

case study

Photo: Miami-Dade County Government

Empowering Community and Energy Savings at the Martin Luther King Jr. Office Plaza

The Martin Luther King, Jr. Office Plaza, an iconic building masterfully conceptualized by architect Ronald E. Frazier and his firm, Ronald E. Frazier & Associates, stands as a testament to African culture, history, and resilience. Beyond its visual and cultural impact, the building has recently become a beacon of energy efficiency and community empowerment, thanks to Gemini Energy Solutions and its innovative technology, *Conserve*.

Harnessing Student Talent and Technology

The energy transformation of the MLK Office Plaza was not only a story of technical excellence but also one of community involvement.

- **Student Collaboration:** Florida Memorial University students, with just a few hours of training, conducted the energy assessment in partnership with Gemini Energy Solutions.
- **Technology in Action:** Leveraging Gemini's proprietary *Conserve* software, these students produced accurate projections of energy savings opportunities.

This innovative approach demonstrated the accessibility and precision of *Conserve*, empowering the next generation to drive sustainable change.

The Challenge: Insufficient Energy Performance

Before Gemini's involvement, the Martin Luther King, Jr. Office Plaza faced significant energy inefficiency challenges.

- Energy Usage: **3,239,600 kWh annually**
- Energy Star Rating: **66** (average performance but with room for improvement)
- Energy Costs: Over **\$500,000 annually**

The facility was operating at levels that reflected the aging infrastructure common in large public buildings and a lack of energy optimization practices.

Gemini's Approach: Affordable, Accurate, Impactful

Gemini Energy Solutions, supported by Florida Memorial University students, conducted an ASHRAE Level 2 energy audit. Key recommendations included:

Lighting Retrofits. Upgrading to LEDs and implementing occupancy sensors and de-lamping.

- Projected Savings: **169,500-185,000 kWh annually.**

HVAC Optimization. Replacing outdated systems and fine-tuning schedules for efficiency.

- Projected Savings: **280,000-299,000 kWh annually.**

Plug Load Management: Addressing "vampire loads" with low-cost solutions like mechanical timers.

- Projected Savings: Up to **80,000 kWh annually.**

Behavioral Adjustments: Refining operations based on occupancy and seasonal patterns.

The Results: Exceeding Expectations

By implementing these measures:

- **Energy Usage Dropped to 2,285,520 kWh annually** (a **29.45%** reduction)
- Energy Star Rating **increased to 86** surpassing the certification threshold of 75
- Cost Savings: **Over \$100,000 annually**
- **Adjusted A/C shutoffs** on three floors to 2 hours earlier
- **Revised building occupancy schedules** (5 hours during weekdays, 11 hours on weekends)
- **Turned off lights** in unoccupied spaces
- **Replaced** exterior Mercury Halide fixtures with LEDs.

Empowering the Next Generation

This project proved that college students, with minimal training and access to innovative tools like *Conserve*, can deliver professional-grade results. It highlights the intersection of technology, education, and sustainability to create lasting impacts.

A Model for Sustainable Change

The Martin Luther King, Jr. Office Plaza is now a shining example of how energy efficiency can coexist with cultural preservation and community empowerment. By combining Gemini's expertise, *Conserve*'s precision, and the enthusiasm of local students, this project not only transformed a building but also inspired a community.

Learn More: Discover how Gemini Energy Solutions and *Conserve* are shaping the future of sustainable energy at visit www.geminiesolutions.com.

