The Climate and Energy Literacy Initiative: A Call To Action

The Climate Literacy Network, which was formed to support the development and deployment of *The Essential Principles of Climate Literacy* and related education, outreach and communication efforts, calls for a nation-wide initiative to increase broad public understanding of the climate system and human impacts, especially the role of burning fossil fuels and other human activities, on climate.

The recently announced plans by President Obama to make government buildings and schools energy efficient a high level priority offers an enormous nation-wide learning opportunity to increase our individual and collective literacy about climate and energy and how they are intrinsically connected. The ***Climate and Energy Literacy Initiative*** calls for energy education programs customized for the location and occupants of all schools and buildings benefiting from this program. Such a program will help balance the gender gap in green jobs and leverage the existing largely ad hoc education programs and materials relating to climate and energy literacy.

Looking back at five decades of science education relating to climate in general and climate change in particular reveals that basic climate and energy science has not been well addressed in science education curricula or in national and state education standards. While clearly not everyone needs to be an expert in climatology and alternative energy in order to make informed choices, our nation's current climate and energy awareness has room for substantial improvement. Individuals and communities need to know the basics of climate science and how our current energy use impacts climate as well as how to engage in personal and civic decision-making around energy use and its impacts. More specifically every high school and certainly every college graduate should know the essentials of climate science, have an understanding of why it is imperative to reduce carbon emissions for the sake of future generations, and have skills and understandings needed to engage in citizen decision-making that will enable local, state and federal agencies to reverse current trends regarding energy choices and climate change.. That is not the case today. For example, utility companies promoting reduced carbon emissions through the use of smart meters and energy efficiency find that many, if not most, consumers do not understand how their electricity is generated or appreciate the dominant role played by fossil fuels in our current energy economy and how that relates to climate change. There is currently widespread confusion in the minds of many about how carbon and climate are connected and what can be done to change our future. We as a society need a Climate & Energy 101 course to be better grounded in the nuts and bolts of how we are influenced by climate, and how we influence climate.

To be sure, the challenge of significantly increasing the public's climate literacy and our understanding of the connection between energy use and climate is a daunting one. There are many misconceptions and much misinformation about the causes of human-induced climate change and how to address it, especially around goals of reducing our energy infrastructure's reliance on fossil fuels. Polling research indicates that most American adults believe climate change is happening. It also shows there is widespread confusion about the causes of current climate change, namely human activities, and the degree to which there is scientific consensus that humans have a significant impact on the climate system. This consensus is very strong.

A high-profile, federal ***Climate and Energy Literacy Initiative*** that couples energy efficiency with climate and energy education programs will help foster climate consciousness, energy intelligence and related decision-making skills, and as a result increase our commitment, willingness, and ability to address the causes of climate change and inefficient energy use. The *Essential Principles of Climate Literacy* (http://www.climateliteracynow.org) provides an authoritative, comprehensive climate science framework for educators and communicators. There are also some excellent existing online resources that provide a good balance of climate and energy science, such as the Keystone "CSI: Climate Status Investigations" (http://www.keystonecurriculum.org/). However, the array of materials and the supporting professional development programs will need to be customized for different regions and audiences and deployed on large and small scales to address the substantial gaps that currently exist. A robust ***Climate and Energy Literacy Initiative*** will also help integrate and energize the emerging climate science literacy efforts of the federal Climate Change Science Program, including key agencies such as NOAA, NSF, EPA, and NASA, leveraging existing energy education programs, such as those from the DOE National Renewable Energy Laboratories, to address these new national priorities on climate change and energy.

The proposed ***Climate and Energy Literacy Initiative***, by focusing on "thinking globally and acting locally," will support and add value to municipal, state, regional, national and international climate action plans and related efforts to reduce greenhouse gas emissions, and prepare individuals and communities for adapting to climate change. It can do this by taking immediate advantage of existing science and environmental education networks and facilities, including science and technology centers, education and science professional associations, public health professionals, youth corps such as AmeriCorps, extension services, faith communities and relevant NGOs. Improved climate and energy literacy will not in and of itself resolve the climate crisis. But a vigorous educational initiative, beginning in public buildings and schools that benefit from a program to improve their energy efficiency, which addresses key misconceptions, helps people develop decision-making skills and abilities, and fosters a climate and energy savvy workforce, will ensure that our nation has a baseline of climate and energy literacy that will empower broad efforts to reduce and stabilize greenhouse gas emissions. It will also further a climate of collaboration, an energy of enthusiasm to ensure that our communities are well informed, prepared, and able to mitigate and adapt to changes in our energy resources and climate.

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