nbi new buildings institute



# 2020 Midwest Getting to Zero Buildings List

The 2020 Midwest Getting to Zero Buildings List tracks commercial and multifamily zero energy (ZE) building projects across thirteen states, including: Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. This inaugural Buildings List is published to show the status of ZE projects in the region and to increase public awareness, market acceptance, and adoption of ZE and other high performance design and construction practices, including Passive House. The 63 trailblazing projects listed here are helping move the needle toward a lowenergy and low-carbon future for the Midwest.



**ZETO** 

The Midwest has seen steady growth in zero energy (ZE) projects since 2003, when the Science Museum of Minnesota's Science House, the Midwest's first ZE project, was completed. So far, 14 projects have documented ZE performance through New Buildings Institute (NBI) verification or certification by a third party such as International Living Future Institute (ILFI)<sup>1</sup> or LEED.<sup>2</sup> A zero energy building produces as much energy through clean, renewable resources as it consumes over the course of a year.

Forty-nine more projects have publicly stated a ZE performance goal, putting them on the emerging projects list. Emerging projects are those striving for ZE goals, but are still in the design and construction phase or do not have a full year of measured energy performance data available for verification. The education sector, including both K-12 and higher education campus buildings, is leading in number of projects with seven verified ZE projects and 18 more on the way, representing 40% of all regional ZE projects (nationally, education represents 34% of all ZE projects).

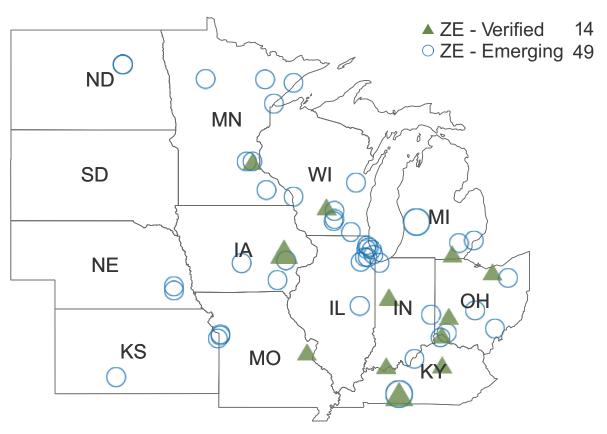
The **EDUCATION SECTOR**,

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#### ZERO ENERGY PROJECTS ACROSS THE MIDWEST



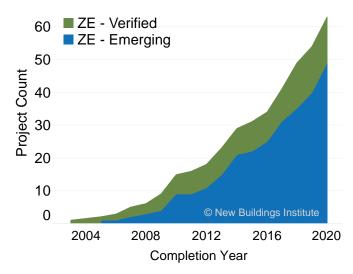
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- 1 https://living-future.org/
- 2 https://www.usgbc.org/leed

#### **Market Growth**

Nearly all ZE project teams take an efficiency-first approach and deliver high performance, ultra-low energy buildings. In the Midwest and across North America, ZE buildings typically consume less than half the energy of conventional buildings.<sup>3</sup> The Midwest and nationwide median site energy use intensity (EUI) of ZE projects tracked by NBI is just 23 kBtu per square foot per year (kBtu/sf/yr), before renewables. These extremely low-energy outcomes are the result of aggressive energy targets, careful design, integrated project teams, and consideration of building operations, typically including occupant education, engagement, and energy use tracking. Some trailblazing zero energy projects also consider embodied carbon and the climate impacts of refrigerant leakage from HVAC systems to further reduce the carbon impact of their projects beyond the operational footprint.

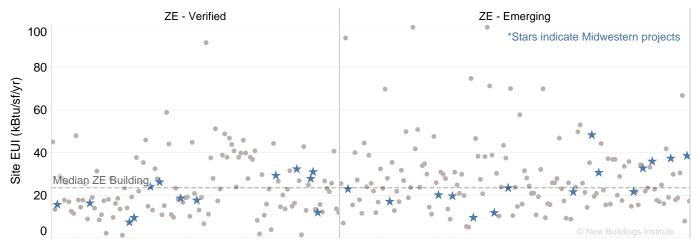
#### **GROWTH IN MIDWESTERN ZE PROJECTS**



The median site energy use intensity (EUI) of Midwestern ZE projects tracked by NBI is just

PER SQUARE FOOT PER YEAR (KBTU/SF/YR), before renewables.

#### ENERGY PERFORMANCE OF NATIONAL AND MIDWESTERN ZERO ENERGY PROJECTS



Zero Energy Projects with Measured or Predicted Energy Performance

<sup>3</sup> For existing buildings, CBECS 2012 provides a useful baseline: the median U.S. office building EUI is 53 kBtu/sf/yr (site).

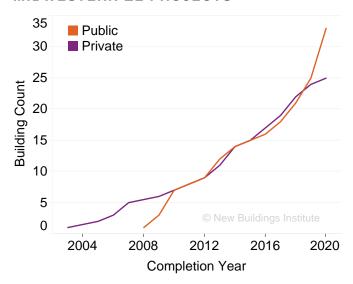
#### Public vs. Private

Zero energy buildings in the Midwest are a mix of publicly and privately owned facilities. Many of the earliest ZE facilities were schools and higher education facilities, and public buildings continue to make up roughly half of all ZE projects nationwide. In many cases, local or state government policy has driven these projects to get to zero. But private-sector projects have been and continue to be a major part of the ZE landscape in the Midwest and beyond. Continued growth in the private sector is a key indicator of market transformation and an encouraging sign that zero energy is gaining momentum across the buildings industry.

## **Building Size and Type**

Smaller zero energy buildings (under 50,000 square feet) are somewhat more common in the Midwest compared to the rest of the country. Nationally, about one third of projects are larger than 50,000 square feet. In the Midwest, about a quarter of projects reach that size. Today's trend toward larger buildings indicates that many designers and builders have solved the challenges of "Getting to Zero" in larger, more complex projects. Many larger ZE projects include renewables located beyond the rooftop: on parking canopies, in community solar models, or procured from utility-scale installations via power purchase agreements. Some national and Midwestern designers and owners are targeting ZE on a district, campus, or portfolio scale rather than at the individual building scale.

#### **GROWTH IN PUBLIC AND PRIVATE MIDWESTERN ZE PROJECTS**

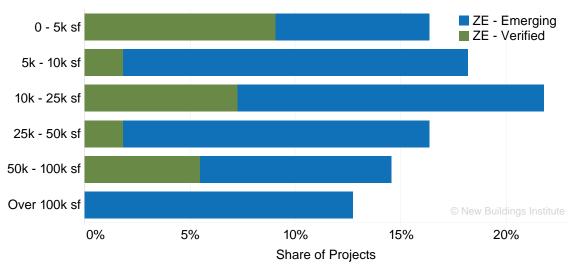


### **Getting to Zero** Shouldn't Break the Bank

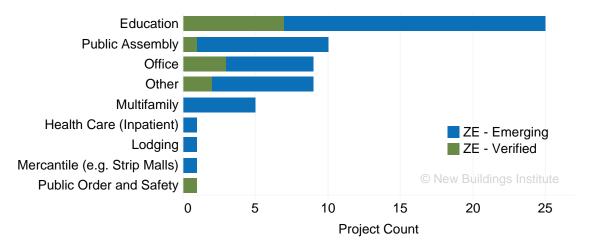
Zero Energy buildings are being built today with little to no added upfront costs. Built Environment Plus showed that many types of ZE buildings in Massachusetts can be built with no added upfront cost and that paybacks can be as low as one year in many commercial buildings.

builtenvironmentplus.org/zero-energy**buildings** 

#### MIDWESTERN ZE BUILDING SIZES



#### **BUILDING TYPES**



## **Policy Drives Zero Energy Projects**

States and local jurisdictions are adopting policies that drive innovation, create clean energy jobs and advance the market for buildings with reduced climate impact by familiarizing the construction industry with better building products and practices. Some best practice policies include:

PROVIDE QAP POINTS FOR PASSIVE HOUSE **CERTIFICATION.** State housing

authorities can provide critical support to low-income citizens and also reduce greenhouse gas emissions by giving extra points for Passive House certification or other low-carbon certifications. in their Qualified Allocation Plan (QAP) for Low-Income Housing Tax Credits. This policy innovation gives a preference for highly efficient housing, resulting in lower energy bills for residents and reduced building operating costs. See how Pennsylvania's QAP has inspired over 900 affordable housing projects here.4

**ADOPT THE 2021 IECC** AND THE ZERO ENERGY **APPENDICES.** To assure

that all new buildings are built to optimal standards, catalyze clean energy job creation in the state, assure lower monthly energy bills for citizens, and reduce state carbon emissions, states can adopt the 2021 International **Energy Conservation Code** (IECC). Local jurisdictions should consider adopting the Residential Zero Energy Appendix<sup>5</sup> and (for commercial) the Zero Code Renewable Energy Appendix<sup>6</sup> as part of their energy codes, which can simplify the requirements for buildings that produce as much energy as they consume.

PROVIDE MARKET **GUIDANCE WITH STRETCH** 

**CODES.** When states allow local jurisdictions the option to adopt a more stringent stretch code7 for better performing buildings, it provides two consistent choices for local code adoption (rather than a patchwork of codes). A stretch code familiarizes the construction industry with advanced products and practices which are likely to appear in forthcoming standards. This approach provides strong motivation to manufacturers and distributors to compete for market share of what will ultimately be required products. Market demand tends to lower prices to builders and the savings can be passed on to developers and owners.

<sup>4</sup> https://passivehouseaccelerator.com/articles/low-income-housing-tax-credits-the-sleeper-passive-house-catalyst

<sup>5</sup> https://gettingtozeroforum.org/wp-content/uploads/sites/2/2020/06/2021 IECC ZEAppendix 062020.pdf

<sup>6</sup> http://zero-code.org/new-model-building-code-empowers-local-jurisdictions-to-require-zero-net-carbon-operations/

<sup>7</sup> https://newbuildings.org/code\_policy/utility-programs-stretch-codes/stretch-codes/



#### **CASE STUDY**

## Fairwood Commons: Ohio's First Passive House **Certified Multifamily Housing, Columbus, Ohio**

Fairwood Commons is a senior affordable housing community built to address the lack of safe housing options for low-income residents on the east side of Columbus.

On a once-blighted, two-acre parcel of land now stands a three-story, 54unit, high-quality multifamily building that provides elderly residents age-inplace amenities. These include a children's playroom, fitness center, walking paths, a dog park, a community room, and onsite availability to supportive services. But the building's unseen benefits are just as important to the residents' quality of life: better indoor air quality and thermal comfort, quiet indoor spaces despite the busy street nearby, and monthly energy bills about half of what they would pay in a conventional building.

As the first multifamily property in Ohio to achieve certification from Passive House Institute U.S. (PHIUS+ 2015), construction included a thorough quality assurance and verification protocol. Although the building does not generate renewable energy onsite and is not targeting zero energy performance, it boasts an exceptional EUI of 20.4 kBtu/sf/yr (modeled), on par with zero energy building efficiency. Fairwood Commons is certified as a U.S. DOE Zero Energy Ready Home (ZERH) and is LEED Platinum certified.

Year Completed	2018
Project Size (sf)	56,050 sf
	54 units, 3 stories
Project Cost	\$12.2 million
Modeled Building EUI	20.4 kBtu/sf/yr8
ASHRAE Climate Zone	5A

<sup>8</sup> Actual energy usage data for this building was not available primarily because each unit is separately metered.

A key reason this project succeeded is because the developer and design and build team – including the general contractor, the architect, and the sustainability consultant – set design goals early in the process and collaborated to ensure that quality and energy priorities were met. As part of the collaborative design process, the construction and design team attended PHIUS training. The team agreed early on to optimize the building's orientation to maximize natural daylighting into interior spaces and to focus on the building's thermal envelope and air barrier to optimize indoor comfort and reduce energy needs.

The building's high performance envelope includes triple-pane windows, super-insulated walls (including 6" of blown fiberglass insulation and 2" continuous exterior insulation (totaling R-62) and ceilings (R-60 blown fiberglass), and airtightness 10 times tighter than required by code. A key challenge to achieving Passive House was how to keep the building envelope's air barrier uncompromised by penetrations at roofs, walls, and shafts. The project team achieved a continuous layer of sheathing below the attic roof truss to ensure an air-tight barrier between the attic and conditioned spaces. Exterior sheathing with taped seams was even taped over the exterior of the elevator shaft and trash chutes.

The project utilized an efficient central water heating system with a closed circulation loop. The system was tested to assure that no more than 0.6 gallons of water is wasted from any plumbing fixture before the temperature changes by 10 degrees while users await the arrival of hot water.

Architect	PCI Design Group, Inc., Columbus OH
Developer	Woda Cooper Companies, Inc. and East Columbus Development Co.
Owner	Fairwood Commons Limited Partnership
Sustainability Consultant	Sanyog Rathod, Certified Passive House Consultant (CPHC) and Chris Dwyer, PHIUS Rater, Sol design + consulting
Engineer	BlueStreak Consulting, Cleveland, OH
Energy-related Certifications	PHIUS+2015, U.S. Department of Energy's Zero Energy Ready Homes, LEED Platinum, Energy Star Version 3, and EPA's Indoor airPLUS
Financing	Low-income housing tax credits allocated by the Ohio Housing Finance Agency; equity provided by Ohio Capital Corporation for Housing. It was selected as an Exceptional Development in the QAP based on Passive House design. The City of Columbus provided a HOME loan and a 15-year tax abatement granted for 100% of the increase in the project's value. The project received a bridge loan from the Affordable Housing Trust for Columbus and Franklin County and a construction loan from Huntington National Bank.

Electric heating and cooling are provided by ducted mini-split heat pumps, which include state-of-the-art centrally located energy recovery ventilators (ERV), with each ERV serving multiple units. An ERV works by capturing the energy contained in the exhaust of conditioned air (that would otherwise normally be expelled and wasted) and using it to pretreat/precondition the incoming outdoor ventilation air. Refrigerators and stovetops are electric ENERGY STAR-rated appliances, and LED lighting was used throughout the building.

## Passive House Certified Projects in the Midwest

Passive House is a stringent building design and construction standard that requires very tight and well-insulated building envelopes as well as carefully sized and balanced HVAC systems. This dramatically reduces the energy needed to condition the building and is often a feature of zero energy design, although not all Passive House buildings achieve zero energy performance. The leading multifamily and commercial projects in the Midwest, listed below, have attained certification from either the Passive House Institute (PHI) or Passive House Institute US (PHIUS). More Passive House projects are in design, being built, or awaiting certification and are not listed here.

#### PASSIVE HOUSE CERTIFIED PROJECTS IN THE MIDWEST

Name	Location	Building Type / MF Units	Floor Area (sf)
Bagley Classroom (PHI)	Duluth, MN	Education	2,000
Das BioHaus (PHI)	Bemidji, MN	Education	5,000
Fairwood Commons (PHIUS)	Columbus, OH	Multifamily / 54	56,050
Prairie Activity & Recreation Center (PHIUS)	Plainfield, IL	Public Assembly	39,776
Rethke Terrace (PHIUS)	Madison, WI	Multifamily / 60	27,838
Saint Joseph's School Addition (PHIUS)	Downers Grove, IL	Education	7,000
Tierra Linda (PHIUS)	Chicago, IL	Multifamily / 6	8,596
University of Chicago Field Station (PHI)	Three Oaks, MI	Education	2,400

## **List Definitions**

#### **ZERO ENERGY**

projects are buildings or groups of buildings with significantly reduced energy loads, such that 100% or more of the energy use can be met with on-site renewable energy generation annually (offsite renewables are counted toward achieving ZE in certain cases). In this list, projects are categorized as ZE Certified or ZE Verified. For simplicity, projects that have set a zero carbon<sup>9</sup> goal are listed as zero energy.

#### **ZERO ENERGY CERTIFIED**

projects have been awarded Net Zero Energy (or equivalent) certification by a trusted third party such as the International Living Future Institute (ILFI). The certifier has thoroughly reviewed at least one continuous year of energy consumption and generation data to certify zero energy performance.

#### **ZERO ENERGY VERIFIED**

projects have achieved ZE for at least one full year and NBI has verified the performance data.

#### ZERO ENERGY EMERGING

projects have a publicly stated goal of reaching ZE but have not yet demonstrated achievement of that goal. These buildings may be in the planning or design phase, under construction, or have been in operation for less than twelve months. Others may have been operating for at least a year, but their measured energy use data either has yet to achieve ZE, or the data to document ZE performance was not available.

#### SITE EUI

stands for the total gross site-level Energy Use Intensity (EUI), the industry common metric used to measure annual energy use per square foot (sf) of building floor area. Energy use includes consumption from all fuels (grid-delivered and on-site-generated electricity, natural gas, district energy, and delivered fuels) in thousands of British thermal Units (kBtu) per year (yr). That sum is divided by the building's gross size, thus the units are kBtu/sf/yr.

#### SOURCE EUI

accounts for upstream generation, transmission, and distribution losses associated with delivering usable energy to the site. Site to Source EUI conversions in this list follow the 2018 U.S. Energy Star® Portfolio Manager guidelines. 10

#### **NET EUI**

is annual energy use minus annual on-site renewable generation, divided by the building's floor area in sf. A building with a measured net EUI (site or source) less than zero has achieved ZE.

#### zEPI11

is a metric on a 0-100 scale that sets a constant goal of ZE and is normalized by climate and building type.

#### LIST KEY

(L) after the project name indicates a project has achieved USGBC LEED certification (at any level).

(M) after the project name indicates a project that has provided measured energy use data.

<sup>9</sup> A growing number of building owners, designers, policymakers, and other organizations are targeting "zero carbon," "carbon neutral," and "zero emission" buildings. It is important to note that zero net annual energy usage is not the same as zero carbon or carbon neutral. Fully measuring the CO2 emissions attributable to buildings requires more information than is available for most buildings on this list. Carbon emissions impacts can vary greatly over time and by region, based largely on the energy sources used to produce electricity (coal, gas, solar, wind, etc.). As more renewables come online these variations are becoming more significant. For more on this topic, see the GridOptimal Buildings Initiative (newbuildings.org/resource/gridoptimal). In addition, the embodied carbon associated with construction and materials can be substantial. See NBI's resource hub (gettingtozeroforum.org/resource-hub) for more information on the topic of embodied carbon. Some organizations have developed Zero Carbon building certifications, including ILFI (living-future.org/zero-carbon-certification) and USGBC (usgbc.org/programs/leed-zero). NBI is working with these and other organizations to seek alignment and accelerate progress.

<sup>10</sup>See the 2018 US Energy Star Portfolio Manager Source Energy Technical Reference Document: energystar.gov/buildings/toolsand-resources/portfolio-manager-technical-reference-source-energy

<sup>11</sup> newbuildings.org/resource/zepi-zero-energy-performance-index/

The 2020 Midwest Zero Energy Buildings List provides examples of commercial, institutional, and multifamily projects that have certified or verified ZE performance or are emerging toward a ZE goal. Undoubtedly, other buildings belong on this list of which we are currently unaware.

If you know of or are working on ZE projects in the Midwest, please add new buildings or provide corrections and updates through the New Buildings Institute Registry at: https://newbuildings.org/project-registry/ share or email us at info@newbuildings.org.

For more on ZE projects nationally, visit the Getting to Zero Buildings Database at newbuildings.org/resource/ getting-to-zero-database



## Zero Energy **Certified**

Year	Project Name	City	State	Building Type	Size (sf)	Total EUI	Source EUI	Net EUI	Net Source EUI	zEPI Score
2018	Design Engineers Headquarters (L) (M)	Cedar Rapids	IA	Office	14,800	29.6	0.0	83.0	0.0	0.0
2018	Indian Creek Nature Center (M)	Cedar Rapids	IA	Other	12,000	32.7	-9.2	91.6	-25.7	-7.9
2017	Purdue University Ross Reserve (M)	West Lafayette	IN	Education	1,248					
2015	Cincinnati Police Department - District 3 (L) (M)	Cincinnati	ОН	Public Order & Safety	39,500	26.6	-7.4	74.5	-20.7	-7.1
2011	Locust Trace AgriScience Campus (High School) (M)	Lexington	KY	Education	70,000	9.9	-0.7	27.6	-2.0	-0.7
2010	Richardsville Elementary School (L) (M)	Bowling Green	KY	Education	72,285	19.0	-2.6	53.2	-7.2	-2.5
2009	Chrisney Library (M)	Chrisney	IN	Public Assembly	2,413	16.7	-0.8	46.7	-2.2	-0.7
2009	Living Learning Center at Tyson Research Center (M)	Eureka	МО	Education	2,968	24.5	-1.9	68.5	-5.5	-1.9

## Zero Energy **Verified**

Year	Project Name	City	State	Building Type	Size (sf)	Total EUI	Source EUI	Net EUI	Net Source EUI	zEPI Score
2018	Jennings Creek Elementary (M)	Bowling Green	KY	Education	88,472	12.3	-2.9	34.4	-8.2	-2.9
2018	Mission of Mary Cooperative HQ (M)	Dayton	ОН	Office	1,400	28.2	-0.2	79.0	-0.5	-0.2
2013	Lenawee Intermediate School District Center for a Sustainable Future <b>(L) (M)</b>	Adrian	MI	Education	8,750	7.7	-2.4	21.6	-6.7	-2.2
2007	Aldo Leopold Legacy Center (L) (M)	Baraboo	WI	Office	11,900	16.0	-2.0	44.8	-5.6	-2.4
2006	Oberlin College Adam Joseph Lewis Center (M)	Oberlin	ОН	Education	13,600	31.4	-5.5	87.8	-15.5	-5.1
2003	Science House (M)	St. Paul	MN	Other	1,532	18.0	0.0	50.4	0.0	0.0

## Zero Energy **Emerging**

Year	Project Name	City	State	Building Type	Size (sf)	Total EUI	Source EUI	Net EUI	Net Source	zEPI Score
2025	Brookridge Development	Overland Park	KS	Other	4,000,000					
2021	Athens County EMS Station	Athens	ОН	Other	8,200					
2021	Broadway Lofts	Gary	IN	Multifamily	45,000					
2021	Techny Fields Activities Center - Northbrook Park District	Northbrook	IL	Public Assembly	44,200					
2020	Adlai E. Stevenson High School Addition	Lincolnshire	IL	Education	54,000					
2020	Carroll Center - Park District of Oak Park	Oak Park	IL	Public Assembly	6,200			-		
2020	Forest Edge Elementary School	Fitchburg	WI	Education	126,580					
2020	Saint Joseph's School Addition	Downers Grove	IL	Education	7,000					
2020	Westwood Hills Nature Center	St. Louis Park	MN	Public Assembly						
2019	Botanica Educational Center	Louisville	KY	Education	10,500					
2019	Countryside Municipal Complex	Countryside	IL	Public Assembly	34,700					
2019	Prairie Activity & Recreation Center - Plainfield Park District	Plainfield	IL	Public Assembly	39,776					
2019	St. Louis County Government Services Center	Virginia	MN	Office	63,000					
2019	Telesis Dairy House Complex	Lincoln	NE	Other	174,000					
2018	Prairie House	Rochester	MN	Education						
2018	Sunset Ridge (L)	Chicago	IL	Education	73,890					

# Zero Energy **Emerging**

Year	Project Name	City	State	Building Type	Size (sf)	Total EUI	Source EUI	Net EUI	Net Source EUI	zEPI Score
2017	Four Winds Alternative & Career Technology Education High School	Fort Totten	ND	Education	12,500					
2017	IBEW Local 58	Detroit	MI	Office	33,000	20.5		57.4	-6.4	
2017	Keeler Flats	Grand Rapids	MI	Multifamily	140,000					
2017	West Dorm, Wolf Ridge Environmental Learning Center	Finland	MN	Multifamily	16,500	31.0		86.8		
2016	Building Positive: Four in One Prototype	Kansas City	МО	Other	43,000					
2016	Cope Environmental Center	Centerville	IN	Education	5,600	22.0	-8.0	61.6	-22.4	-7.4
2016	Wyandot Lodge	Columbus	ОН	Public Assembly	5,800					
2015	Sun Baths	Ann Arbor	MI	Other	10,000					
2014	Electrical and Computer Engineering Building and University of Illinois	Champaign	IL	Education	250,000					
2014	Gundersen Health System (L)	La Crosse	WI	Health Care (Inpatient)						
2014	Market One (L)	Des Moines	IA	Office	50,000					
2014	University of Minnesota Itasca Biological Station and Laboratories	Shevlin	MN	Education	10,900					
2013	Austin Gardens Environmental Education Center (L)	Oak Park	IL	Public Assembly	2,100					
2013	General Aviation Terminal (L)	Appleton	WI	Other	8,000					
2013	Green Leaf Inn	Delavan	WI	Lodging						
2013	Walgreens Evanston Store (L)	Evanston	IL	Mercantile (Enclosed & Strip Malls)	14,000	48.7	-5.3	136.4	-14.8	-4.0
2012	Jody Richards Elementary School (M)	Bowling Green	KY	Education	80,904	20.0	20.0	56.0	56.0	19.5
2012	Maharishi University of Management Sustainable Living Center	Fairfield	IA	Education	6,900	9.9	-0.5	27.7	-1.4	-0.5
2010	Bagley Classroom University of Minnesota Duluth (L)	Duluth	MN	Education	2,000					
2010	Greensburg Kansas Net Zero Community (L)	Greensburg	KS	Multifamily						
2010	Harmony House for Cats (L) (M)	Chicago	IL	Other	7,095	50.0	50.0	140.0		43.2
2010	New Bristow Elementary School (L) (M)	Bowling Green	KY	Education	79,817	23.8	23.8	66.7	66.7	23.2
2010	Turkey Foot Middle school (M)	Edgewood	KY	Education	133,000	22.0	11.0	61.5	30.7	10.7
2009	Catalyst Partners Office (L) (M)	Grand Rapids	MI	Office	3,950	17.4	14.9	48.8	41.7	16.2
2008	Akron Zoo (L)	Akron	ОН	Public Assembly						
2007	Prairie Hill Learning Center	Roca	NE	Education	2,940					

## Zero Energy **Emerging**

Project Name	City	State	Building Type	Size (sf)	Total EUI	Source EUI	Net EUI	Net Source EUI	zEPI Score
Melink Corporation Headquarters (L) (M)	Milford	ОН	Office	30,000	12.2	6.8	34.1	19.1	8.7
Ford Site Net Zero Development	Saint Paul	MN	Multifamily						
HGA Office - Madison	Madison	WI	Office						
North Kansas City High School	North Kansas City	MO	Education	240,000					
Pinhook Farm		IN							
Unitarian Universalist Society of Iowa City	Coralville	IA	Public Assembly	19,564					
University of Wisconsin Arlington Agricultural Research Station	Arlington	WI	Education						
	Melink Corporation Headquarters (L) (M) Ford Site Net Zero Development HGA Office - Madison North Kansas City High School Pinhook Farm Unitarian Universalist Society of Iowa City University of Wisconsin Arlington	Melink Corporation Headquarters (L) (M) Milford  Ford Site Net Zero Development Saint Paul  HGA Office - Madison Madison  North Kansas City High School North Kansas City  Pinhook Farm  Unitarian Universalist Society of Iowa City  University of Wisconsin Arlington Arlington	Melink Corporation Headquarters (L) (M) Milford OH  Ford Site Net Zero Development Saint Paul MN  HGA Office - Madison Madison WI  North Kansas City High School North Kansas City High School North Kansas City  Pinhook Farm IN  Unitarian Universalist Society of Iowa City  University of Wisconsin Arlington Arlington WI	Project NameCityStateTypeMelink Corporation Headquarters (L) (M)MilfordOHOfficeFord Site Net Zero DevelopmentSaint PaulMNMultifamilyHGA Office - MadisonMadisonWIOfficeNorth Kansas City High SchoolNorth Kansas CityMOEducationPinhook FarmINUnitarian Universalist Society of Iowa CityCoralville AssemblyIAPublic AssemblyUniversity of Wisconsin ArlingtonArlingtonWIEducation	Project NameCityStateTypeSize (sf)Melink Corporation Headquarters (L) (M)MilfordOHOffice30,000Ford Site Net Zero DevelopmentSaint PaulMNMultifamilyHGA Office - MadisonMadisonWIOfficeNorth Kansas City High SchoolNorth Kansas CityMOEducation240,000Pinhook FarmININUnitarian Universalist Society of Iowa CityCoralvilleIAPublic Assembly19,564University of Wisconsin ArlingtonArlingtonWIEducation	Project Name  City State Type Size (sf) EUI  Melink Corporation Headquarters (L) (M) Milford OH Office 30,000 12.2  Ford Site Net Zero Development Saint Paul MN Multifamily HGA Office - Madison Madison WI Office  North Kansas City High School North Kansas City Pinhook Farm IN  Unitarian Universalist Society of lowa City  University of Wisconsin Arlington  Kity MO Education Arlington WI Education  Size (sf) EUI  MO Hultifamily Finho  Corfice  North Kansas City MO Education Public Assembly  In Education  Li EUI  Assembly  Li EUI  EUI  EUI  EUI  EUI  EUI  EUI  EUI	Project NameCityStateTypeSize (sf)EUIEUIMelink Corporation Headquarters (L) (M)MilfordOHOffice30,00012.26.8Ford Site Net Zero DevelopmentSaint PaulMNMultifamilyHGA Office - MadisonMadisonWIOfficeNorth Kansas City High SchoolNorth Kansas CityMOEducation240,000Pinhook FarmINUnitarian Universalist Society of Iowa CityCoralvilleIAPublic Assembly19,564University of Wisconsin ArlingtonArlingtonWIEducation	Project NameCityStateTypeSize (sf)EUIEUIEUIMelink Corporation Headquarters (L) (M)MilfordOHOffice30,00012.26.834.1Ford Site Net Zero DevelopmentSaint PaulMNMultifamilyHGA Office - MadisonMadisonWIOfficeNorth Kansas City High SchoolNorth Kansas CityMOEducation240,000Pinhook FarmINUnitarian Universalist Society of Iowa CityCoralvilleIAPublic Assembly19,564University of Wisconsin ArlingtonArlingtonWIEducation	Project NameCityStateBuilding TypeSize (sf)Total EUISource EUINet EUISource EUIMelink Corporation Headquarters (L) (M)MilfordOHOffice30,00012.26.834.119.1Ford Site Net Zero DevelopmentSaint PaulMNMultifamilyHGA Office - MadisonMadisonWIOfficeNorth Kansas City High SchoolNorth Kansas CityMOEducation240,000Pinhook FarmINUnitarian Universalist Society of Iowa CityCoralville AssemblyIAPublic Assembly19,564University of Wisconsin ArlingtonArlingtonWIEducation

We appreciate the support from the following organizations for their contributions in the development and dissemination of the 2020 Midwest Getting to Zero Buildings List:

Midwest Energy Efficiency Alliance North American Passive House Network (NAPHN) PHIUS

Rocky Mountain Institute



New Buildings Institute (NBI) is a nonprofit organization driving better energy performance in buildings to make them better for people and the environment. We work collaboratively with industry market players—governments, utilities, energy efficiency advocates, and building professionals—to promote advanced design practices, innovative technologies, public policies, and programs that improve energy efficiency. The Getting to Zero website houses over 300 curated resources including guidance, educational webinars, policy models, research, case studies, and more to help all buildings achieve zero energy. Visit **gettingtozeroleadership.org** to learn more.



The Midwest Building Decarbonization Coalition (Midwest BDC) seeks to develop equitable strategies to achieve zero emissions from the building sector by 2050. The Midwest BDC plays a leadership role in convening and leveraging numerous organizations, stakeholders, and allies to develop and implement a plan for coordinated progress in eight states (IA, IN, IL, MI, MN, MO, OH, WI). The Midwest BDC is currently sponsored by Fresh Energy.