



Baker Renewable Energy Installs Largest Solar Thermal System in Virginia

New River Valley Regional Jail Leverages Solar Technology to Offset Nearly One Third of Natural Gas Usage

DUBLIN, Va. (August 14, 2012) Baker Renewable Energy announced today it has installed the largest solar thermal system in Virginia at the New River Valley Regional Jail. This state-of-the-art, ground mount system consists of 138 collectors, the equivalence of 272 kW of photovoltaic energy. The structure will offset approximately 30 percent of the jail's natural gas usage, and will provide 2.5 million gallons of hot water per year to the facility. It is one of the largest ground mount solar thermal projects in the Southeastern United States.

"The New River Valley Regional Jail Authority is truly committed to making a long-term investment that will significantly increase the energy efficiency of the facility," said John Matthews, president of Baker Renewable Energy. "Large public facilities like the New River Regional Jail that have a continuous, high demand for water usage can greatly offset their water heating costs by utilizing this clean and renewable technology." New River Valley Regional Jail is a 296,000-square-foot facility located in the Dublin Industrial Park in Dublin, Va. The jail leverages state-of-the-art technology throughout the facility, which has a rated capacity of 1,183 inmates. Baker Renewable Energy worked in conjunction with Virginia-based Thompson & Litton, an award-winning engineering, architectural, surveying and construction administration firm, to design a custom solution for NRVVJ.

"We had just completed a major renovation and expansion of the original regional jail facility and became aware of a potential funding opportunity through the Virginia Department of Mines, Minerals and

Energy and U.S. Department of Energy for renewable energy projects," said Bill King, P.E., vice president of Thompson & Litton. "Thompson & Litton and Jail Authority staff conceived the concept for the project, and with the blessing and support of the Authority Board, a funding application was submitted and approved. The \$856,000 project was funded with a \$410,880 grant from DMME/DOE with the balance of funding coming from the Authority. At the end of the day, this project was completed for approximately \$800,000, which also included a 15 percent increase in the size of the project as originally bid. It was great to not only finish the project under the original budget, but also to increase the size and effectiveness of the project in the process."

The project consists of a 3,000 gallon underground water storage tank connected to more than 1,500 linear feet of underground steel pipe infrastructure which runs back to the jail. As part of the initiative, Baker also installed a detailed weather station nearby to monitor system efficiency versus weather fluctuations. System performance can be monitored remotely. "Local governments are being forced to assume more and more financial burdens in today's tough economy. Our population and therefore our demand for hot water is growing much more quickly than we expected. "Local governments are being forced to assume more and more financial burdens in today's tough economy. Our population and therefore our demand for hot water is growing much more quickly than we expected. Rising fuel costs made the prospect of a renewable energy source a likely choice to reduce operating expenses. We looked to Thompson & Litton and Baker Renewable



About New River Valley Regional Jail

The New River Valley Regional Jail was first opened in April of 1999 and completed an expansion and renovation in April of 2010. Its 296,000-square-foot facility is located on a 28-acre site in Dublin, Va. Today NRVRJ serves the counties of Bland, Carroll, Floyd, Giles, Grayson, Pulaski, Wythe and the city of Radford. The regional jail is equipped with state-of-the-art infrastructure and can house up to 1,183 inmates. With over 250 full-time staff members, NRVRJ is also an important New River Valley employer. For more information, please visit www.nrvrj.com.

Energy to design and build a solution that would allow our facility to become more energy and cost efficient,” said Gerald McPeak, the superintendant of the New River Valley Regional Jail. “The Thompson & Litton and Baker teams faced many challenges while working at our facility.

Fluctuating weather conditions, extensive underground infrastructure and working in a high security environment made the project complex in a number of ways. The teams from Thompson & Litton and Baker Renewable Energy were professional, attentive to our needs and able to deliver us an expansive solar thermal system that was completed in a timely fashion.” “Putting 138 collectors on one ground mounted system is a big deal,” Jason Epstein, executive vice president of Baker Renewable Energy, said. “We’ve been at this for a long time now, and even some of our larger installations haven’t topped 50 collectors on any single project. It’s exciting to see the Authority taking a bold stance like this.”

“Baker Renewable Energy is unique in that it is backed by all of the logistical capability and experience of a 97-year-old construction company, but also offers design consulting and construction expertise on all types of renewable energy-related construction projects,” said Alec Sheaff, a business development manager of Baker Renewable Energy based in the Charlotte office. “We are glad to be engaged with a forward-thinking organization like New River Valley Regional Jail and were proud to complete this project.”

About Thompson & Litton

Thompson & Litton is an award winning engineering, architectural, surveying, and construction administration firm founded in Wise, Va. in 1956, where its headquarters remains. For more than 55 years, T&L has provided professional services to Western Virginia and beyond from offices located in Wise, Radford, Tazewell, Chilhowie, and Clintwood, Va.; and Bristol, Tenn. Thompson & Litton values its reputation with many local, state and federal government clients, and private enterprise clients that it currently serves in Virginia, Tennessee, and West Virginia.

The firm has a staff of over 120 employees and is listed on the 2011 Virginia Business Magazine List of Leaders as the 16th largest engineering, architectural and surveying firm in Virginia and is among the Top 250 Architectural firms in the country based on architectural revenues. Architectural Records Magazine and SNAP (Sweets Network) publishes the list of Top 250 firms. The firm is a Virginia SWaM certified Small Business Enterprise and has federal small business status with the SBA. For more information, please visit www.t-l.com.



About Baker Renewable Energy

Baker Renewable Energy offers a full line of turn-key design and installation services for commercial, residential and institutional customers along the Eastern Seaboard. With expertise in solar photovoltaics, solar thermal, wind energy and solar hot air, Baker Renewable Energy serves customers through offices in North Carolina, South Carolina and Virginia. Baker Renewable Energy is a division of Baker Roofing Company, founded in 1915.