but it would take much longer with less funding.

EVT funding reduced

Our programs have grown considerably in reach and scale over the years since Efficiency Vermont launched the Energy Literacy Program (ELP). But forces beyond our control have reduced the level of funding allocated toward the ELP, which was funded at \$230,000 per year in 2015 and is now supported at \$140,000 per year. The additional funds we are requesting that would allow us to reach more schools.

What exactly would we do with those dollars?

This funding will go toward meet our staffing needs in order to reach our goal of bringing this range of programs to all VT schools by 2030. We will offer our range of high quality, Next Generation Science Standards-aligned, "hands-on/minds on" energy and climate education programs on a wide range of topics designed for grade levels K-12. We will offer workshops, curricula, and equipment kits and strive to empower teachers through our personalized teaching partnership approach. We will bring more educators to our professional development programs that help meet teacher's needs while furthering our mission of moving communities to sustainability through impactful and high quality climate and energy education. These funds will allow us time to find other sources of funding to continue this level of service to Vermont.



With this new funding we will produce school materials that focus on the Climate Action Plan and current status of implementation. Below please find a graphic representation of VEEP's existing curriculum units. Blue circles indicate appropriate grade levels. Each unit has a complete kit of materials, customized for the number of students, so all students have hands-on time and a complete teacher manual using Next Generations Science Standards. VEEP teacher training, teaching partnerships with our staff and ongoing support are also available.



