



The Community Music School of Springfield, MA

CASE STUDY

Client Profile

The Community Music School occupies a historic 40,000 square foot building in urban Springfield. It is dedicated to providing high quality music education, arts instruction and performing arts presentations throughout the region, bringing diverse populations together to celebrate unity through music, creativity and life.

Challenges

The circa 1930 low pressure steam system and 40 year old air conditioning system were inefficient, unreliable and expensive to maintain. Extreme hot/cold spots prevented use of the entire building, inadequate humidity control risked the integrity of the musical instruments and 'out of code' fresh air balance threatened the health of occupants. It was a burden on the day to day operations and focus of the school, diverting funds from its Music Programs.

Solutions

The existing system was replaced with an ultra-efficient energy recovery chiller incorporating a hybrid geothermal/solar thermal system, high efficiency, low emission condensing boiler technology as back-up heat and high efficiency hydronic fan coil units incorporating the existing ductwork where feasible.

Results

The new hybrid HVAC system has reduced energy use by 55%, curbed carbon emissions by roughly 75 tons, trimmed maintenance costs by an estimated \$10,000 per year, improved air quality and increased usable space in school by 15%. Energy savings offset the loan payments resulting in a cash flow neutral financial impact. These results have empowered the Community Music School to increase access to the arts and provide a sustainable stewardship. The project is a model of re-purposing historic structures in urban areas to revitalize the city and surrounding region. Funding was achieved through community giving, grants, incentive funding and low interests loans.

Renewable Thermal Energy

Hybrid Geothermal/ Solar Thermal System

Goals and Objectives

1. Replace the failing HVAC system with a high efficiency system incorporating renewable thermal technologies.
2. Improve comfort, dependability, and operation of the HVAC system through the installation of a reliable distribution system, dedicated outdoor system and controls.
3. Reduce energy use and operating costs by at least 55%
4. Provide solar thermal and geothermal alternative energy sources to reduce dependence on fossil fuels and reduce the school's carbon footprint.



4 New Park Road East Windsor, CT 06088 860-243-1491
www.bghusa.com





The Community Music School of Springfield, MA

CASE STUDY

Renewable Thermal Energy

Hybrid Geothermal/ Solar Thermal System

Funding

- Mass Cultural Facilities Fund
- Beveridge Foundation
- Community Foundation of Western Mass
- A Roy and V Lea Foundation
- Davis Foundation
- Anonymous Donations
- WMECO
- Columbia Natural Gas
- Rebuild Western Mass
- DOER
- ABCD LEAN
- Mass Development(Loan)

a sound investment.

PARTNERS IN SUCCESS

Visionary Leadership at Community Music School



Engineering

Harry Grodsky & Co., Inc., Springfield, MA
The Blake Group, East Windsor, CT - Data/Drawings

Contractors

Harry Grodsky & Co., Inc., Springfield, MA - Design/Build
Automated Logic, Ludlow, MA - Controls
Collins Electric, Chicopee, MA - Electrical
LaFramboise Well Drilling, Inc., Thompson, CT - Wells
RES Solar, North Scituate, MA - Solar Thermal

Equipment Manufacturers

Camus Hydronics - Condensing Peaking Boilers
Flo Fab - Buffer Tanks
Thermal Care - Energy Recovery Chiller
WILO - EMC Motor Pumps



4 New Park Road East Windsor, CT 06088 860-243-1491
www.bghusa.com

