

Advanced Energy Group Leads “Net-Zero” Renewable Energy Project in Meriden, CT

The Meriden Connecticut Housing Authority (MHA) is renovating its Yale Acres public housing project as a “Net-Zero” community, using energy conservation and renewable energy production to create as much energy as it uses. These improvements will also allow it to maintain power in case of blackouts.

MHA has contracted Advanced Energy Group (AEG) of Ann Arbor MI, to develop, design and build a Phase 1 demonstration project, as well as the energy related portion of the entire Yale Acres complex.

Yale Acres is an MHA owned affordable housing complex on 27 acres of land that provides 163, 2-3 bedroom affordable apartments. It was designed to house moderate income families, but is now classified as obsolete and severely distressed. This family-oriented neighborhood is in serious need of comprehensive energy efficiency measures as well as non-energy related modernization improvements, to provide Connecticut families with a safe, clean and affordable housing option. AEG is working with Connecticut-based Landmark Architects, Michigan-based New Energy Solutions and LUMA Roofs, Indiana-based Geothermal Innovations, and several Meriden- and Connecticut-based contractors to design and implement a fully integrated energy efficiency and production system for Yale Acres, with the goal of creating “Net Zero” energy consumption community.

The project began this past winter with the renovation of a 4-unit Energy Star-rated Model Building to confirm the operation and reliability of the entire suite of planned renewable and energy conservation initiatives. One of the featured and unique conservation measures is a geothermal HVAC and domestic hot water system supplemented by solar thermal (sun powered hot water). The geothermal system will utilize Geothermal Innovations’ revolutionary Gi4 heat exchangers, which reduce the size and cost of a geothermal field up to 60%, compared to conventional geothermal heat exchange systems.

The geothermal field will service a three building (12 unit) mini geothermal district, serving as model district for later expansion to all 162 units. In addition to Energy Star related conservation measures, New Energy Solutions will install a fully-integrated LUMA solar roof to generate electricity for all four units within the Model Building. The Model Building is expected to be completed by April, 2013.

After the verification of energy savings, the project will be expanded to the remaining housing units with an expected 18 month time-line. Energy improvements are expected to reduce resident utility bills up to 80%. Currently, residents spend a substantial amount of money to purchase oil for heating needs. Some of this is reimbursed by MHA. While at least 15% of the energy cost savings will be realized by the residents, a substantial portion will be used to help payback the cost of these improvements.

“This is a model for public housing projects as well as any residential community. Moderate and low income families are hurt most by high energy costs, and this kind of program, duplicated around the State, can save Connecticut’s most vulnerable citizens millions of dollars as well as provide energy security during regional blackouts” said MHA’s Executive Director, Robert Cappelletti.

According to AEG president, Jim Moran, “AEG has done all of the individual components of this program in several Midwest cities, but MHA is the first to put all of the pieces together in one well-defined model

project. We'll be able to see the results of the model before the rest of the complex is developed, monitor it for a whole year, and use the results to spread this success story across the state and country."

Based on the success of the Yale Acres project, MHA plans to expand the program to provide energy improvements to other MHA owned properties – including a supportive housing project for veterans – and also provide district geothermal heating and cooling services to nearby residents and businesses.

AEG has developed multiple energy savings projects with cities in Michigan, Ohio and other Midwest states. With Wyandotte, MI (south of Detroit), it developed a city-wide geothermal heating and cooling program for homes, businesses and public buildings that helped the city win a \$3.7 Million Energy Efficiency Block Grant. In Toledo, OH, it developed a City-wide energy financing program that received a \$15 Million US Dept. of Energy Better Buildings grant, used by Toledo Port Authority to establish a financing program for energy retrofits, including weatherization, lighting, solar and geothermal.

Continued AEG's Moran: "I started putting geothermal HVAC in public building projects in MI in 2004, and discovered quickly that among the major energy technologies, it's the most cost effective and has highest return on investment. When we partnered with Geothermal Innovations, whose principal Jim Hardin has installed over 900 geothermal projects, we had a team and a product – the Gi4 heat exchanger – that made geothermal districts possible, affordable and financeable."

Anyone interested in learning more about the program or the Gi4 heat Exchanger can visit AEG's website at: <http://.aeg-group.us> or keep up-to-date with the progress at Yale Acres through the MHA project blog: <http://aeggroup.wordpress.com/>.

For further Information contact: Anne Fowler-Edin
Advanced Energy Group
1003 Broadway, Ann Arbor MI 48105
anne@nfrmi.com
734-395-5300