

Reaching to the sun in hard times

By Peter Forbes, co-founder, Center for Whole Communities
Knoll Farm, Fayston, Vermont

People have asked me recently how we could have found the time, money and courage to make these big changes in such difficult times. How could we convert a nonprofit business, a residential learning center, and a farm to run and heat on energy we produce on-site here in Vermont in such an unstable economy? My answer is, how could we not?

Three years ago, I saw *The End of Suburbia*, a 2006 documentary film by the Toronto-based film-maker Gregory Greene. I returned home to Knoll Farm that evening on-fire to make some changes in our lives. I had always thought that our 200-year-old farm could sustain us and our community no matter what happened across America and the planet. Knoll Farm includes 400 acres with barns, outbuildings, and farmhouse on the national register of historic places. Since its settlement in 1804, this land has been farmed and powered primarily by sun and human labor. In the 1940s this farm, like most across America, became dependent on fossil fuels at increasingly high financial and environmental costs. When I saw *End of Suburbia*, I realized for the first time how our farm's dependence on petroleum put all of our dreams for our farm and for Center for Whole Communities at tremendous risk. Not only were we spending about \$12,000 per year on petroleum-based utilities, but we were convening leaders to talk about healing the planet while doing our part in the process to destroy the planet. This terrible irony had to stop. With hundreds of environmental and social justice leaders coming through Knoll Farm every year, we simply had to more fully "walk our talk" and convert our systems to run once again on renewable resources – the sun, wind, and wood of this land.

In 2007, Center for Whole Communities made this conversion a priority. Though we didn't yet have the capital we did have a strong vision. We partnered with Jeff Schoellkopf and Andy Shapiro, Vermont leaders in architecture and energy engineering, to design the systems and renovations that would be needed. This early process involved understanding the existing energy uses of our operation, learning how to significantly reduce those uses through conservation, and finally how to meet that reduced demand with renewable energy produced on site. We concluded we would need a super-efficient gasifying wood boiler system to heat the main buildings; super-insulation—the primary source being packed cellulose and recycled newsprint—of the small barn that would house the boiler and our new offices, and a 8KW solar panel system on the hillside. The renovated building would also be designed with natural and efficient lighting, heat recovery technology, and a composting toilet to save energy and water. At the same time we explored the possibilities of micro-hydro on our springs and wind power on our hillsides. In the end, we had a \$580,000 price tag to meet, approximately \$80,000 of that for the solar panels and the heating system.

Then the economy began to collapse. Fortunately, with this strong vision of what was possible, financial support followed from our alumni and supporters all over the country. We figured out all the ways to do this project as inexpensively as possible. Taz Squire,

our land steward, became the general contractor and three local craftsmen went on our payroll to handle many aspects of the renovation. As we went into the late fall of 2008, we heard that local mills were struggling from lack of demand for building supplies, and we realized that by using all local materials and labor were really helping those in our community to make it through a very difficult economic time. There was terrific team spirit and a strong desire to make this conversion work.

On June 4th, 2008 we received a permit from the Vermont Public Service Board to be an energy producer, and we switched on our brand-new 8KW solar array. In July our bill from Green Mountain Power was -\$285.00. We were powering our email by the sun, and making energy credited in the exchange! Best of all, we are feeding into the electric grid clean energy produced on the south-facing hills of Knoll Farm. And, of course, the work is far from over. We're still exploring the possibility of additional wind power and expanding our solar array.

Over the months ahead, we hope to make transparent what our process entailed, how it has changed our work life and our relationships to both land and community, and how we made the financial decision to do so in these tough economic times. We want to tell this story so that others can explore doing the same in the face of today's complex issues, such as climate change, that deserve our collective and immediate action. There are endless calls to reduce carbon footprints, to use less energy, and to convert to renewable energy, but how many examples are there of actual organizations that have done this? We hope there are more and more. We want our story to be instructive to Vermonters and as well as the thousands of leaders from around the country who intersect with our work each year or who simply visit our website to learn more.