

Expanding the Green Economy via Brownfield Sites



PUB-RR-916
December 2011

The state of Wisconsin has a long reputation as a national leader in protecting the environment. In the 21st Century, Wisconsin continues to be a leader when it comes to the new “green economy”: companies producing clean energy technology and products which use energy more efficiently.

In the Department of Natural Resources (DNR), the Remediation and Redevelopment (RR) Program has also long been on the forefront of sustainability. We promote responsible growth over development of greenspace by encouraging the cleanup and redevelopment of brownfields – abandoned, underused, and environmentally contaminated properties. Brownfields can be transformed into a wide variety of commercial, industrial and residential uses. However, there is extra cause for celebration when a Wisconsin-based company chooses a brownfield redevelopment to grow their green-tech business.

See for yourself what great things can happen when brownfields redevelopment and the green economy come together.

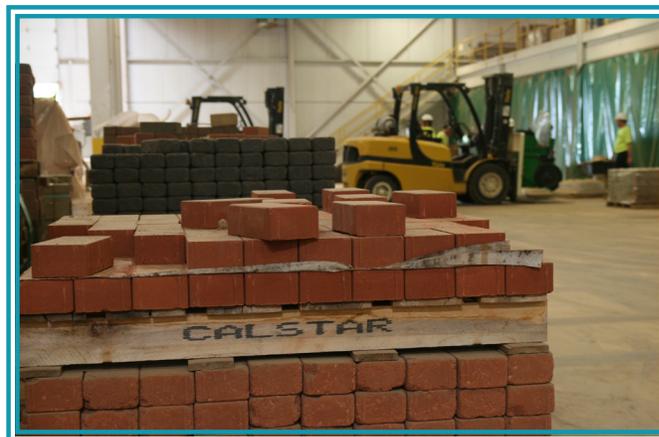
CalStar Green Brick Plant – Caledonia

Website: www.calstarproducts.com

Southeast Wisconsin has a long history in the brick-making business, with its famous “Cream City” brick. Now the CalStar company of Caledonia is writing a new chapter in that history by creating bricks with energy-efficient green technologies.

Then: The current CalStar plant was formerly home to Young Radiator, a company that built radiators and heat exchangers from the early 1970s to the early 1990s. Assessment of the property revealed volatile organic compounds (VOCs) in the soil, and some polycyclic aromatic hydrocarbon (PAH) contamination in the groundwater.

Now: With remediation work ongoing, CalStar opened their Caledonia plant in 2010 to build green bricks and pavers – the first such plant in the nation. The company uses fly ash from a nearby We Energies power plant to create special bricks which take 85% less energy to create and use 45% recycled material. These brick are now



Access to the fly ash used in its brick making process made Wisconsin a perfect partner for CalStar (photo courtesy DNR).

sold wholesale and at large home improvement retailers in several Midwest states.

The first year of business was deemed so successful the company chose to move its headquarters to Wisconsin.

Orion Energy Systems – Manitowoc

Website: www.oesx.com

In the effort to reduce dependence on fossil fuels, a strong case can be made for both finding

new sources of energy (e.g. solar, wind, etc.) and increasing the energy efficiency of the products we already use. Enter Orion Energy Systems – which has a manufacturing facility in Manitowoc that builds energy efficient lighting systems, direct-use renewables and energy management controls.

Then: Orion operates in a building that was once one of the many Mirro Aluminum factories in Manitowoc. Mirro built aluminum pots and pans in Wisconsin, until the work was moved overseas.

Now: Orion manufactures state-of-the-art high-performance fluorescent high-bay lighting systems, integrated wireless energy management system and direct-use renewable solar light pipes in addition to photovoltaic and urban wind systems.

Orion Energy received national attention when President Obama visited the facility in 2011, during a tour of companies creating green jobs. He praised the company's efforts to "sharpen America's competitive edge all around the world."



An employee demonstrates the technology of Orion Energy Systems to President Barack Obama during a 2011 tour (photo courtesy Orion Energy).

Natural Green Farms – Racine

Website: www.naturalgreenfarms.com

The gloomy walls of a closed, downtown manufacturing plant seem entirely at odds with the fresh air of a country farm. Yet the two now have something in common, as the phenomenon of urban agriculture breaks new ground. In

Racine, Natural Green Farms is a company riding this movement, managing to grow both fish and vegetables indoors at a former brownfield.



Basil grows in rows of support trays fed by running water at Natural Green Farms in Racine (photo courtesy DNR).

Then: The farm operates in the former JI Case building near downtown Racine. It was constructed from brick and timber in 1900 and expanded in 1940. Case Plow Works was the original tenant, but the facility was used by several companies as storage space, before lying vacant.

Now: Filling a portion of the building is Natural Green Farms: a locally-owned company, trying to be among the companies revolutionizing agriculture, through sustainable urban farming. Look inside and you'll see rows upon rows of growing herbs and tilapia swimming in fish tanks. The process for raising the greens, takes less water and land than traditional farming, plus, it takes less energy to ship it to market. Being located in Racine is "perfect" for the owner, who notes that there are 13 million potential customers within 100 miles of his farm.

Helios USA – Milwaukee

Website: www.heliossolarworks.com

Solar energy is the one of the biggest bright spots for the clean technology sector. Studies show solar panels can operate effectively in many climates, including Wisconsin. In Milwaukee's Menomonee Valley, Helios USA is producing solar cells with aims of helping both the environment and the economy.



A worker puts the final touches on a solar panel at Helios USA in Milwaukee (photo courtesy DNR).

Then: The Menomonee Valley in Milwaukee was once Wisconsin's largest brownfield site. It was the home of the former Milwaukee Road railroad repair facilities, stockyards and other heavy industrial output, before the Rust Belt economy began eroding in the latter half of the 20th Century.

Now: Helios USA is a proud Milwaukee company, located in the new Menomonee Valley Industrial Center. The company produces state-of-the-art solar technology, including high-performance, affordable mono-crystalline solar modules. Helios employs about 30 people, and hopes to eventually expand to a total of three production lines.

Spark Innovation in Your Community

The RR Program offers a variety of tools to address environmentally contaminated properties and other brownfields, including:

- Grants and Loans;
- Technical Assistance;
- Liability Assistance;
- Voluntary Party Cleanup; and,
- Brownfields Insurance

For more information visit us on-line at dnr.wi.gov/topic/Brownfields/.