



The Journal of Sustainability Education

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CALL FOR PAPERS – JOURNAL OF SUSTAINABILITY EDUCATION

2014 FALL THEME: BEYOND CONSERVATION: REIMAGINING THE PURPOSE OF ENERGY EDUCATION

GUEST EDITORS:

Justin Hougham, Ph.D., justin@nararenewables.org

Jan De Waters, Ph.D., dewaters@clarkson.edu

Energy is an essential resource that has provided the foundation for our current economic and social systems. A major challenge to human quality of life in the 21st century is going to be our successful ability to shift the burden of our energy resources and the way we use them, as well as how we adapt our economic and social systems to accommodate changes in resource availability in the face of rising energy costs. So-called “early adopters” have shown that the challenge can be met technologically –on the production side through widespread adoption of solar and wind; and on the use side through changes in building, transportation and food customs. The real challenge is promoting widespread change in people's behaviors and attitudes regarding energy use along with the political and social will to enact system-wide change. In other words, it's a perfect challenge for sustainability education.

HOW GOOD IS THE CONSERVATION MATH?--A SCENARIO

While efforts to frame energy literacy as a matter of resource conservation are needed and certainly easy to be found on the “front line” of energy education materials, this cannot be the full extent of content or action related to education for an energy literate citizenry.

For example, one of the most common cases for increasing energy conservation is cost savings. Consider that the average U.S. residential electric bill is roughly \$100 a month, depending on where you live (lowest total use in Maine, highest in Louisiana). Then consider that, with the purchase and use of more efficient appliances and with some improved conservation behaviors such as vigilantly turning off lights, powering down computers, and so on, a family may reduce their bill by 10% or even closer to 20% in some cases. That sums up to a cost savings of about \$180 a year – certainly a ‘real’ cost savings that everyone should enjoy. Yet this savings comes as a result of convincing every household member to adjust their behavior dozens of times a day, every day, for a year. For a household of four people, that could amount to thousands of actions or decisions a month, and over the year tens of thousands of “if you are the last out turn the lights off” and “energy conservation is in your hands” messages with often diminishing follow-through. While these accessible behaviors are undoubtedly something we should all strive for, we should keep in mind, as we open up a dialogue on energy education,

that this savings of \$180 is a small reward considering the thousands of actions required to achieve it. Clearly our “savings per action” is too low; we need something more.

WHERE DO WE GO FROM HERE? REIMAGINING ENERGY EDUCATION

- How do we get solid energy data into people’s minds and change the vernacular of everyday conversation about energy?
- How do we alter people’s behaviors to accommodate the deeper level understanding about energy?
- Where are successful advances in this effort happening?
- What are best practices in energy literacy education?

If we come away from this math exercise saying “gosh, that’s just not a lot of money for the effort,” then we are a little closer to unpacking the basic elements of energy literacy that we need, including 1) energy is really cheap; 2) saving it, while a good habit, is not a convincing economic proposition without considering that; 3) there is a richer case to be made beyond conservation that includes where our energy comes from, how it is transferred and used, what are the true costs of a given energy type and what are the efficiencies of a given system. Deeper still, strong approaches to energy literacy will address eco-social justice, advance community resilience, are built upon sound STEM (science, technology, engineering, and mathematics) fundamentals, and include the use of real-world data sets that maintain transparency of the whole costs in an energy system.

For this issue of the Journal, we’ll be looking for contributions that: highlight and assess energy education initiatives; deepen our understanding of the relationships between our energy, economic, social, and ecological systems; and develop recommendations for systems-based behavior and social change efforts. We welcome a range of submission types, including academic research papers, opinion pieces, case studies, and media reviews. We especially encourage quality alternative media such as digital postcards, photo collages, video interviews and discussions, or other formats that contributor’s might suggest. Please consider engaging this call in any of the following ways:

WAYS TO CONTRIBUTE TO THIS SPECIAL ISSUE ON ENERGY EDUCATION

- 1) Submit a contribution as a scholarly paper or in a nontraditional format that:
 - addresses one of the sub-themes (see below)
 - tackles one or more of our integrating questions (see below)You can submit these contributions through our online submission system (RATS).
- 2) Fill in the energy education template. Send your completed template to the editor [link]
- 3) Send us a digital postcard. Send a YouTube compatible file to the editor, or request access to upload yourself.[link]

Larry M Frolich, Ph.D., JSE Editor, editorjse@gmail.com
Clare Hintz, Assistant Editor for Energy Education, elsewherefarmherbster@gmail.com

ENERGY EDUCATION SUBTHEMES AND INTEGRATING QUESTIONS

We welcome submissions on any topic related to energy education. However, contributors are encouraged to consider these sub-themes as suggestions to help shape your submission:

- Sub-theme 1: green energy solutions
 - energy in the context of place consciousness
 - new and emerging green technologies in energy
 - data sets and analysis of transmission, storage, use, and user interfaces
 - content and research disciplines in emerging energy sectors

- Sub-theme 2: energy literacy pedagogies
 - Assessment
 - Programming
 - curricular approaches, including energy literacy principles (DOE, standards alignment, STEM, sequencing of topics and concepts that scaffold energy problem solving)
 - public (nonformal) education

- Sub-theme 3: energy in the context of global citizenship and climate impacts
 - impacts and considerations with respect to emerging economies
 - interconnectedness between global climate solutions and energy futures

These Integrating Questions might also guide your contribution.

1. How can place-based education be used to integrate energy literacy, emerging technologies, and action research?
2. How do we assess curricular approaches to energy literacy for fostering innovation?
3. How can energy education initiatives in the global north and south work together to foster dialogue around a common future in the context of climate change?
4. How do we foster energy literacy in the context of eco-social justice?
5. How do we develop new energy innovators in the context of ecological sustainability?
6. How can we make transparent to the public the possible energy choices and their ecological, social, and economic implications in the context of complex systems?