

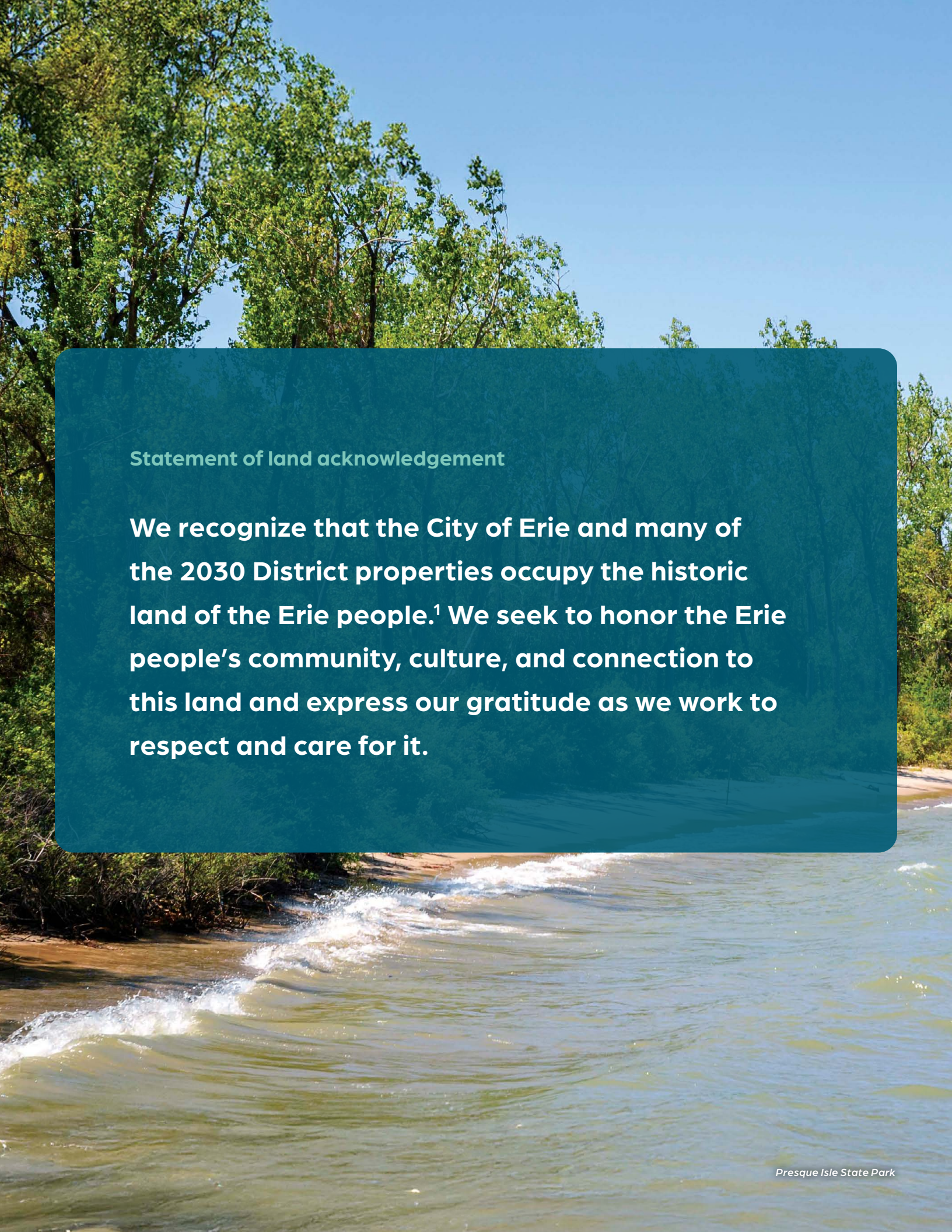
ERIE 2030 DISTRICT

2024 Annual Progress Report

PUBLISHED OCTOBER 2025



Green
Building
Alliance

The background of the entire page is a photograph of a lake. In the foreground, there are white-capped waves breaking onto a sandy beach. The water is a murky greenish-brown color. In the background, there are dense green trees under a clear blue sky. A large, semi-transparent teal rectangle is overlaid on the middle of the image, containing the text.

Statement of land acknowledgement

We recognize that the City of Erie and many of the 2030 District properties occupy the historic land of the Erie people.¹ We seek to honor the Erie people's community, culture, and connection to this land and express our gratitude as we work to respect and care for it.

BUILDING WITH ERIE'S FUTURE IN MIND

In 2024, the concept of “resiliency” gained widespread prominence in emergency planning, property management,² insurance and financing, workforce development, and public health.^{3,4,5} Worsening disasters, like Hurricane Helene in fall 2024 and California wildfires early this year cost billions of dollars in damages and lost productivity,⁶ dramatically threatening human health and safety.^{7,8} Increasing electricity demand from data centers has made clean energy production more urgent, and housing availability and affordability were front of mind for local and state leaders.

As the Federal Emergency Management Agency (FEMA) outlined last summer,³ a state of **resiliency requires that your population, society, economy, and environment are supported and thriving**. It is a holistic framework that goes beyond mere preparedness, fosters prosperity, and works hand in hand with net-zero strategies to ensure environmental progress alongside economic adaptivity.

Building modernization is a necessary business strategy against significant electricity price increases enacted by our grid operator, PJM.⁹ Good building “performance” – high-efficiency lighting, HVAC systems, and equipment, together with efficient structural elements such as windows, doors, siding, and roofs – is simultaneously preventative of and protection against grid outages and price volatility.¹⁰ And reinvesting in local storefronts strengthens not only our buildings and infrastructure but also our quality of life. This is resiliency: a mutually beneficial relationship wherein our own readiness and prevention strengthens the collective.

Erie is pursuing smart adaptations like the City’s Central Fire Station, whose solar array completed its first full calendar year of operation in 2024, providing electricity for daily use and a backup battery. The project has reduced the station’s electricity costs, cut

its greenhouse gas emissions, and kept it in operation through an outage, inspiring proposed legislation that would increase solar power and battery storage investments in first responder facilities across PA.¹¹

Political and business leaders also partnered last year in constructing a new large-scale solar farm, with two more planned in nearby counties. These clean energy investments protect local energy stability, help us meet the rising demand on our electric grid, and promote an economic growth model that is congruous with a clean and healthy environment.

Economic resiliency opportunities expanded in 2024 as well. With Erie approved in December as one of PA’s two City Revitalization and Improvement Zone (CRIZ) designees,¹² more state tax dollars will be allocated directly back into local economic development,¹³ with the goal of creating a positive cycle of growth in areas in need of a renaissance and creating a unique opportunity for future-ready building practices that are truly transformative.

GBA is proud to celebrate Erie Partners’ resiliency achievements, and we hope that these wins will energize all of us to go further toward resilient building practices. As we look ahead to the last five years of our race to 2030, we are not slowing down. Working together with you, GBA will amplify our vision across Pennsylvania, creating communities where every person can thrive.



Ashley DiGregorio

Senior Director, Energy and Communities

ERIE

Est 2019

20 PARTNERS

172 BUILDINGS COMMITTED

9,330,000 SQUARE FEET COMMITTED



Touring energy efficient buildings in the Erie 2030 District

NEW KENSINGTON

Est 2024

4 PARTNERS

26 BUILDINGS COMMITTED

1,370,000 SQUARE FEET COMMITTED



New Kensington 2030 District meeting at the Digital Foundry

PITTSBURGH

+ District Affiliates

Est 2012

108 PARTNERS

1,065 BUILDINGS COMMITTED

124,630,000 SQUARE FEET COMMITTED



Partners enjoying the Pittsburgh 2030 District Progress Report Reception in 2024

TOTAL PROGRESS

132

PARTNERS

1,263

BUILDINGS COMMITTED

135,300,000

SQUARE FEET COMMITTED

BUILDING COMMUNITY ACROSS PENNSYLVANIA

The success of the Pittsburgh 2030 District prompted the creation of the Erie 2030 District in 2019, and through several grant opportunities, GBA is expanding its work to build local resiliency in other communities across Pennsylvania, including the establishment of a 2030 District in New Kensington through support from the West Penn Energy Fund. GBA is thrilled to support new partners and jumpstart energy efficiency projects across PA, increasing economic resilience to price fluctuations and focusing on building projects that can withstand extreme weather events.

Enhancing Educational Offerings

GBA is constantly improving its services to better support our partners. This year, we introduced two new educational courses – Energy Efficiency 101 and Green Building 101 – and will be unveiling Intro to Capital Planning in the coming months. Energy Efficiency 101 details actionable no- and low- cost energy and water efficiency measures that building owners and operators can quickly implement to reduce energy and save costs, and Green Building 101 helps build awareness of the many strategies owners can use to enhance sustainability in their buildings. Intro to Capital Planning will share information on multiple aspects of the capital planning process, including identifying and prioritizing projects, budgeting for capital improvements, and keeping plans updated throughout the year. These courses are living documents aimed at inspiring actionable roadmaps toward resilient properties, neighborhoods, and communities.

THE 2030 DISTRICTS NETWORK

A Community of High-Performance Buildings

The Erie 2030 District is growing a groundbreaking, high-performance building district through private-public collaboration. Committed Property Partners strive to make dramatic reductions in carbon emissions and energy use in their buildings through next-generation energy practices, building envelope improvements, educating their peers, and more. To date, the Erie 2030 District comprises 20 Property Partners totaling 172 buildings and 9.3 million square feet, who join a collaborative of community organizations, engineers, architects, and government officials to implement sustainable building practices.

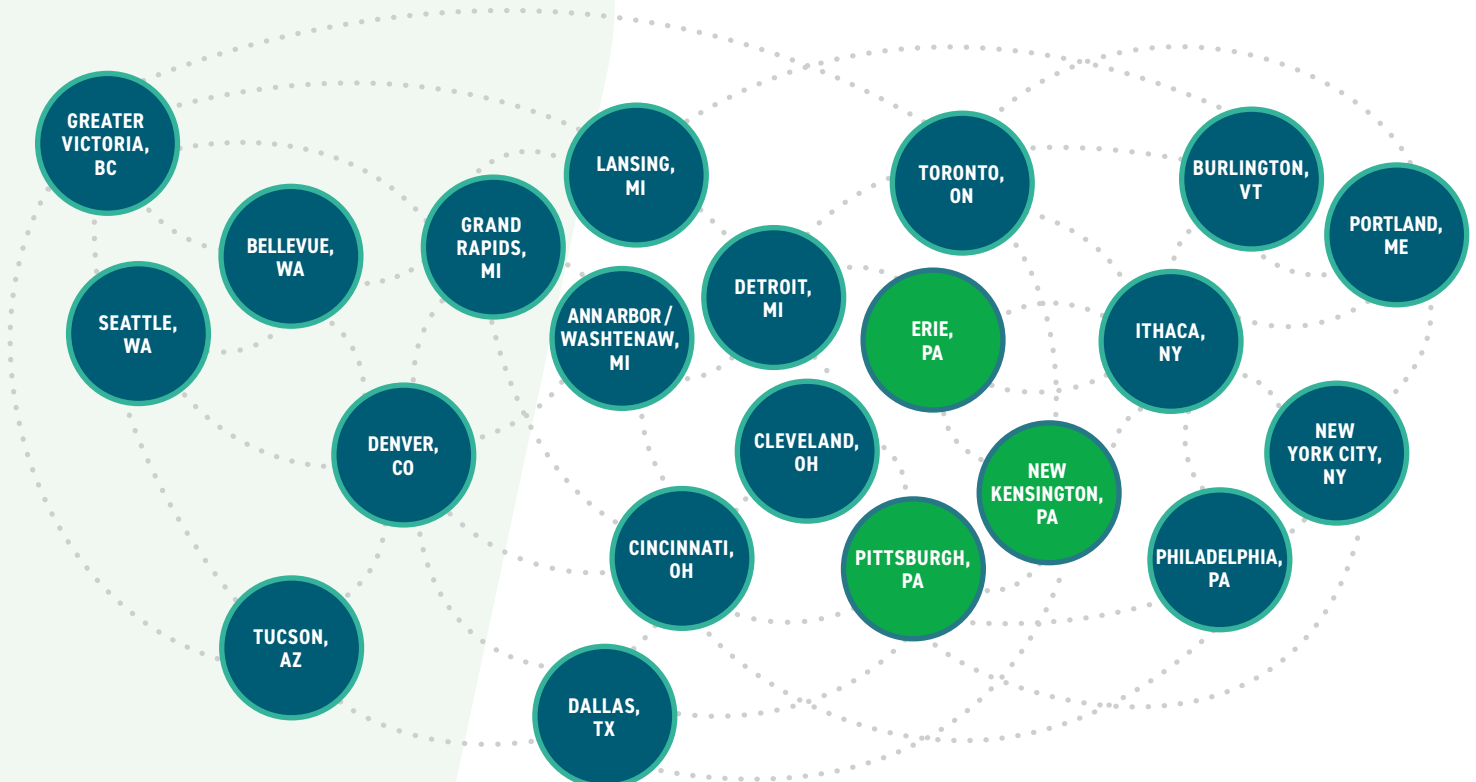
A Network of Influence

As part of the 2030 Districts Network, Erie punches above its weight and joins the ranks of major cities such as NYC, Toronto, and Philadelphia, but with its own distinctive qualities. The Erie 2030 District reflects the property makeup of a mid-sized city with a greater variety of property use types compared to its large metropolitan peers – differences that should be celebrated and inspiring to other small cities. Expanding 2030 Districts to places like Erie bolsters local economies by providing education on methods for redesigning buildings for high performance.

As a rust belt city, Erie has suffered from the economic downturn following the collapse of large American industrial manufacturing – but compared to some of its larger neighbors, Erie is uniquely positioned to capitalize on the benefits of Lake Erie to revitalize its economy. Drawing on resources from private sources, foundations, and government grants, developers are working to jumpstart Erie's redevelopment, presenting a once-in-a-generation opportunity for smart, sustainable, and cost-effective renovation that will foster resilience well into Erie's future.

2030 DISTRICTS NETWORK

- GBA MANAGED DISTRICTS
- NATIONWIDE NETWORK



Beyond 2030: Accelerating to Zero

At the 26th Conference of Parties in Glasgow (COP26), Architecture 2030 warned, “If the world is to meet the 1.5°C carbon budget set in the 2015 Paris Agreement, **we must reduce CO2 emissions in the entire [existing] built environment by 50–65% by 2030 and reach zero carbon by 2040.**”¹⁴ New buildings and major renovations must be designed for zero carbon immediately.

2024 was confirmed to be the new hottest year on record, surpassing the previous record set in 2023,¹⁵ and US emissions in 2024 remained roughly the same as the prior year.¹⁶ We need to redouble our efforts, reducing energy use and switching to and investing in renewable energy sources.

The Erie 2030 District is a prime example of how the built environment can work towards decarbonization and decrease the likelihood of devastating effects. The good news is that decarbonization efforts can not only reduce the negative impact of our building operations on global temperature rise, but can simultaneously ensure that our buildings cost less to operate and are more adaptive and resilient to the changing temperatures and storm impacts we are seeing in our communities. The work of Property Partners in the Erie 2030 District is essential to improving our chances to reduce global warming and protect our building assets.

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2030 CHALLENGE GOALS

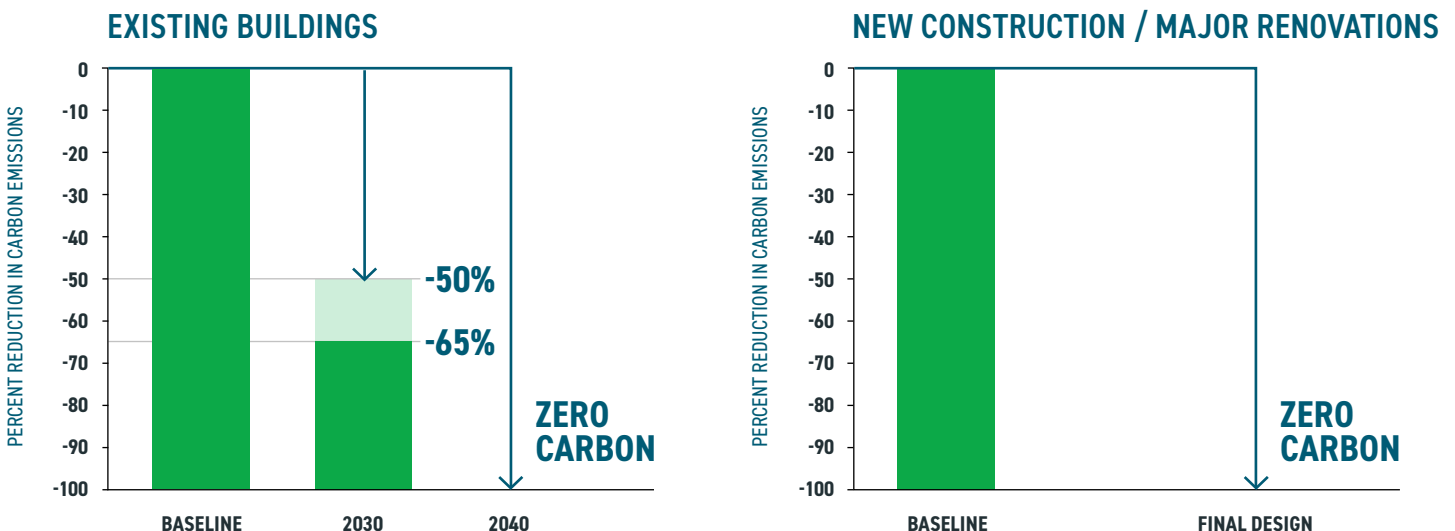
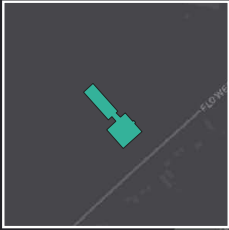


figure 1

2024 DATA



ERIE COUNTY PUBLIC
SAFETY BUILDING



MERCYHURST
UNIVERSITY



MOUNT SAINT
BENEDICT



ERIE FOOD COOP



SISTERS OF ST. JOSEPH



PENN STATE BEHREND

18.9%

ENERGY
REDUCTION

37.5%

REDUCTION IN
CARBON EMISSIONS

\$4.5M

ENERGY COSTS
SAVED (2024)

32,900

METRIC TONS OF CO₂e
EMISSIONS AVOIDED



172

BUILDINGS
COMMITTED WITHIN
BOUNDARY

9.3M

SQUARE FEET
COMMITTED WITHIN
BOUNDARY

- COMMITTED
- COMMITTED UNBUILT
- NOT YET COMMITTED

\$22.1M

ENERGY COSTS
SAVED (CUMULATIVE)

CARBON REDUCTION
EQUIVALENT TO 6 MILLION
CAR TRIPS AROUND
PRESQUE ISLE STATE PARK

Baseline & Performance Metrics

Determining a building’s reduction in emissions and energy use requires an initial point of comparison, known as a baseline. Using the best available data, each building is assigned an initial baseline value, which considers various features depending on the metric. Unique use types such as museums and stadiums have custom baselines referencing their historic performance.

	 CARBON EMISSIONS	 ENERGY
Baseline Type	National Baseline	National Baseline
Baseline Source	2003 Commercial Building Energy Consumption Survey (CBECS)	2003 Commercial Building Energy Consumption Survey (CBECS)
Baseline Considerations	• Climate zone • Building use type(s) • Occupancy • Weather	• Climate zone • Building use type(s) • Occupancy • Weather
Impact Metric	Emissions Intensity (EI)	Annual Energy Use Intensity (EUI)
Measurement Units	kg CO ₂ e/square foot/year	kBtu/square foot/year
Tracking Method	ENERGY STAR Portfolio Manager	ENERGY STAR Portfolio Manager
Reporting 2024 Performance	77 buildings, 6.0 million square feet, 64% of total committed square feet	77 buildings, 6.0 million square feet, 64% of total committed square feet

table 1



A Clean Energy Milestone for Erie

ERIE CENTRAL FIRE STATION

- 📍 208 W. 12th Street
- 🔌 Rooftop solar array with battery backup system
- 🗓 Flipped the switch in May 2023

2024 was the first full calendar year of operation for the Erie Central Fire Station’s rooftop solar array and backup storage battery. Clean energy projects like this one are an important strategy for both energy resiliency in local buildings and for reducing GHG emissions. In honor of this milestone, we celebrate the station’s progress toward a net-zero goal and energy cost savings for taxpayers.

104%
OF STATION'S
ELECTRICITY NEED
GENERATED

208 MWh
LIFETIME
ELECTRICITY
GENERATED

\$5,055
REBATES
RECEIVED

\$9,694
SOLAR
RENEWABLE
ENERGY
CERTIFICATES
(SREC) VALUE





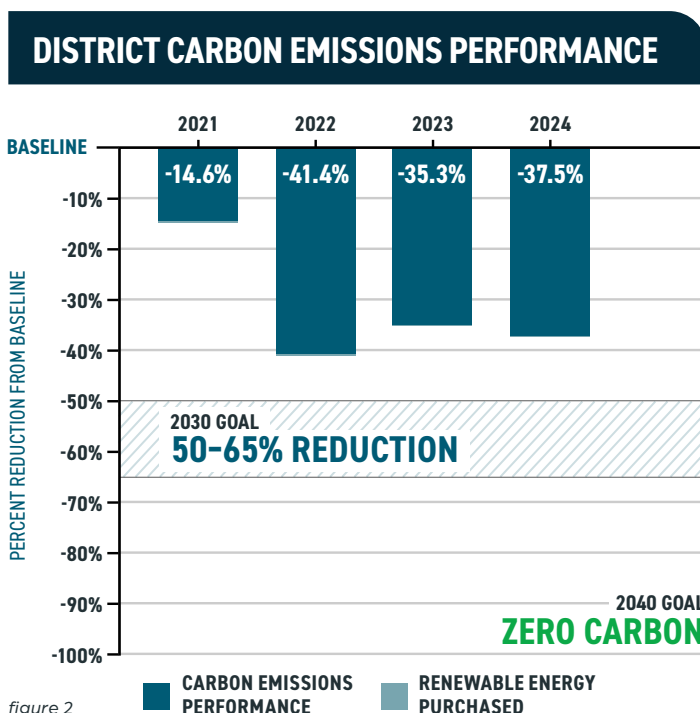
CARBON EMISSIONS

Converting Energy to Carbon

With the exception of renewable energy, producing and using energy creates carbon emissions, also known as greenhouse gas (GHG) pollutants, and different types of energy have different emissions factors. ENERGY STAR Portfolio Manager tracks emissions by determining the amount of each fuel type used and multiplying it by a corresponding emissions factor.¹⁷

District Performance

The Erie District saw a steady 2.2% improvement in carbon emissions performance in 2024, measuring in at 37.5% below the baseline. Owners and managers can cut their buildings' operational carbon emissions in two ways: by reducing the total energy used in their buildings through structural, mechanical, and operational improvements, and by converting to clean, renewable energy sources to power their remaining energy requirements. Through continued energy efficiency initiatives, Erie District Partners continue to make meaningful progress towards the goal of a 50–65% reduction in emissions by 2030.



Renewable Energy Developments

While few Erie 2030 District Partners report purchasing renewable energy compared to their peers in other cities, the broader region recently celebrated an important milestone. In late 2024, the area's first utility-scale solar farm was completed. The 24 MW facility, located in nearby Girard, PA, will produce enough energy to power nearly 3,000 homes.¹⁸ This type of investment in large-scale clean energy production reduces warming greenhouse gases, improves local and regional air quality, helps keep energy prices stable,¹⁹ and adds resiliency to our increasingly taxed electrical grid.

2024 was also the first full calendar year of operation for the solar array on the City's Central Fire Station, which has demonstrated excellent value. From the City of Erie's decision to adopt solar for certain operations to large infusions of renewable energy to the regional grid, these efforts across Northwest PA to increase clean energy capacity offer encouraging examples for future growth. While many business and local government leaders were galvanized into these investments through the rollout of expanded solar tax credits soon to expire in 2026, it is our hope that other incentives will continue pushing leaders across sectors toward renewables, such as the electricity cost savings that can be reinvested in their people, products, and mission. Whether through on-site solar or wind turbine installation or through renewable energy purchasing agreements, Erie building operators have a large window of opportunity to lead in energy stability and carbon reduction.

2024 METRIC TONS CO₂e AVOIDED

32,900

CUMULATIVE METRIC TONS CO₂e AVOIDED:

128,300



ENERGY

District Performance

In 2024, Erie 2030 District Partners saw a modest improvement in energy use to 18.9% below the baseline. While many buildings exhibited similar energy use in 2024 as they did the prior year, one notable partner saw a significant reduction by implementing a very replicable change. Through a new energy-saving initiative that stresses maximizing building occupancy based on seasonal usage requirements, Gannon University was able to reduce their buildings' energy use by almost 10% without requiring high capital expenditures. Read more about Gannon's initiative on the next page.

Occupancy-driven operations and fixtures are an important component to reducing your energy usage, but efficiency-based capital upgrades are critical and are less often pursued by our Erie partners.

Many older buildings, which are plentiful in Erie, have poor building envelopes, including single-paned windows, old roofs, and a lack of insulation. These leaky structures lose cooled and heated air, driving up energy usage, making spaces hard to cool or heat, and wasting dollars along the way.

With drastic increases in electricity prices, envelope upgrades are an essential strategy to ensure comfort, efficiency, reliability, and cost savings. Upgrades can take a variety of forms: increasing building insulation, replacing windows with double or triple pane versions, or resealing door and window frames.

Envelope upgrades can come at a high price point, but they should be thought of as a smart investment in your property today that will pay off in lowered operational costs going forward. They are a crucial step in significantly reducing energy use, including natural gas that is of high importance in Erie's lengthy winters, and ensuring the long-term performance of our buildings. As Erie property owners adjust to hotter summers with new air conditioning systems, a tight building envelope is critical to retaining cooled air. As we continue to adapt to changing regional needs for both heating and cooling, tightening building envelopes is a necessity to reduce leakage, usage rates, and costs, and ensure that building occupants will be comfortable as Erie's climate continues to change.

TOTAL ENERGY USE AVOIDED

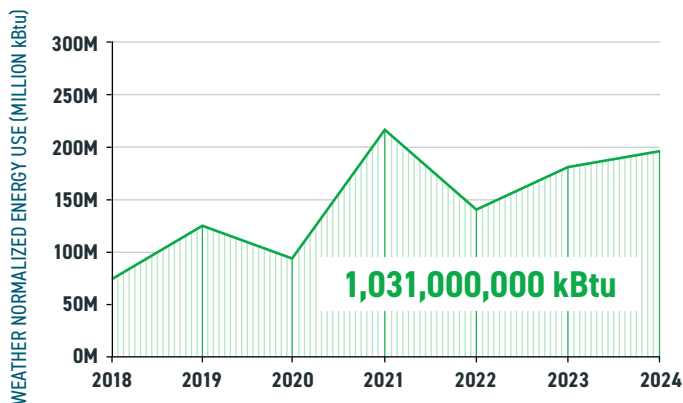


figure 3

DISTRICT ENERGY PERFORMANCE

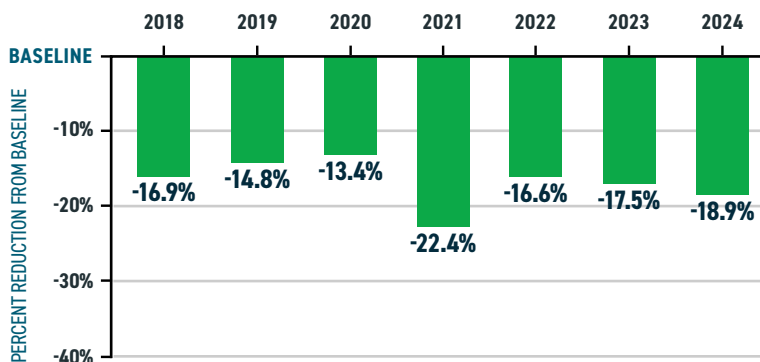


figure 4

2024 ENERGY COST SAVINGS:

\$4.5M

CUMULATIVE ENERGY COST SAVINGS:

\$22.1M

GANNON UNIVERSITY

Unlocking Energy Savings

Unlike many other organizations, colleges have a several month period where a majority of their building occupants are not present. By curtailing energy use during the summer, Gannon realized that they had an excellent opportunity to substantially reduce energy use across their campus and save significant amounts on their utility bills – all without disrupting campus operations.

In the fall of 2023, GBA provided an analysis on potential savings for two of Gannon’s buildings, drawing on the energy reductions experienced in other college/university buildings during the COVID shutdown in 2020. Gannon used these numbers as a jumping off point to develop an energy savings plan.

In the summer of 2024, Gannon implemented their plan, which revolved around two main components: consolidating the campus’ occupied spaces and reducing energy use in unoccupied spaces. With much of the student population away from campus during the season, Gannon was able to consolidate summer classes into two buildings, leaving many of their other buildings predominantly unoccupied. Unoccupied spaces do not require the same level of conditioning, so Gannon raised their temperature setpoint to 78°. Additional savings resulted from reduced lighting demand and lower hot water loads.



Photo Credit: Gannon University

The effects of these changes are immediately apparent when looking at Gannon’s energy use by month (as shown in figure 5). On average, much of 2024 was warmer than 2023, which, while naturally reducing heating needs during the spring and fall, also resulted in increased cooling needs during the summer. With 2024 being warmer than 2023, we would expect summer energy use to be higher, but Gannon’s energy graph shows the opposite. In May 2024, Gannon’s campus energy use fell by 36% compared to the prior year.

The rest of the summer tells a similar story: 26% decrease in June, 18% in July, and 11% in August. This reduction in energy use saved the university \$93,000 in utility and operations costs over the course of the summer. It is a common trope that right-sizing strategies are often overlooked in favor of capital expenditures and large-scale project installations, due to their comparatively low visibility to building end users. Gannon’s success turns this trend on its head and shows that energy savings can be unlocked with relatively simple operational and scheduling optimizations that adapt consumption to meet need.

MONTHLY CAMPUS ENERGY USE

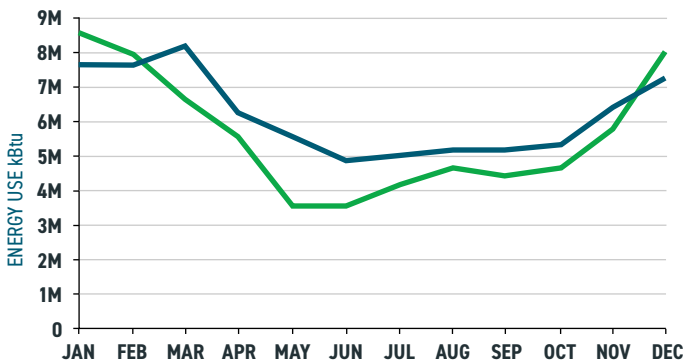


figure 5 2023 2024

JOIN THE ERIE 2030 DISTRICT

The Value of Community

The Erie 2030 District's success stems from its close-knit and dedicated network of partners and sponsors. Property Partners have opportunities to learn and benefit from personalized support, professional guidance, training, and technical assistance available through the 2030 District program, and GBA works with every 2030 District Partner to create a warm, trusted relationship. The program fosters a network of peer-to-peer relationships and learning opportunities, allowing participants to learn from their neighbors and share their own successes. Erie 2030 District Partners form a community of educated, purposeful leaders that have the knowledge to positively impact building development and operations throughout the region.

Individual Building Performance Evaluations

GBA consults with Property Partners one-on-one to identify critical investments toward improving building performance and reducing utility costs. Partners receive a confidential annual performance report that analyzes their progress towards zero carbon, energy reductions, water reductions, and indoor air quality performance. These reports highlight Partners' current and former performance, while GBA staff provide context and ideas for specific building upgrades. Where possible, reports also compare a building's performance to similar, anonymous local buildings.

Become a Property, Community, or Resource Partner

Distinguish your organization or school district by joining Western Pennsylvania's most influential network of building owners and developers! Reach out to GBA to learn more, commit to the 2030 Challenge goals, and join a community of technical experts. GBA offers partners individualized property benchmarking and recommendations to support your building resiliency journey. Any new or existing developments in Western Pennsylvania are welcome to join!



**Green
Building
Alliance**

Green Building Alliance (GBA) works across sectors and with communities to create beautiful, efficient, high-performing spaces that are as healthy for people as they are for the environment, and that contribute to a thriving economy. Founded in 1993, GBA is a leading authority on sustainable building best practices, with a vision for transforming how we plan, build, and revitalize our buildings and our communities; designing and manufacturing sustainable products and materials; and establishing plans and policies that set new standards for the future. GBA manages the largest 2030 District in North America and in 2019, established Pittsburgh as the 2nd UN International Center of Excellence on High Performance Building in the world. GBA works throughout Pennsylvania and across the country and world through strategic alliances including the 2030 Districts Network, Architecture 2030, United Nations, International Living Future Institute, US and World Green Building Councils, and the High Performance Building Alliance (Ireland).

Property Partners:

1001 State OZ Operator, LLC
 Allegheny Health Network
 Benedictine Sisters of Erie*
 Cathedral of St. Paul
 City of Erie
 Emmaus Ministries Inc.
 Erie Art Museum
 Erie City Mission*
 Erie County*
 Erie Food Cooperative
 Erie Insurance
 Erie United Methodist Alliance
 First Presbyterian Church
 of the Covenant
 Gannon University
 Mercyhurst University*
 PA Department of Conservation
 and Natural Resources
 PA Performing Artists
 Collective Alliance (PACA)
 Penn State Behrend
 Sisters of St. Joseph of
 Northwestern Pennsylvania*
 UPMC Hamot*

*Founding Property Partner

Community & Resource Partners:

Architecture 2030
 Bridgeway Capital
 Community Resilience Action
 Network of Erie (CRANE)
 Erie Bird Observatory
 Generation180
 International Living Future Institute
 Keystone Energy Efficiency
 Alliance (KEEA)
 Master Builders' Association
 of Western Pennsylvania
 PA Sea Grant
 Pennsylvania Solar Center
 PennFuture
 Pennsylvania Environmental Council
 Pennsylvania Technical
 Assistance Program (PennTAP)

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Green Building Initiative

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Interface

Cordia Energy

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REFERENCES

1 May, J.D. (n.d.) Erie. The Encyclopedia of Oklahoma History and Culture. <https://www.okhistory.org/publications/enc/entry?entry=ER002>

2 Williams, J. (n.d.). Design resiliency often means going beyond building code requirements. FacilitiesNet. https://www.facilitiesnet.com/emergencypreparedness/article/Design-Resiliency-Often-Means-Going-Beyond-Building-Code-Requirements--20441?poly_enc_%20id=9896A6393067J3D&source=facility_insider

3 Federal Emergency Management Agency. (2024, August). National resilience guidance. <https://www.fema.gov/sites/default/files/documents/fema-national-resilience-guidance-august2024.pdf>

4 Trauma Resource Institute. (2025, January 21). Healing after disasters. <https://www.traumaresourceinstitute.com/blog/healingafterdisasters>

5 Stiell, S. (2024, November 18). National adaptation plans: Key to unleashing the transformative power of resilience and protecting communities and economics. United Nations Framework Convention on Climate Change. <https://unfccc.int/news/national-adaptation-plans-key-to-unleashing-the-transformative-power-of-resilience-and-protecting>

6 Danielle, M. (2025, January 13). AccuWeather estimates more than \$250 billion in damages and economic loss from LA wildfires. AccuWeather. <https://www.accuweather.com/en/weather-news/accuweather-estimates-more-than-250-billion-in-damages-and-economic-loss-from-la-wildfires/1733821>

7 Kestin, S. (2024, October 19). The lives we lost: Helene took entire families, couples, children. Asheville Watchdog. <https://avlwatdog.org/the-lives-we-lost-helene-took-entire-families-couples-children/>

8 Hlavinka, E. (2025, January 28). After a disaster, communities can be at risk for toxic exposures. Do residents know that? Yahoo News. <https://www.yahoo.com/news/disaster-communities-risk-toxic-exposures-103005781.html>

9 Howland, E. (2025, January 29). PJM agrees to lower price cap for upcoming capacity auctions. Utility Dive. <https://www.utilitydive.com/news/pjm-shapiro-pennsylvania-capacity-auction-price-cap/738591/>

10 Jackson, F. (2025, January 31). Changing the narrative from decarbonization to modernization. Forbes. <https://www.forbes.com/sites/feliciajackson/2025/01/31/changing-the-narrative-from-decarbonization-to-modernization/>

11 Pa. House Bill 272, 2025–2026 Session (2025). <https://www.palegis.us/legislation/bills/2025/hb0272>

12 Commonwealth of Pennsylvania. (2024, December 30). Shapiro administration creates new economic development zones in Erie and Reading. <https://www.pa.gov/governor/newsroom/2024-press-releases/shapiro-admin-creates-new-economic-development-zones-criz-in-eri>

13 Flowers, K. (2025, May 2). What is CRIZ? And how could it benefit Erie? Go Erie. <https://www.goerie.com/story/news/local/2025/05/02/criz-important-development-tool-city-revitalization-improvement-zone/83365438007/>

14 Mazir, E. (2021, August 19). CarbonPositive: If we act together now, we can change the world. Architect Magazine. https://www.architectmagazine.com/carbon-positive/carbonpositive-if-we-act-together-now-we-can-change-the-world_o

15 Bordan, R. (2025, January 10). Temperatures rising: NASA confirms 2024 warmest year on record. National Aeronautics and Space Administration. <https://www.nasa.gov/news-release/temperatures-rising-nasa-confirms-2024-warmest-year-on-record/>

16 Gaffney, M., King, B., & Larsen, J. (2025, January 9). Preliminary US greenhouse gas emissions estimates for 2024. Rhodium Group. <https://rhg.com/research/preliminary-us-greenhouse-gas-estimates-for-2024/>

17 Energy Star Portfolio Manager. (2024, August). Technical reference: Greenhouse gas emissions. <https://portfoliomanager.energy.gov/pdf/reference/Emissions.pdf>

18 Cypress Creek Renewables. (2024, October 14). Cypress Creek Renewables hosts project preview of coming Erie, Pennsylvania solar facility for state senator and other local leaders. <https://ccrenew.com/news/cypress-creek-renewables-hosts-project-preview-of-coming-erie-pennsylvania-solar-facility-for-state-senator-and-other-local-leaders/>

19 Foyer, A. (2025, July 29). Renewables and the price of power: what the data says. Orennia. <https://orenna.com/insights/renewables-and-the-price-of-power-what-the-data-says>



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