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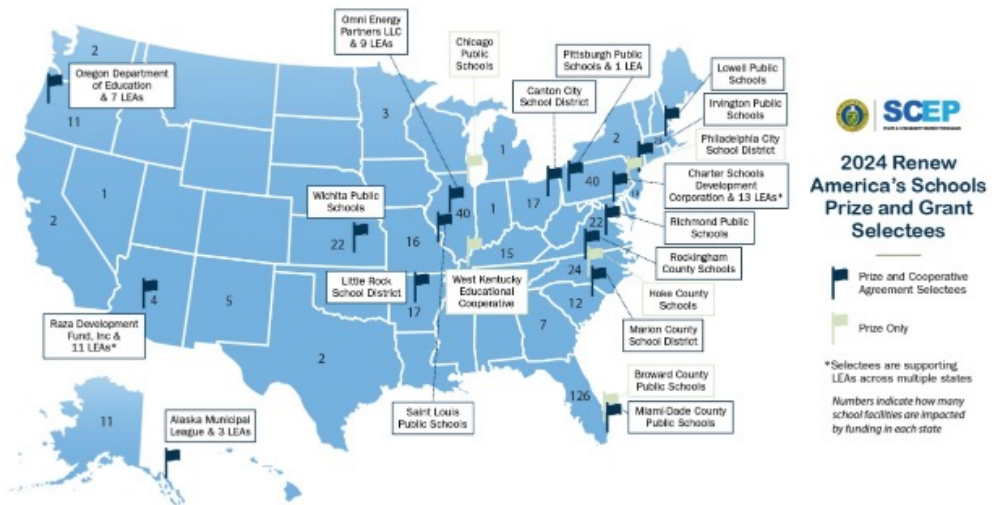


Case Study: ASHRAE Miami Chapter's Involvement with Miami-Dade County Public Schools in the 2024 Renew America's Schools Prize

Executive Summary

In 2024, the ASHRAE Miami Chapter in collaboration with EXP U.S. Services Inc. (EXP) supported Miami-Dade County Public Schools (M-DCPS) as part of the Renew America's Schools Prize initiative. Supported by the U.S. Department of Energy (DOE), the program aims to enhance energy efficiency, reduce greenhouse gas emissions, and improve indoor air quality (IAQ) in disadvantaged communities. While EXP led the technical execution of services, including energy audits, retrofitting, and renewable energy integration, the ASHRAE Miami Chapter provided critical support in information dissemination, educational programming, and coordination.

This collaboration underscores the transformative potential of local ASHRAE chapters in enhancing the impact of engineering expertise and fostering educational opportunities to serve communities in need. Together, ASHRAE Miami and EXP are delivering sustainable energy improvements to 74 school buildings across 10 campuses, benefiting 7,460 students and their communities.



Background Miami-Dade County Public Schools



Miami-Dade County Public Schools
Giving our students the world

Miami-Dade County Public Schools (M-DCPS), the third-largest school district in the nation, spans 2,400 square miles and consists of 392 schools. Over the past decade, M-DCPS has prioritized sustainability, aiming to reduce energy consumption by 15% by 2026. The district identified 74 school buildings across 10 campuses, primarily in disadvantaged communities, to participate in the Renew America's Schools Program. Overall, this grant will serve 7,460 students. M-DCPS sent a survey to high school students in the district and received overwhelming support from over 4,000 students for the project.

With 73.3% of students identifying as Hispanic and 18.6% identifying as African American, M-DCPS serves a diverse student population. Three of the schools in this project portfolio are designated as emergency shelters, and more than 75% of students are eligible for free and reduced-price lunch. These factors underscore the critical need for energy-efficient and sustainable infrastructure improvements.

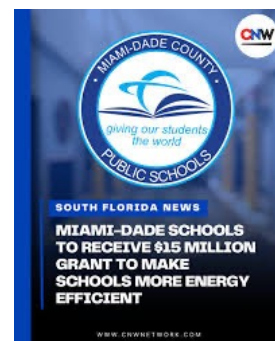
M-DCPS is fostering relationships with more than 10 organizations to ensure the project benefits the entire community. The district collaborates with:

- EXP to provide engineering services.
- Florida Memorial University for hands-on student training in energy efficiency.
- WeCount to ensure worker voices are heard and rights are protected, addressing labor equity and safety concerns.
- Greater Miami Service Corps and others to provide workforce training and access to clean energy jobs.
- Through its collaboration with EXP and ASHRAE Miami Chapter's educational and coordination efforts, M-DCPS is also engaging communities to promote environmental justice and equitable energy transitions.

The Project

On August 5, 2024, DOE named 21 Winners who earned a \$300,000 cash prize for their accomplishments in Phase 1. DOE then identified 16 of those Winners to advance to Phases 2 and 3, inviting them to enter cooperative agreements as Selectees for awards ranging from \$7.5 million to \$15 million. M-DCPS has identified 74 school buildings across 10 campuses with high energy needs to participate in the Renew America's Schools Program.

- Phase 1 Prize: \$300,000
- Federal Award (Phases 2-3): \$15,000,000
- Proposed Cost Share: \$4,719,298
 - o Phase 2: \$52,632
 - o Phase 3: \$4,666,667
- Number of Facilities to be Improved: 74
- Partner Organizations: EXP U.S. Services Inc. (EXP), The CLEO Institute, Dream in Green (DIG), Department of Regulatory and Economic Resources Development, UndauntedK12, WeCount, Greater Miami Service Corp, Florida Memorial University (FMU), EcoRise, Solar United Neighbors, Society of Flora Fauna and Friend, Walker Reid Strategies Inc.



M-DCPS's project plan centers around four key goals:

1. *Enhance energy efficiency and optimize building performance*
Strategies include retrofitting HVAC systems, upgrading lighting, implementing weatherization, and integrating advanced building automation systems.
2. *Increase renewable energy generation and reduce fossil fuel consumption*
The project includes solar photovoltaic installations and electrification of energy systems, reducing greenhouse gas emissions and grid dependency.
3. *Foster educational opportunities and workforce development in disadvantaged populations*
Partnerships with organizations like Florida Memorial University will provide hands-on training in energy auditing, sustainability practices, and clean energy jobs.
4. *Promote environmental justice by strengthening community engagement and partnerships*
Through partnerships with organizations like **WeCount** and **Dream in Green**, the project focuses on equitable energy access, worker protection, and educational resources in underserved communities.

ASHRAE Miami Chapter's Role

The ASHRAE Miami Chapter played an essential supporting role by facilitating communication, education, and coordination between EXP, M-DCPS, and the community. Key contributions include:

- 1. Information and Educational Support**

ASHRAE Miami disseminated critical knowledge to stakeholders, including community members and industry partners, ensuring alignment on goals and the importance of sustainable practices.

- 2. Coordination with EXP**

Through its partnership with EXP, the Chapter ensured that energy audit findings, retrofit recommendations, and project implementation plans adhered to ASHRAE standards for energy efficiency, IAQ, and sustainability.

- 3. Community Engagement and Awareness**

The Chapter joins forces with M-DCPS and its partners to promote environmental literacy and foster community support for the initiative.

Outcomes of the Collaboration

- 1. Energy Efficiency and Cost Savings**

Implemented retrofits and renewable energy solutions are projected to save M-DCPS \$1.2 million annually and reduce carbon emissions by 2,431 metric tons of CO₂e.

- 2. Improved Indoor Air Quality (IAQ)**

Upgraded HVAC systems and enhanced ventilation ensure healthier learning environments, reducing risks associated with airborne contaminants.

- 3. Educational and Workforce Development**

Partnerships with Florida Memorial University and workforce programs provided hands-on training for students and job opportunities for disadvantaged populations.

- 4. Community Impact**

The project fosters equity in energy access, engages local labor unions, and promotes environmental justice.

Conclusion

The ASHRAE Miami Chapter and EXP, in partnership with MDCPS demonstrated how technical expertise, strategic coordination, and community engagement can drive impactful, sustainable change. By addressing energy efficiency, renewable energy, and environmental justice, this collaboration serves as a model for other ASHRAE chapters to replicate, creating a healthier, more equitable future for communities nationwide.

Learn more:

<https://www.ashrae.org/communities/chapters/doe-lbnl-partnership-schools@ashrae.org>

