



PALADÍN

Game changer in building systems



LEED ZERO ENERGY MANAGEMENT PLAN

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON CO

NASHVILLE, TN

*LEED Zero Certification
& Energy Management Planning*





Through strategic planning, collaboration, and sustained investment, the Metro Energy Management Plan sets a clear path for Nashville and Davidson County to achieve ambitious energy efficiency and sustainability goals, ensuring a greener, more resilient future for generations to come.

LEED ZERO ENERGY MANAGEMENT PLAN

METROPOLITAN GOVERNMENT OF NASHVILLE & DAVIDSON COUNTY

Nashville, TN

The Metropolitan Government of Nashville and Davidson County (Metro) launched an ambitious initiative to reduce energy use, cut greenhouse gas emissions, and elevate building performance across its more than 19 million sq.ft. portfolio. In collaboration with the Department of General Services, Paladin developed the Metro Energy Management Plan, a strategic roadmap that guides energy-efficiency upgrades, establishes pathways toward LEED Zero Energy certification, and sets the foundation for long-term operational sustainability.



THE PROJECT

The city was required to retrofit at least 9% of its portfolio by 2024 and achieve LEED Zero Energy certification for 12.5% of buildings between 2026 and 2032. To meet these mandates, Paladin produced a scalable energy management framework that measures current performance, prioritizes investments, and guides each department toward long-term Net Zero operations. The plan outlines Nashville's commitment to sustainability through energy efficiency and LEED Zero Energy standards.

Paladin developed a comprehensive Energy Management Plan for implementation that integrates building performance data, retrofit strategies, and LEED Zero Energy certification pathways.





Q4 2024

v1 Energy Management Plan Issued



Q1 2025 Through Q2 2026

Implement ECMs from Completed ASHRAE Audits on Tier 2 Projects

Complete ASHRAE Audits on select additional Tier 2 buildings

Canvass existing facility operations contracts and ensure that contract renewals contain LEED O+M requirements.

Prepare Gap Analysis for LEED O+M on Tier 3.

Note: Tier 3 Candidates must have O+M awarded prior to LEED Zero Energy Pursuit.



Q2 2026

Implement ECMs on select additional Tier 2 buildings

Tier 1 projects begin 12-months of utility data reporting for LEED Zero Energy



Q2 2027

Metro's Green Invest partnership is on-line and generating

Tier 2 projects begin to collect 12-months of utility data (Tracking post ECMs)

Allocate kWh to each Tier 1 project and estimate Tier 2

Post Energy Data

Certify Tier 1 projects for LEED Zero Energy



Q3 2028

Submit and certify Tier 2 projects for LEED Zero Energy

Proposed timeline to meet Metro ordinances.

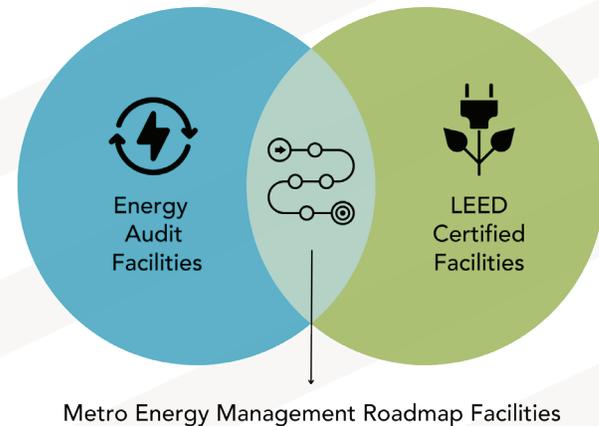


THE WORK

Key elements of Paladin's work included:

- **Portfolio Analysis & Benchmarking:** Analyzed energy use across Metro-owned buildings using Energy Star Portfolio Manager and CBECS data to establish baselines and track reductions.
- **Tiered LEED Zero Energy Roadmap:** Developed a four-tier system to prioritize buildings for LEED Zero Energy certification based on readiness, efficiency, and lifecycle considerations.
 - **Tier 1:** Prime candidates—existing LEED buildings with strong performance and on-site renewables.

Plan to Achieve Metro Ordinances (Metropolitan Code of Laws Section 2.32.070 and Section 2.32.080)



01

Prime Candidates

- LEED Certified
- Onsite PV Production
- Efficient Lighting
- All LED, less than 10 yrs old
- Efficient HVAC
- ASHRAE Life Expectancies (generally less than 20 yrs old)
- EUI below CBECS average
- Confirm expected normal operations for 3 year duration (no major renovations or similar disruption)

- o **Tier 2:** Capable candidates requiring targeted energy conservation measures.
- o **Tier 3:** Future candidates needing LEED O+M certification and operational policy alignment.
- o **Tier 4:** Owned, but not a candidate.

Paladin quantified the impact of previously completed energy projects to demonstrate compliance with two ordinances: LEED Zero requirements and energy performance standards. Through analysis of Metro’s upgrades — including lighting, HVAC, and controls improvements — Paladin verified a **6% energy savings**.

02

Capable Candidates

- LEED Certified
- Does not meet one or more of the Efficient Lighting, HVAC, or EUI criteria
- Requires investment to reduce energy consumption (HVAC, Lighting, PV Array)
- Align with planned maintenance projects wherever possible

03

Future Candidates

- Not LEED Certified - Potential for LEED O+M Certification
- Requires Building Maintenance and Services Policies
 - o Solid Waste Management
 - o Green Cleaning Policy
 - o Pest Management
 - o Indoor Air Quality Management
- Requires Major Renovations that will impact energy performance (e.g. reroofing, window replacements, lighting upgrades, and/or HVAC upgrades)

04

Owned,
Not a Candidate

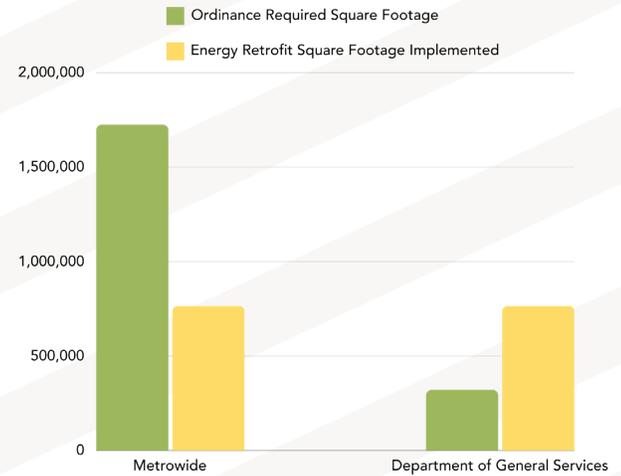
- Total GSF < 1,000
- Does not meet LEED BD+C or LEED O+M Minimum Program Requirements



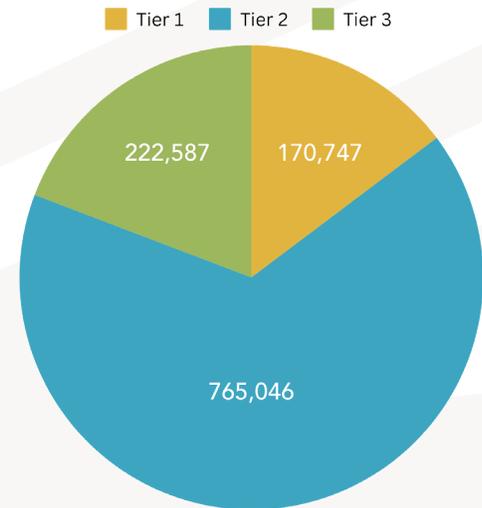
THE IMPACT

Reductions in energy consumption will translate into substantial annual cost savings for Metro's operating budget.

- From 2019-2024, Metro **achieved 46.5% of its energy retrofit target**, equating to 834,029 GSF retrofitted.
- The ESRF has employed \$1.7 million, resulting in a **6% decrease in energy consumption**.
- High-performance buildings saw a **15.7% reduction in energy use**, saving approximately \$387,000.
- **Scalable model** for extending energy management practices across all Metro departments.



Energy Retrofit Program Results



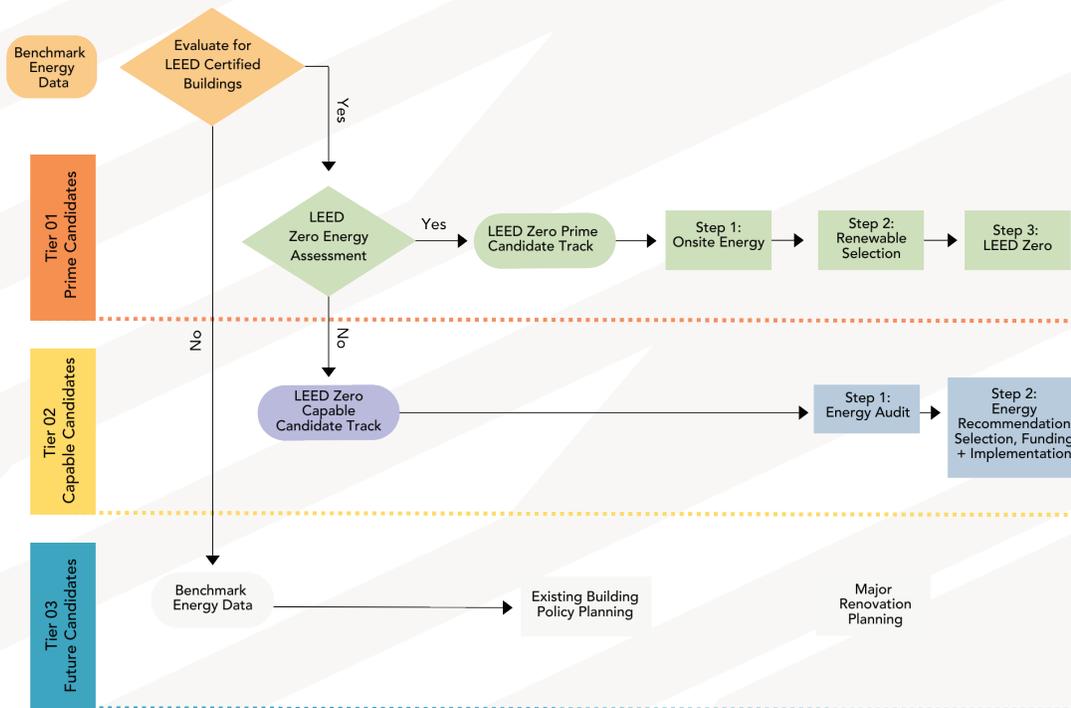
Metro Department of General Services:
Building Square Footage by
LEED Zero Energy Tier Candidacy

Progress toward LEED Zero Energy will significantly reduce greenhouse gas emissions and help Metro achieve its long-term sustainability commitments.

Through Paladin's leadership, Metro Nashville now has a clear, actionable roadmap to

achieve LEED Zero Energy certification and meet its 2041 renewable energy mandate.

The plan positions Nashville as a national example of how municipal portfolios can transition toward sustainable operations through data-driven energy management and collaborative policy implementation.



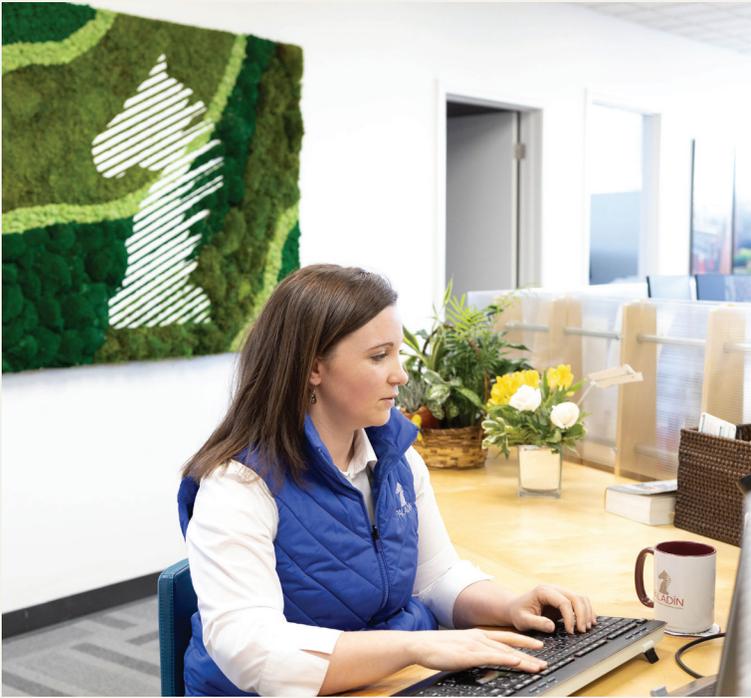
ABOUT US

We coined *Game changer in building systems*[™] because of our solid commitment to your building's potential. Founded in 1986, **Paladin** is a **woman-owned business** that harnessed our engineering roots to deliver strategic commissioning, sustainability, and direct-to-owner engineering services for new and existing facilities.



The Paladin difference is a team that tells you the truth with good intent allowing you to **leave status quo behind.**

As paladins, we support your project, defend your goals, and champion your building's success.



We are committed to reducing carbon emissions in every project by **more than 10%** through operational improvements, embodied carbon awareness, and properly operating systems.

CERTIFICATIONS & MEMBERSHIPS/ASSOCIATIONS





PALADÍN

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