

SUSTAINABILITY HERO

October 2018



Jodi Bettermann

Energy Efficiency Coordinator

Readington Township Public School District (Hunterdon County)

For four years, Jodi Bettermann has served as the energy efficiency coordinator for the Readington Township Public School District where she administers the district's behavior-based Energy Conservation Program that serves four schools and approximately 1,700 students. Her work to achieve energy savings through changes in culture, behavior and decision-making is delivering measurable results that serve as a model for New Jersey school districts.

By working closely with staff and students to save energy, the Readington Township Public School District has avoided approximately \$421,000 in utility costs over five years. Under Jodi's guidance, the schools in the district have been recognized by Sustainable Jersey for Schools, the U.S. Environmental Protection Agency's ENERGY STAR program, the U.S. Department of Education's Green Ribbon Schools program and Eco-Schools USA. Jodi led all four of the schools in the Readington Township Public School District to achieve certification with Sustainable Jersey for Schools; two schools are certified at the silver-level.

Jodi frequently speaks at events and workshops to share the Energy Efficiency Program's story. She provides guidance to other school districts beginning their energy savings journeys. Motivated and goal-oriented, Jodi said that she is truly dedicated to the district's commitment to educate its staff and students about energy conservation. She explained, "Each day I hope to learn something, conserve something and do something to make the world a better place."

Sustainable Jersey for Schools: All four schools in the Readington Township School District have achieved Sustainable Jersey for Schools certification. Three Bridges Elementary School and Whitehouse Elementary School are certified at the silver-level and Holland Brook Elementary School and Readington Middle School are certified at the bronze-level. The school certification reports provide a summary of each action completed by these schools: [Holland Brook Elementary School Certification Report](#), [Readington Middle School Certification Report](#), [Three Bridges Elementary School Certification Report](#) and [Whitehouse Elementary School Certification Report](#).

Reading Township Public School District Energy Efficiency Program: Five years ago, the Readington Township Public School District took the ambitious step to create an Energy Efficiency Program. The district partnered with Schools for Energy Efficiency and a local energy efficiency consultant, then hired an energy efficiency coordinator to manage the program. The district wanted to reduce energy use through more efficient facility operations and behavior modification. The overall goal of the program was to achieve a ten percent reduction in annual energy use, increase awareness, and involve staff and students over the five-year period of the program.

With guidance from the energy efficiency consultant, the district's Green Committee crafted a comprehensive [Energy Conservation Policy](#) that was adopted in 2013. It outlines expectations for the use of lighting, heating and cooling, as well as shutdown requirements for electronic devices. Jodi started as the energy efficiency coordinator in the second year of the program. When she started, she dealt with below-record temperatures. Jodi said, "Although the extreme cold weather was a set back to the energy reduction goal, it enabled me to create close relationships with the school facilities director

and the principals. I was able to share the data that showed the spike in energy use and tie it to real life occurrences, in this case the cold weather. This built a foundation and trust in the data so that when I needed to ask for improvements or for their support with a program of behavioral changes, they were open and ready to go.”

With the combination of operational and behavioral changes initiated by staff and students, the district has reduced its energy use. For example, the upgraded windows at Readington Middle School have reduced energy usage by more than \$20,000 to date. To track progress, Jodi enters the electricity and natural gas usage data into the EnergyManager energy tracking software that then moves the information into U.S. Environmental Protection Agency’s (EPA)’s [ENERGY STAR Portfolio Manager](#), a no-cost, interactive energy management tool.



Each quarter, Jodi shares results with the school community in an e-mail results report. The results are reviewed with the district’s Green Committee at their meetings and published on the [Energy Efficiency](#) section of the district’s website. In 2016, Readington Middle School and, in 2017, Whitehouse School, earned the EPA ENERGY STAR certification for superior energy performance. Jodi explained, “With energy efficiency, you can’t just decide to not use energy. We must be aware of how we use energy and then make changes and decisions on how best to conserve it.”

The district finished its fifth year of the Energy Efficiency Program in June 2017. In program Year 3 through Year 5, the district successfully met the annual energy usage reduction goal. In Year 4 (2015-16), the district had an energy reduction of 11 percent and in Year 5 (2016-17) the district achieved an 18 percent reduction. The estimate of avoided cost based on the usage savings over the five years of the program is \$421,000. Jodi said, “Behavioral changes are the unsung heroes of our results. Turning off lights and electronics, setting moderate heating and cooling setpoints and operating our building efficiently all added up to big energy savings.” The Energy Efficiency Program is moving forward into Year 6; you can read about their progress on the Readington Township School District website’s [energy efficiency](#) section. As Readington Township School District continues to make energy efficiency improvements, they are looking forward to partnering with [New Jersey’s Clean Energy Program](#) on future capital projects.

Student Involvement in the Energy Efficiency Program: Jodi stressed the importance of having the students involved in the Energy Efficiency Program. Students have participated in poster contests and energy assemblies, one of which introduced an Energy Hog character. Jodi regularly goes into classrooms to educate staff and students about energy use in school with energy fact game shows as well as a Watts Up activity which uses a watt meter to illustrate how much electricity devices use over time. She supports the student green teams in each school. Middle school students can participate in an Energy Club which monitors classrooms to ensure lights and electronics are turned off at the end of the day as well as investigates renewable energy sources. In addition, the school district has participated in Readington Community Day by sharing displays about energy conservation. Jodi noted, “If you don’t get the students involved, then the program will not be a success. As the facilitator, I only had to make them aware of the problem and provide possible strategies. The students have taken action and moved the program forward.”



Readington Township Public School District Solar Program: After two years of research and planning, construction began in September 2017 on the solar panel installation for the Readington Township Public School District. At Readington Middle School, both ground and roof-mounted solar arrays were installed. Roof-mounted arrays were installed at Three Bridges Elementary School and additional ground arrays were installed behind Holland Brook Elementary School.

Jodi explained, "While the system will reduce some but not all of the electrical power received from the local power company, we hope the district will be able to send power back into the grid during times of reduced building use, particularly during summer months. This will result in reduced energy costs to the district, while also lowering the district's carbon footprint."

The school community, parents and the greater Readington community were able to see the projects as they were installed, and Jodi helped to educate the community on the benefits of renewable energy. The district-wide Solar Dedication Ceremony, held on May 9, 2018, included students, parents and representatives from the Readington Township Committee, Readington Green Committee, all the companies involved with the solar design and installation, the school district's Green Committee and all staff. Jodi, in partnership with the solar operator, Ameresco, provided a workshop to staff and the community called Incorporating Solar into the Classroom.

Sustainable Jersey Grants: Jodi has brought in \$34,000 in funding to the school district through successful applications to the [Sustainable Jersey for Schools Grant program](#). In 2018, the Readington Public School District was one of seven school districts that received a Sustainable Jersey for Schools grant funded by the Gardiner Environmental Fund. The grant for \$10,000 is being used to implement device-level energy monitoring using portable meters that send data to a cloud-based information system. The school district also received a \$10,000 grant funded by the Gardiner Environmental Fund in 2015. The Three Bridges Elementary School and Whitehouse Elementary School were each awarded a \$2,000 Sustainable Jersey for Schools grant funded by the New Jersey Education Association (NJEA) in 2015 and in 2016. The Holland Brook Elementary School received a \$2,000 grant funded by NJEA in 2016. Jodi said, "The capacity building grants helped support green initiatives, including enhancing an outdoor classroom space at Holland Brook School, installing a pollinator garden and a rain garden at Three Bridges School and offering a green club after school at Whitehouse School."



Education and Experience: As early as first grade, Jodi was tested and tracked in her school district for having an aptitude for engineering. With this encouragement, she was placed in an enrichment track and had a childhood goal of becoming an engineer. Before she graduated from high school, she received a scholarship from the [Society for Women Engineers](#) to attend the Stevens Institute of Technology for a summer engineering program. Jodi then went on to attend Tufts University where she graduated with a Bachelor of Science in Chemical Engineering, magna cum laude. She spent ten years as a process engineer for Merck & Company, Inc. holding positions in all aspects of pharmaceutical process engineering from equipment design to process operations. She implemented capital projects, managed process campaigns and completed regulatory qualification documents.

What You May Not Know About Jodi: Jodi grew up in Clearwater, Florida, and for the past 26 years she has lived in Whitehouse Station, New Jersey. She and her husband, Robert, have four children; their kids' ages are 17, 14, 11 and 8. She is grateful for her family's support and is happy to be making a difference in the school district and community that she calls home. In fact, this is not her first hero profile. On her desk, Jodi said that she has an essay by her son that identifies her as his hero for the work she is doing to help the schools save energy. In her spare time, Jodi likes to read and play music; she plays the flute and piano. She is currently reading the book, [Sustainable Energy-Without the Hot Air](#), by David JC MacKay.

Words of Advice: When asked what has helped her succeed, Jodi immediately said, "Relationship building is the most important element. If you have good communication with the school administration and the people on the ground in the classrooms, then impossible ideas can turn into real projects that actually get done."