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Introduction to the Special Issue

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Introduction to the Special Issue

The sustainable energy utility (SEU) is an entirely new institution: It helps communities invest in using less conventional energy and more renewable energy. Unlike the utility we have known for years, which aims to sell everyone more energy, the SEU proposes to greatly reduce our energy needs and costs. Its effects are far reaching and broad, from saving money for consumers to reducing carbon emissions, creating jobs, and spurring economic development—and that is just the tip of the iceberg.

Energy efficiency has long been considered the “low-hanging fruit” in our fight to combat global warming. According to a recent *Time* magazine article, author Michael Grunwald (2008) points out what many in the energy field have known for decades, namely, that energy efficiency is “much less expensive, destructive and time-intensive” to realize than a supply-side strategy that relies mainly on “new drilling or new power plants.”

Harvesting our energy efficiency and conservation potential will create hundreds of thousands of new jobs that cannot be outsourced. Harvesting renewable energy at our buildings and farms will bring additional, substantial reductions in energy use and more jobs. Combining these options in a concerted campaign to green our energy sector will save citizens and businesses real cash in significant amounts. It is believed the United States can cut its energy use by nearly 30% through an aggressive promotion of efficiency, conservation, and distributed renewables. This would amount to an annual savings of nearly \$350 billion—equal to almost one half of the economic stimulus package proposed by President Obama to pull the country out of one of its deepest recessions.

The energy field has been stuck in an antiquated system of “silo” organizations in which each aspect of energy—such as fuel sources, electricity, transportation, and education—is kept separated. This cumbersome and outdated approach has caused frustration and confusion when one attempts to address renewable energy, conservation, and efficiency opportunities. The Delaware model of the SEU, by contrast, is the first utility of its kind that has the flexibility to act synergistically in all fuel sectors and across all uses.

By encouraging consistent communication among users and providers, the Delaware SEU can aggressively change the state’s energy future in economic, environmental, and social terms. The model is now being studied for implementation in several foreign countries. U.S. cities such as Washington, D.C. (which has passed an SEU law modeled on the Delaware approach), and Philadelphia (which is creating a sustainable energy authority along the lines of the Delaware SEU) and states (including Maryland and Washington) are actively considering SEU-style options.

We are currently living through some of the most trying economic times in modern history, including unemployment rates in industrialized countries creeping toward 10%. The latest reports from scientists suggest that climate change is accelerating faster than expected, making the task of cutting greenhouse emissions (coming mostly from our energy sector) an urgent one. The time for action is today. We are convinced that a key option for creating a low-carbon and economically vibrant society is the SEU. It has a special advantage of being adaptable to the needs of countries, states, and cities seeking to reduce fossil fuel consumption while achieving a host of additional goals.

This issue of *Bulletin of Science, Technology & Society* explores how the SEU and its tenets can serve energy and carbon reduction goals and, at the same time, address the development concerns in places such as Africa and India. With more than one half of the human population living on this planet with very little on which to survive, the articles applying the SEU idea to the real energy needs of Africa and India show that the old assumption of conflicts between environment and development should no longer govern our thinking. The issue also offers the reader practical ideas for achieving urban sustainability in perhaps the most difficult region to achieve this goal—the megacities of Asia. The study of an SEU for Seoul, South Korea, can give us hope that the daunting task of reconstructing the energy foundations of urban development is possible. Many sustainability experiments are under way in Europe, a region deservedly recognized for often being further ahead on the policy curve in these matters. The admirable efforts of

Woking, in the United Kingdom, to chart a new path are instructive of how modern energy needs can be met while dramatically cutting greenhouse emissions. Finally, the article on Austin, Texas—home to the “net zero” energy buildings standard and one of the most progressive urban renewable energy policies in the United States—shows how this American pioneer has effectively put into place goals and practices compatible with an SEU-type approach *before* we in Delaware had even coined the phrase!

It is a genuine pleasure to offer an introduction for this special issue on the SEU. It has been a long journey to create in law a new utility that can compete with the energy mandarins of the 20th century for the right to support our communities’ efforts to change their

lives and environmental relations in the 21st century. We are encouraged by the appearance of articles applying the idea from across the globe. We salute the authors and pledge our support as they work on behalf of an overdue energy revolution.

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Reference

Grunwald, M. (2008, December 31). America’s untapped energy resource: Boosting efficiency. *Time*, pp.