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Saturday, April 10, 2010

## FeatureStory

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## A green believer

BY KENT DARR

All the promise of a green future lies behind a garage door on Northeast Broadway Avenue.

On the left is a miniature biodiesel plant, consisting of a water heater and three 50-gallon drums, containing, among other things, the raw material of used vegetable oil and the final, earth-friendly product that has surged through shower heads connected by black pipe during its purification rinse.

Large bolts, hefty enough to secure wind turbine towers, are slumped in cardboard containers. In the shiny black and silver suitcase near a workbench rests a battery charger, soon to be connected via a satellite network and transmitting a computer signal when it sends a refueling charge through an electric vehicle.

Oh, and that black panel off in a corner? It delivers the energy of the sun to a ventilation fan on a partly cloudy day to demonstrate the practicality of solar power.

This is the hardware of a green believer, James McCain, and a business that has tried for the last two years to deliver alternative energy to the residential market.

McCain, 27, launched Innovative Kinetics in 2008, renting an East Side workshop from his uncle, mortgaging his home, tapping his college savings and finding some angel investors in his family for the \$60,000 needed to get the business off the ground after banks turned him down.

Unlike major players in renewable energy, whether they are building wind turbines or brewing biodiesel fuel from soybean oil and animal fats, McCain's entree into the green industry has not been padded with tax credits and government-issued grants and loans.

He is on his own, and it has been a long haul, financially and emotionally. McCain is, after all, a true believer, driven more by passion than by a search for profits.



James McCain

**Mount Ayr company plans to fill a wind niche**

Heartland Energy Solutions, an Iowa company launched by a native son who has spent most of his adult life in California, is preparing a prototype of a turbine that is missing in the wind energy industry.

The native son is Paul Ramsey, who grew up in Des Moines and spent summers during the Great Depression on his aunt and uncle's farm near Mount Ayr. He lives in California, where he built a successful real estate business, but he has returned some of his wealth to the community about 100 miles southwest of Des Moines.

He has contributed to the revitalization of downtown Mount Ayr, and he has restored his aunt and uncle's farm into a working 1930s farm and tourist attraction, complete with a bed-and-breakfast operation. Proceeds from the farm go to Mount Ayr Community School District.

It wasn't surprising that when a group of engineers, one of whom operated a company in nearby Leon, and alternative energy experts and enthusiasts wanted to enter what is sometimes called the "medium wind" market, they looked to Ramsey for help.

Heartland Energy Solutions was created in 2007 and took up residence in an abandoned factory in Mount Ayr. The plan was to design a turbine that would generate 100 kilowatts of power, enough electrical juice to feed farms, small businesses, even small communities, and that would be triggered by moderate wind speeds.

It has added 9,000 square feet to the 30,000-square-foot building, providing enough room to build 45-foot-long blades for the turbines, which will hover 150 feet in the air.

The company plans to unveil a prototype in June or July and erect it outside the factory, which is being leased for five years from the community, with an option to buy at the end of the lease, said Charles Sharp, the company's president and CEO.

In an application for an Iowa Department of Economic Development grant, the company estimated a total capital investment of \$5 million.

Heartland has received about \$1.3 million in public grants and loans and a note from Great Western Bank for \$120,000.

The factory currently employs 15 people, but plans call for it to have 110 workers by 2012, Sharp said.

Heartland Energy Solutions plans to sell the units to agricultural and industrial users, as