

Rebuilding the Upper Peninsula through Democratic Industry & Economics

By Ken & Pam Rieli

At a time when most cities are struggling to keep the lights on & public services available, communities in Michigan's upper peninsula are on the brink of energy independence and economic recovery.

Copperland Corporation's Ken Rieli has formulated an industrial strategy that begins with tapping abandoned mine water for "free energy" geothermal district heating/cooling. His expertise in heat differential turbines, pumps, solar thermal power & low-cost wind generators guarantees a successful transition from high-cost to low-cost utilities across the Copper Country.

Geothermal heating is nothing new.

The first geothermal system was installed in Italy over 100 years ago - and is still in operation.

According to the U.S. DOE, combined heat & power (CHP) district heating using geothermal energy is extremely high in efficiency. Maintenance costs are low - 33% less than conventional natural gas systems - and abandoned mines are increasingly attracting the attention of government planners who see the readymade heat reservoirs as infrastructure budget savers.

- China is installing geothermal wells 5,000 feet deep for each new home built.
- Yellowknife (Canada) is studying abandoned gold mine shafts under the city, where water temperatures of 50 degrees Celsius could provide 20 MW of heating capacity.
- Also in Canada, the city of Whitehorse uses low-grade geothermal groundwater to prevent water pipes from freezing.
- In Scotland, a former coal mine will soon supply hot water for district heating, and electricity generated by gas engine CHP units.

Proposed energy mining in the Copper Country

1. The three counties that make up Michigan's copper range are loaded with abandoned mine shafts - some of them owned by the counties themselves. To forge ahead with sustainable growth strategies, counties must put in their fair share. In return for donating land for public use projects, they will reap new revenues from local nonprofit utilities.
2. Local ownership of nonprofit utilities keeps heating costs eternally LOW for members - and these members continually secure future benefits. Using hillside & backyard solar collectors to supplement heat from water-filled mine shafts, each home returns its excess heat to the heat bank during summer months. In winter, the process is reversed.

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3. Copperland Corporation has the “rocket science” to make it work. Our part is to develop the geothermal head end (at the shaft), which we would own/operate/maintain, including the small section of property containing the site. We develop the head end at our cost, and receive an eternal tax moratorium on the property, and a small maintenance fee.

The ecosystem wins, residents & businesses slash utility bills in half, and no damage or change to historical sites is necessary, aside from two pipes inserted into existing shafts.

Full-cycle industrial growth

Small wind turbines that harness the peninsula’s awesome wind resources will play a big role in supplying free electrical power to operate heat pumps. These wind turbines can be built locally, in community workshops.

Locally-made products eliminate shipping pollution, while local workshops bring renewable energy to people with limited resources.

To stem the tsunami of climate change, locally processed metals must be transformed into solar metal roof collectors, turbines, pumps, small wind turbine towers, space-age vehicles, and other products in demand around the world. Instead of scrapping old vehicles, garage-level small businesses can convert them into WorldKar hybrids from technical plans - and let efficiencies of small-scale propel growth.

Take Action!

- Work with county commissioners to allocate land containing suitable mine shafts for community-owned utilities.
- Re-purpose old buildings into community workshop centers, where local know-how can teach & assist people in building their own home-level energy systems: wind generators & solar heat systems.
- Transform the Copper Country into a vibrant renewable energy community. Immediate results will include lowering the cost of living & drastically lowering environmental damage. Renewable energy projects also result in new industry & new cash flow into the region.

Learn more about Copperland’s Wind Workshops

at http://copperland.org/wind_generators.html

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