

Case Study – Baldwin Community Schools



The Challenge

- Escalating energy costs and already tight operating budgets
- Inefficient and dated HVAC and water heating systems
- Various sources of energy loss throughout the facilities
- Overall environment was not optimized for learning (e.g., lighting and comfort of classrooms)
- Understood need for improvements; however, a creative solution was required to overcome budget challenges

The Solution

- Sheren Energy conducted an energy audit to learn how and where we were using energy
- Baldwin's customized energy savings plan included the following for both the elementary and high/middle school buildings:
 - **Upgraded boiler with a more efficient system**
 - **Replaced inefficient domestic hot water systems**
 - **Provided intelligent occupancy sensors for concession machine control**
 - **Installed weather stripping in exterior doors**
 - **Added Electronic Recovery Ventilators in classrooms and offices for increased efficiency and comfort**
 - **Replaced lighting fixtures with more efficient fixtures**
 - **Added occupancy sensors to lighting**
 - **Replaced obsolete management system with a new energy management system**
 - **Provided test and balancing for HVAC systems, monitoring and ensuring proper air and water flow to each device in the system**
 - **Provided a commissioned report to ensure all devices are working at optimal levels**
 - **Created an energy playbook, establishing a school-wide energy policy**
 - **Provided ongoing training for staff, administration and teachers and helped the district create an energy curriculum**
 - **Offered thermography services, using an infrared camera to identify air and water leakage and eliminate wasted energy**
- We also quantified the amount of anticipated energy savings in terms of usage and dollars.
- The team also created a financing plan whereby Baldwin Community Schools could use the identified savings to pay for the needed upgrades...meaning no out-of-pocket expenses for the district.

The Results

- **Enables a savings of...**
 - **\$81,733 annually in energy costs**
 - **\$15,000 annually in operational savings**
- **Resulted in a total of \$2,081,955 in energy costs over 15 years**
- Combats escalating energy costs
- Provides a more comfortable and conducive to learning
- Offers systems that are easier and less costly to maintain