

Pentucket Regional School District (Massachusetts)

Organization Size: 8 schools (4,600 students in K-12)

Project Scope: New boilers, windows, doors, roofs, school expansion

Project Cost: \$7.3 million

Type of Financing: Qualified Energy Conservation Bonds

Simple Payback Period: Not available

Key Benefits: Lower energy bills, replace aging equipment, address deferred maintenance, major building renovations

In 2011, the three towns making up the Pentucket Regional School District (PRSD) funded over \$7 million in energy-related improvements through a blend of state grant monies and Qualified Energy Conservation Bonds (QECBs). The federally-subsidized QECBs offered PRSD exceptionally low-cost debt (0.89 percent) over 17 years.

Addressing Deferred Maintenance through Energy Efficiency

Regional school districts often have complex school facility ownership and maintenance agreements with their member towns – and for PRSD, this led to extensive deferred maintenance challenges. Each of PRSD’s three member towns – Groveland, Merrimac and West Newbury – own their elementary schools, which the school district leases, and the district owns the regional middle school and high school. By handshake agreement, the school district was historically responsible for maintenance up to \$10,000 in the schools – anything larger was considered a capital project that the towns were responsible for.

The school district had almost gone into receivership in the late 1990’s, and as a result it had virtually no facilities management staff – each school was managed by a head custodian. By 2009, when PRSD hired Maintenance Director Greg Hadden, the schools were in very bad condition, “The member towns lacked technical capacity and funding, and had not made basic



investments in the schools in 20 years. It was all emergency response maintenance – a boiler blows up, fix the boiler. There’s a hole in the wall, patch the wall. The schools needed to be rebuilt – new heating systems, window systems, integrated controls.”

In 2009, the school district developed a capital improvement plan, identifying improvements for each school facility. Leveraging programs and financing tools targeting clean energy improvements enabled the school district and its member towns to make the requisite investments at lower net cost.

Leveraging Public Programs to Reduce Retrofit Costs

The timing of PRSD’s capital improvement plan could not have been better, as the Massachusetts School Building Authority (MSBA) launched a \$300 million Green Repair grant program in 2010. The program provided schools with grants covering approximately 50% of roof, window and boiler repair and replacement costs. The school district received \$2.7 million of grant monies from this initiative, which ultimately covered about 40 percent of the school district’s upgrade costs, as some measures that did not qualify for grant monies were incorporated into the work scope. PSRD’s then-Business Manager, Amy Pocfick, noted that these monies were critical to project success, “This was free money at a time when budgets were getting slashed.”

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- Greg Hadden, Maintenance Director for Pentucket Regional School District

The balance of the energy-related project costs, \$4.6 million, was paid for with Qualified Energy Conservation Bonds (QECBs). QECBs are federally-subsidized bonds that enable state, tribal, and local government issuers to borrow money to fund a range of energy conservation projects at very attractive interest rates and long terms. Eligible projects include those that save energy in public buildings, like schools.¹ A QECB is among the lowest-cost public financing tools available for clean energy projects because the U.S. Treasury subsidizes the issuer’s borrowing costs (bond issuers receive cash payments from the Treasury to subsidize their interest payments). This was a key selling point for PRSD – the district’s net interest cost was just 0.88 percent over 17 years (the school district pays a taxable interest rate of 4.49 percent and receives a federal subsidy of 3.60 percent). “The communities are very pleased with it,” said Christine Reading of West

¹ For a full list of qualified projects, visit <http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/qecb.html>.

Newbury, chairwoman of the Pentucket Regional School Committee. “Given the economy right now, anything that can save on interest is a good thing.”²

Because of the school district’s unique regional governance structure, the QECB issuance was a bit complex – the bonds were issued by MassDevelopment, the state’s economic development authority, on behalf of Pentucket Regional School District. PSRD made a general obligation pledge to secure the notes, after being provided with authorization to borrow (and a general obligation pledge) from each town for its share of the financing. In other words, PSRD used both its own general obligation pledge and a general obligation pledge from its member towns to secure the debt. In addition to this debt, the town of Groveland paid tapped \$188,000 from its stabilization fund to avoid exceeding its annual debt limit.

The school district and its towns have seen tremendous benefits from these improvements. Hadden explains, “The old buildings had poorly-insulated, leaky roofs and mold issues from water coming in. Now we have roofs with appropriate insulation, and we are seeing great benefit on our heating bills. We had 40- to 50-year-old windows, some were broken, many weren’t secure and we couldn’t open windows to ventilate. Now we have windows that work, and we get a huge educational benefit as they dampen outdoor noise. From a heating perspective, one of our schools had a steam boiler from 1926, and we had very little temperature control. Units were either on or off and we had uneven heating with lots of hot and cold spots. Today, everything is efficient and balanced, and we can easily manage the systems centrally from a single computer. We literally went from shoveling coal into a boiler to digital controls.”

Resources

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Department of Energy Qualified Energy Conservation Bond Resources:

<http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/qecb.html>

²John Laidler. “\$6m in low-interest aid to help upgrade schools.” *Boston Globe* September 11, 2011. Accessed January 9, 2011. Available here:

http://www.boston.com/news/education/k_12/articles/2011/09/11/6m_in_low_interest_aid_to_help_upgrade_schools/