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Case Study: ASHRAE Miami Chapter's Involvement with Broward County Public Schools in the 2024 Renew America's Schools Prize

Executive Summary

In 2024, the ASHRAE Miami Chapter in collaboration with EXP U.S. Services Inc. (EXP) supported Broward County Public Schools (BCPS) with their successful bid for the 2024 Renew America's Schools Prize. The 2024 Renew America's Schools Prize and Grant is the second round of funding from the Renew America's Schools Program. This opportunity focused on helping K-12 public school districts across America make energy upgrades to decrease energy use and costs, improve indoor air quality, and foster healthier learning environments. BCPS, the sixth-largest school district in the nation, will use the \$300,000 prize to support the retrofit of 52 school buildings across 10 campuses with high energy needs. The program's goals include reducing energy consumption, improving indoor air quality (IAQ), and fostering workforce development. This collaboration highlights the potential for ASHRAE chapters to drive impactful sustainability initiatives, leveraging engineering expertise and community partnerships to achieve lasting change.

Background: Broward County Public Schools

Broward County Public Schools (BCPS) is the sixth-largest school district in the nation and the second largest in Florida, serving more than 256,000 students, and approximately 110,000 adult students, in 240 schools, centers, and technical colleges.



A Leader in Energy Efficiency

BCPS was recognized in 2024 as the Best in Class Retrofit Revolutionary by the DOE Efficient and Healthy Schools Program for its commitment to sustainability and strategic energy investments.

Previous initiatives, such as installing charging stations for its electric school bus fleet in partnership with FPLC, have positioned the district as a leader in energy efficiency and resilience.

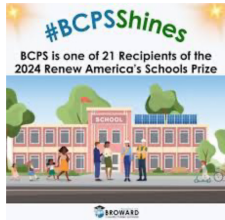
Commitment to Diversity, Equity, Inclusion, and Accessibility (DEIA)

BCPS maintains a robust Supplier Diversity Outreach Program to address systemic barriers faced by Small/Minority and Women Business Enterprises (S/M/WBEs) in securing contracts. The district also collaborates with FOPE, ensuring collective bargaining agreements support fair labor practices, equitable wages, and workforce inclusion.

Impact on Disadvantaged Communities (DACs)

The initiative focuses on schools in underserved areas, addressing inequities in access to energy-efficient infrastructure and educational resources. By improving facilities, the project enhances learning environments, reduces energy burdens, and empowers local communities through workforce development and economic opportunities.

The Project



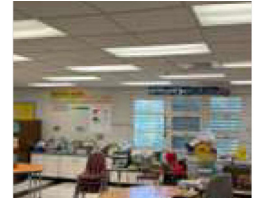
The project team includes the local utility company, Florida Power and Light Company (FPLC), as well as private firms, EXP U.S. Services Inc. (EXP) and Roth Schneider bolstering the partnership with specialized expertise with energy audits. FPLC provides the school district real-time energy use data. In a previous successful project, BCSP worked with the utility to launch charging stations across the district for its electric school bus fleet.

Key project elements include:

1. Energy Efficiency Improvements
 - o Retrofitting HVAC systems and upgrading lighting systems.
 - o Conducting energy audits to identify additional opportunities for energy savings.
2. Resilience and Sustainability
 - o Ensuring schools are better equipped to withstand extreme weather events.
 - o Promoting renewable energy and resource conservation practices.
3. Educational and Workforce Development
 - o Supporting hands-on learning for students in energy efficiency and sustainability practices.
 - o Partnering with organizations like FOPE and the Supplier Diversity Outreach Program to foster local workforce development and engage underrepresented communities.
4. Community Engagement
 - o Collaborating with Florida Power and Light Company (FPLC) to leverage real-time energy use data for educational and operational improvements.



Broward Estates Elementary School Single Pane Windows



Walker Elementary School Classroom Lighting Fixtures

ASHRAE Miami Chapter's Role

While EXP provided technical expertise for energy audits and retrofits, the ASHRAE Miami Chapter played a key role in providing educational support and facilitating coordination between the district, technical teams, and community stakeholders. The ASHRAE Miami Chapter provided critical support for the project by:

1. Educational Support and Community Awareness
 - o Disseminating information to stakeholders about the benefits of energy efficiency and IAQ improvements.
2. Coordination with EXP
 - o Ensuring energy audits, retrofit plans, and technical recommendations aligned with ASHRAE standards.
 - o Facilitating collaboration between the technical teams and BCPS leadership to streamline project implementation.

Outcomes of the Collaboration

1. Energy Efficiency and Cost Savings
 - o Energy audits and retrofits are projected to significantly reduce energy consumption and operational costs across 52 school buildings.
2. Improved Resilience and IAQ
 - o Upgrades to HVAC systems and building automation controls to enhance ventilation, filtration, and overall air quality.
3. Educational and Economic Impact
 - o Partnerships with FOPE and FPLC to create pathways for students and local workers to access clean energy jobs and hands-on training opportunities.
4. Community Benefits
 - o Enhance learning environments and resilient infrastructure to provide long-term benefits for disadvantaged communities.

Lesson Learned: Engagement with Local Education Agencies (LEAs)

- **Building Trust:** Establishing trust is fundamental, particularly through introductions made via networks with established contracts in the district. This fosters credibility and opens doors for collaboration.
- **Effective Early Communication:** Early interactions should prioritize providing the most relevant and essential information, emphasizing that all services are voluntary to avoid any pressure or misunderstanding.
- **Collaborative Partnerships:** Partnering with engineering firms willing to provide pro bono energy auditing services can significantly benefit LEAs and enhance engagement outcomes.
- **Valuable Networking Events:** Participating in ASHRAE events such as the Memphis Chapter Panel Discussion proved to be highly informative and supportive in fostering collaboration.
- **Persistence and Positivity:** Maintaining a persistent yet positive approach is essential for successful engagement and overcoming challenges in building relationships with LEAs.

Conclusion

The partnership between ASHRAE Miami Chapter, EXP, and Broward County Public Schools demonstrates the powerful impact of combining technical expertise, community engagement, and workforce development. Together, these organizations are setting a precedent for energy efficiency, sustainability, and resilience in schools, creating healthier and more equitable environments for students and communities.

This case study serves as a model for other ASHRAE chapters seeking to collaborate with local school districts and contribute to meaningful sustainability initiatives.

<https://www.ashrae.org/communities/chapters/dae-lbni-partnership/schools@ashrae.org>

