

Sustainable Berea is a group of residents of Berea Kentucky and surrounding areas who work together to develop stronger households, neighborhoods and community in the face of imminent threats to global sustainability including peak oil, global climate change, sky-rocketing national debt, and destruction of ecosystems worldwide. Sustainable Berea is affiliated with the Relocalization Network (www.relocalize.net), 192 community groups that share knowledge and expertise as they work to develop sustainable communities.

Sustainable Berea's current projects focus on supporting and expanding local businesses, community food production, home energy conservation and renewable energy, and strengthening local neighborhoods. Sustainable Berea meets the **second Wednesday** of each month at the Friends Meetinghouse, 300 Harrison Street. **Potluck at 6pm, meeting 6:30-7:30.** Everyone welcome!

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Peak Oil, Climate Change & Berea Municipal Utilities

The United States, with 5% of the world population, accounts for 25% of world energy use. Fossil fuels – oil, natural gas, and coal – supply 85% of the energy that powers the U.S. economy, and much of this energy is imported. Any decline in the world availability of fossil energy would have severe consequences for the United States.

Unfortunately, a decline in energy availability is imminent. According to energy expert Richard Heinberg, “There is simply no denying that we humans are facing tough times. Not only does evidence suggest that global oil production has already reached its all-time maximum and has begun its inevitable decline, but forecasts for natural gas extraction rates in the North Sea, North America, and Russia look worse than dismal. Meanwhile, new studies of global coal supplies suggest a peak in extraction rates could occur in as few as fifteen years...” (from the introduction to “The Transition Handbook” by Rob Hopkins)

A leveling or decline in global energy supply combined with an ongoing surge in global demand leads to rising energy prices:

Since 2000, the price of a barrel of oil (42 gallons) has increased from \$25 to more than \$130, pushing U.S. gasoline prices to \$4.00 per gallon. During this time, the well-head price of natural gas in the United States has tripled, and the price of one ton of the benchmark Central Appalachian coal has gone from \$20 to \$90.

These price increases are not short-term aberrations, but the beginning of a long-term trend. The world is moving from an era in which energy demand drove supply to one in which geological limits hold supply below demand, and rising prices determine who gets what share.

Setting Berea's Rates

The City of Berea is proposing changes to the electricity rates and rate structures of the city-owned utility, and a spirited discussion is underway regarding what rate structures are most appropriate. Several points need to be considered in this discussion:

- Berea Municipal Utilities (BMU) produces no electricity; it purchases electricity from Kentucky Utilities (KU) and distributes it. The rates charged by BMU will in large part be determined by KU's rates for wholesale electricity.
- For Berea, electricity = coal in that virtually all of KU's electricity is produced in coal-fired power plants.
- The price of coal, as for oil and natural gas, is determined by global supply and demand, and will increase greatly.

While BMU can determine how it distributes its costs among its customers, the magnitude of those costs and the overall rates for electricity will inevitably increase, and rapidly. Already, the Kentucky Public Service Commission reports that the four largest utilities in Kentucky have raised rates an average of 12 percent during the past year.

Climate Change and Berea's Price for Electricity

The burning of coal is one of the major sources of carbon dioxide emissions that are driving global climate change. The just-released White House summary of the likely effects of climate change on the United States describes heat waves, water shortages, increases in severe weather, disease, stress on agricultural crops, and coastal flooding. The direct implications for the price that Berea Municipal Utilities will pay for electricity stem from:

- Likely federal regulations to reduce carbon emissions, which will increase the costs of coal-generated electricity.
- A warmer climate is expected to cause a major increase in demand for electricity in the United States for air

conditioning, industrial refrigeration, and water pumping. Billions of dollars will be required to pay for new power plants and transmission lines, and the demand for fuel to run the new plants will add to the upward pressure on energy prices.

Weakening the Links

Rising energy prices are a severe drain on the economy of Berea. Each gallon of gasoline pumped into a Berea citizen's car now results in almost \$4.00 leaving the community. Payments to KU for electricity drain millions of dollars from the local economy each year.

Given the likely magnitude of upcoming increases in electricity prices, it may become impossible for Berea to maintain its current level of electricity use. Low-income households will feel the crunch first, and utility-relief programs such as BUURR may be overwhelmed. Eventually, the entire local economy may contract.

To insulate itself from the worst effects of the global energy crisis, Berea needs to retrofit its local economy to function well on far less energy than it currently uses, and to obtain much of its energy from local renewable sources.

The Role of the Municipal Utility in Supporting Sustainability

A community-owned utility is a powerful mechanism for facilitating the development of a low-energy local economy. The utility of course must generate sufficient revenue to cover operating costs and infrastructure, but it has options to do so in ways that support community sustainability, and "profits" can be reinvested in the community.

A conservation-oriented rate structure can provide a financial incentive for reducing energy use. In an "inverted block structure," the per unit cost of each additional block of electricity used by a customer goes up. Low users are rewarded, and the additional revenue obtained from higher users can be used to fund conservation programs.

Waverly Iowa's municipal utility uses an inverted block rate structure during the summer months. Residential customers pay a base charge of \$10 per month, and then a per kWh charge as follows:

First 600 kWh used	\$0.0850
Next 500 kWh used	\$0.1201
Next 400 kWh used	\$0.1600
Over 1,500 kWh used	\$0.1701

Many utilities offer home and business energy audits, rebates on energy-efficient appliances, weatherization assistance, and a safety net for those households that are unable to afford even the basic electricity block.

Electricity produced locally from renewable energy sources such as solar, wind or biomass give the community an energy source that is completely decoupled from the global fossil energy market. Net metering, rebates toward home installation of solar or wind capacity, and preferential rates for the purchase of solar energy are actions that utilities can take to encourage development of local energy sources.

Transitioning to Sustainability

To survive, let alone thrive in the coming decades, communities need to make major changes not only in the way they obtain and use energy, but also food, transportation, shelter, and manufactured goods. After decades of "globalization," a declining energy supply will require the relocalization of our economies.

This is a massive undertaking, and one for which we are not well prepared. However, there is no viable alternative. "Business as usual" based on denial of the realities of peak oil, climate change, and other threats to sustainability leads to disaster.

Fortunately there are many communities that have embraced this challenge and are working to create resilient local economies. Members of the Relocalization Network (see newsletter introduction) and the Transition Towns Network founded in the UK (<http://www.transitiontowns.org/>) are willing to share their extensive

knowledge and experience with like-minded communities and groups.

"The end of the Age of Cheap Oil is rapidly coming upon us, and life will radically change, whether we want it to or not. By taking a proactive response rather than a reactive one, we can still shape and form that future, within the rapidly changing energy context, in such a way that it ends up preferable to the present." Rob Hopkins, Founder of the Transition Towns Movement

2008 Edible Yard Contest

Entries due by July 18

Show off your contribution to the relocalization of Berea's food system. If you use all or part of your yard to grow vegetables, fruits, nuts, herbs or small livestock, let Sustainable Berea know. Novice or long-timer, large yard or small, there is a category in which you might win a prize. Visit www.sustainableberea.org for entry instructions.

Winners will be announced at the

2nd Annual 100-mile Potluck
Sunday, July 27, 5pm
Acton Folk Center
Berea, KY

Be a locavore! Come to the 2nd Annual 100-mile Potluck with a contribution that demonstrates your knack for discovering ingredients grown and processed within 100 miles of Berea, and combining them into a tasty and nutritious dish.

Share your culinary creativity by bringing a written copy of your recipe to the Potluck or emailing a copy to info@sustainableberea.org and be eligible to win cool prizes.

