

## About Mark Sardella (*Updated April, 2008*)



I have been researching and developing energy policies and projects since 1993, always with a focus on how energy systems can be designed and built to provide benefits to communities. I am fascinated by the way social and political structures tend to mirror energy structures: Communities with decentralized energy systems

that are owned and controlled within the community tend to have more equitable economies and be more democratic, while communities with central power systems that are owned and controlled by outside investors tend to have greater wealth disparity and higher concentrations of political power. So my work is dedicated to helping communities develop energy systems that empower citizens and allow greater decision-making at the local level.

Before working in energy I developed spaceflight instruments for the GOES weather satellite platform, and also for the University of Maryland's Department of Space Physics. I designed and built high-precision mechanisms, structural housings, and electronics enclosures for spaceflight, and developed mathematical models and test procedures for ensuring the performance of assemblies that rotate for long periods in the vacuum of space.

My early work in energy was with off-grid solar and hydroelectric power systems, and CNN even featured one of my early micro-hydroelectric power systems on their "Earth Matters" program. When grid-connected solar power systems became possible I moved to Santa Fe and installed the first residential net-metered system in the state. I joined the New Mexico Solar Energy Industries Association (NMSEIA), which had 26 solar businesses as members, and led the fight to stop Public Service Company of New Mexico (PNM) from building the world's largest solar power plant in 1998. I showed the Public Utility Commission that NMSEIA members could install three times the capacity for the same money, and the project died shortly after the New Mexican ran a story about our group's objections to the project.

In 1998 I co-founded the Southwest Energy Institute as well as "People for Independent Energy" which had two objectives: stop electricity deregulation, and provide every New Mexican with the legal right to generate electricity while connected to the power grid. (Parallel operation with the utility grid is still a privilege

in this country.) Bill Althouse and David Bacon were co-principals in the effort, and although we fell short of our ultimate goal we inspired a lot of articles and lectures on the benefits of distributed generation. Electricity deregulation died a natural death the following year after Enron and California teamed up to demonstrate how it worked, but investor-owned utilities still have the right to deny distributed generation projects today.

Southwest Energy Institute went on to research and promote many energy policies, and as its director I testified before the New Mexico Legislature, Public Regulation Commission, and State Energy Office, as well as the Santa Fe City Council and Board of County Commissioners. In 2001 the Union of Concerned Scientists enlisted me to lobby on Capitol Hill on the role of renewable energy businesses in the campaign against global warming. Around that time I also worked with the Institute of Electrical and Electronics Engineers to develop Standard 1547, which defines the technical requirements for integrating distributed energy resources with the electric grid.

For the next two years I was the Technical Director for Rebuild New Mexico, a joint program of the New Mexico State Energy Office and the U.S. Department of Energy, and I audited buildings around the state and wrote reports identifying more than \$3 million in annual energy savings for New Mexico businesses.

I co-founded Local Energy in 2003 to help communities develop energy self-reliance in preparation for higher energy costs and declining oil and gas supplies. As a 501(c)(3) nonprofit organization, Local Energy carried out more than \$2 million in research, education, and demonstration projects over the next four years, all focused on better defining the relationship of energy to the local economy. With funding from the U.S. Department of Agriculture, we showed the feasibility and benefits of using local biomass resources to create self-reliance in energy for downtown Santa Fe. I presented the results at the Central European Biomass Conference in Austria in 2005, and at home I received a Santa Fe Future award for the effort.

Currently I research and write about energy and policy, and I teach and lecture as often as I can. I maintain my engineering license in New Mexico and occasionally do technical consulting as well. You can contact me at [marksardella@gmail.com](mailto:marksardella@gmail.com).