



LEADERS IN EFFICIENCY: ENERGY STAR BUILDINGS IN WISCONSIN

By Kathy Kuntz

Cool Choices Report
Produced in conjunction with
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Great Plains Institute

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About Cool Choices

Cool Choices is a Wisconsin nonprofit that inspires actions that reduce greenhouse gas emissions. Cool Choices partners with companies and public entities (including schools) to make environmentally sustainable actions the norm via innovative game-based programming. Cool Choices' approach reflects decades of social science research on human and organizational behavior. One effective change strategy is feedback—providing people with information about how they compare to others. This report examines participation trends in a specific kind of feedback strategy—benchmarking building performance. Cool Choices intends this report to inspire additional property owners and managers across Wisconsin to use ENERGY STAR Portfolio Manager to benchmark their own facilities—an important step in effectively managing energy use.

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EXECUTIVE SUMMARY

ENERGY STAR certified buildings average 35 percent less energy use than typical buildings and cumulatively achieve over \$2 billion in annual cost savings. More than 300,000 buildings across the country—over 40 percent of the commercial market—measure and track their energy use with ENERGY STAR Portfolio Manager, a tool that helps identify their eligibility for certification.

This report characterizes the market uptake of ENERGY STAR certification for buildings in Wisconsin, which has grown from 43 buildings in 2000 to 582 certified buildings as of December 31, 2013. Collectively these certified buildings in Wisconsin represent nearly 72 million square feet of floor space, which is less than 5 percent of commercial building floor space in the state.¹

Key insights about the market for certifying ENERGY STAR buildings in Wisconsin include:

Activity has flattened in recent years: The annual number of ENERGY STAR certifications rose quickly between 2006 and 2010 and has flattened since 2010.

More than half Wisconsin's certified buildings are schools: While K-12 schools make up just a third of ENERGY STAR certified buildings nationally, in Wisconsin they are 56 percent of the total.

Uptake varies across buildings of different sizes: Wisconsin's ENERGY STAR buildings range from 3,200 to over 1.7 million square feet. Buildings less than 100,000 square feet represent about 65 percent of all ENERGY STAR certified buildings in the state.

Activity encompasses a mix of old and new buildings: Wisconsin's oldest ENERGY STAR certified building was built in 1857. More than half of all certified buildings in Wisconsin were built before 1980—and less than 15 percent of certified buildings were built in 2000 or later.

Most of the ENERGY STAR certified buildings in Wisconsin were certified just once; buildings recertified multiple times tend to be more efficient: ENERGY STAR does not require annual recertification though ongoing performance monitoring and certification is encouraged. In Wisconsin over 78 percent of certified buildings earned just one certification. The average ENERGY STAR score for Wisconsin buildings with one certification is 83.83, and the most recent score for buildings with four or more certifications averaged 90.07 on a scale of 1 - 100.

Institutional commitment drives uptake in certain areas: In the retail sector, four companies own over 87 percent of all certified retail buildings in Wisconsin. In the city of Kenosha, over 90 percent of all the certified buildings belong to Kenosha School District.

¹ With assistance from Energy Center of Wisconsin staff, we estimate Wisconsin's total commercial square footage to be between 1,500 million and 1,900 million square feet.

BACKGROUND

About ENERGY STAR Buildings

Efficient buildings hold the key to significant cost savings and environmental benefits. The energy costs of commercial buildings nationwide exceeded \$170 billion dollars in 2010,ⁱ and estimates suggest that cost-effective energy efficiency measures can reduce energy use in the commercial sector by nearly 30 percent.ⁱⁱ

Nationwide ENERGY STAR Buildings by the Numbersⁱⁱⁱ	
As of December 2012	
Buildings certified:	Over 20,000
Square footage certified:	Over 3 billion
Average energy use:	35 percent less than typical buildings
Total energy cost savings:	\$2.3 billion/year ^{iv}
Average score:	86 /100

The ENERGY STAR program provides resources to help achieve this potential savings. Since 1999, the U.S. Environmental Protection Agency has recognized the most efficient buildings in the country with ENERGY STAR certification. Buildings can earn certification each year by entering basic information about the property and 12 months of energy bills into Portfolio Manager, a free tool to track and manage energy and water use in buildings. While ENERGY STAR certification does not expire, building owners are encouraged to recertify properties on an annual basis.

Portfolio Manager generates a score for 20 different types of buildings. The score (1 – 100) benchmarks buildings against a national database, and adjusts for differences in climate, hours of operation, and several other factors. Buildings scoring 75 or higher perform more efficiently than 75 percent of similar buildings, and may be eligible for ENERGY STAR certification.^v

Building Types Eligible for an ENERGY STAR Certification^{vi}

- Bank Branch
- Courthouse
- Data Center
- Distribution Center
- Financial Office
- Hospital (General Medical & Surgical)
- Hotel
- K - 12 School
- Medical Office
- Non-Refrigerated Warehouse
- Office
- Refrigerated Warehouse
- Retail Store
- Residence Hall / Dormitory / Barracks
- Senior Care Community
- Supermarket/Grocery Store
- Wholesale Club/Supercenter
- Worship Facility

Energy Management: Nationwide, over 300,000 properties, representing over 30 billion square feet and over 40 percent of the commercial market, used ENERGY STAR Portfolio Manager to measure, benchmark and /or manage their energy use as of December 2012. Wisconsin has 5,243 of those properties, representing 518 million square feet, that have used Portfolio Manager either once or on an ongoing basis.^{vii} Consistent ongoing benchmarking can yield substantive savings for building owners. ENERGY STAR's analysis of more than 35,000 buildings with complete data in the Portfolio Manager between 2008 and 2011 shows that those buildings achieved average annual savings of 2.4 percent over that timeframe, saving 7 percent across the three years.^{viii}

ENERGY STAR Certification: Over 20,000 buildings across the country, representing over 3 billion square feet, have earned an ENERGY STAR certification as of December 2012. Approximately a third of the certified buildings improved their scores in order to earn a certification. On average, ENERGY STAR buildings use 35 percent less energy than typical buildings and further reduced their greenhouse gas emissions by 10 percent since beginning to use Portfolio Manager.^{ix}

In Wisconsin, 582 buildings representing almost 72 million square feet have received ENERGY STAR certification through December 2013.

Leadership in Energy & Environmental Design (LEED): Other programs also certify energy efficient or sustainable buildings. Most notably LEED, a program of the U.S. Green Building Council, promotes a whole-building approach to sustainability by recognizing performance in five key areas:

- Sustainable Sites
- Water Efficiency
- Energy & Atmosphere
- Materials & Resources
- Indoor Environmental Quality

LEED measures a broader category of metrics than ENERGY STAR Portfolio Manager and also offers recognition for different types of building situations (including new construction). One category of LEED recognition based on ongoing building performance, LEED for Existing Building: Operations & Maintenance, encourages building owners to use ENERGY STAR Portfolio Manager to track energy and water usage in the building.^xAs of the end of June 2013, there were 247 LEED certified projects in Wisconsin. University of Wisconsin-Extension staff maintain a database of LEED projects in the state at www.uwex.edu/shwec/leed.

About this Report

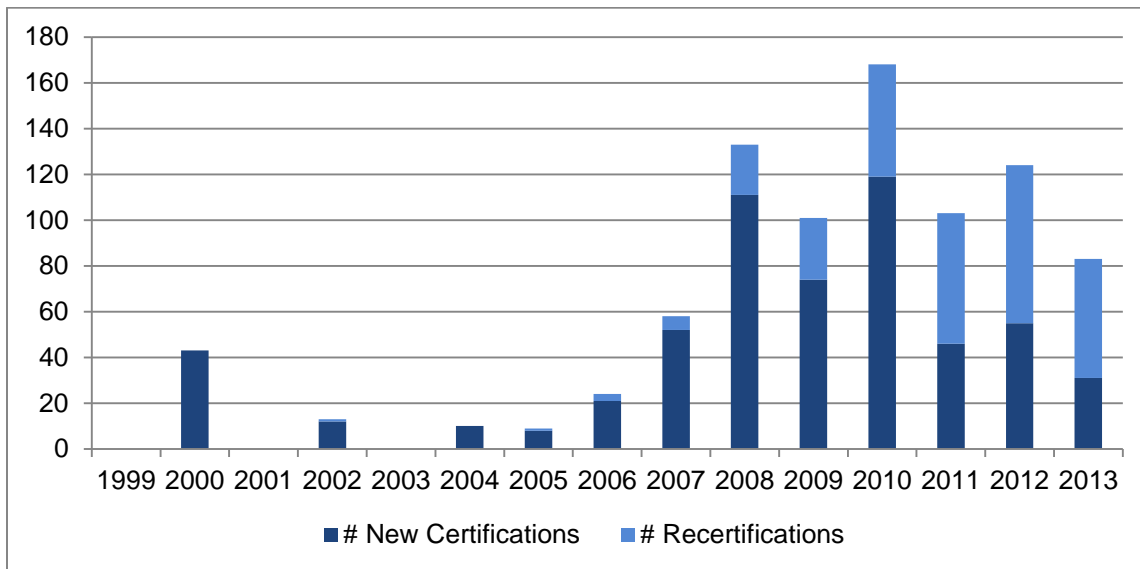
This report draws on publically available data to describe the ENERGY STAR *certification* activity for buildings in Wisconsin. Cool Choices thanks the Great Plains Institute for its work developing the bulk of the charts used in this report. All of the chart data derive from the ENERGY STAR buildings locator referenced at the end of this report. Energy performance *benchmarking* is an important tool to track and control energy costs and one of the major steps to earning an ENERGY STAR certification. Granular data about the characteristics of commercial buildings that complete energy performance benchmarking is not as publically available. As a result, this report acknowledges the importance of benchmarking but does not offer detailed information on the commercial market activity relative to benchmarking.

WISCONSIN MARKET SNAPSHOT

Number of ENERGY STAR Certifications Earned by Buildings

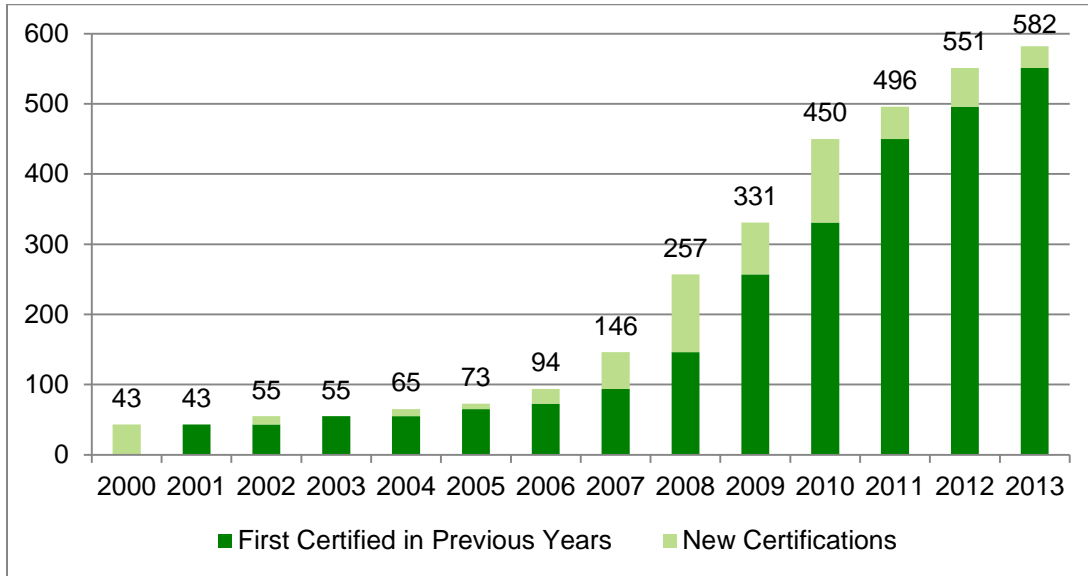
The number of ENERGY STAR certifications has varied considerably on an annual basis in Wisconsin, with more buildings achieving certification or recertification in the 2007-2010 timeframe than in recent years.

Figure 1: Number of ENERGY STAR Certifications in Wisconsin Annually



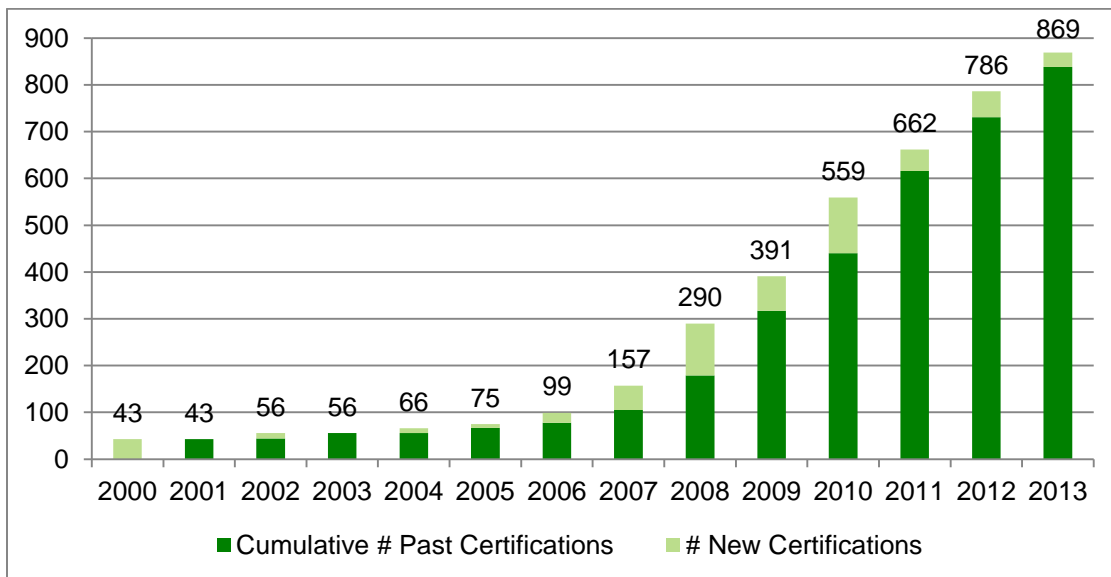
As of December 31, 2013, 582 buildings in Wisconsin have earned an ENERGY STAR certification.

Figure 2: Cumulative Growth of ENERGY STAR Certified Buildings in Wisconsin



Eligible buildings can apply for a new certification each year that reflects their energy performance over the last 12 months. Wisconsin’s ENERGY STAR buildings have earned a cumulative total of 869 certifications.

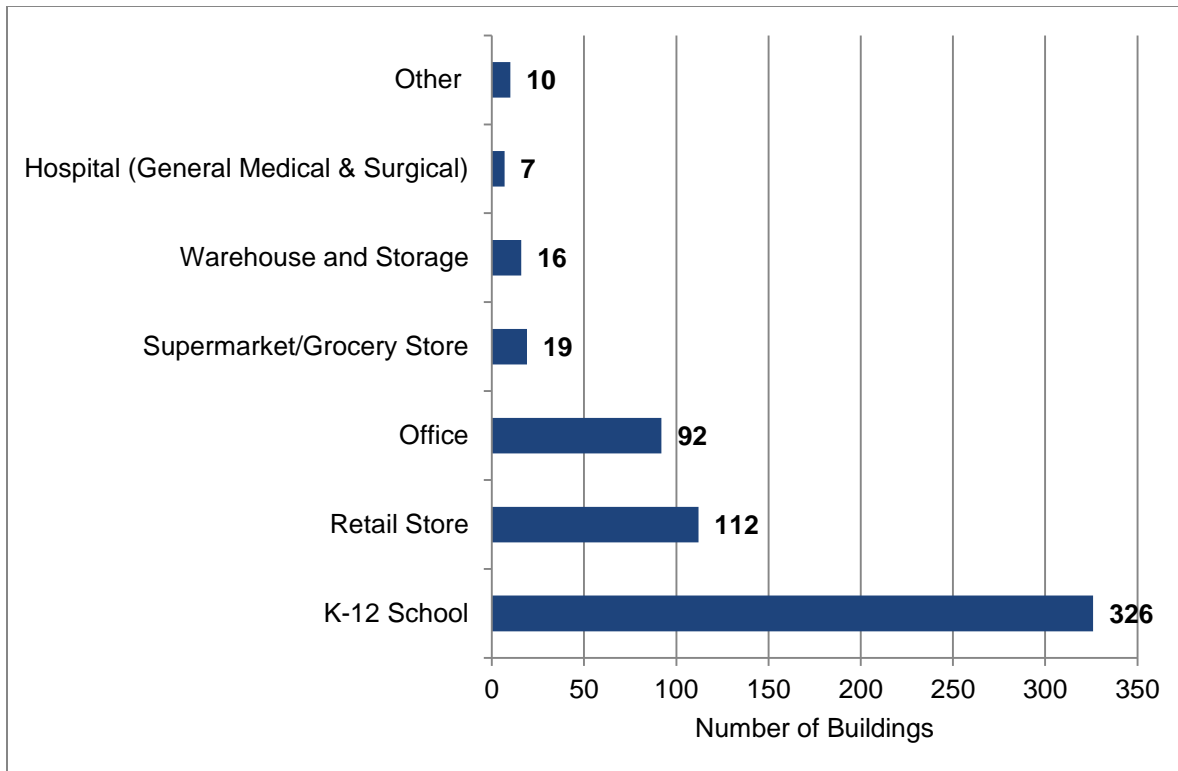
Figure 3: Cumulative Growth of Annual ENERGY STAR Certifications Achieved by Buildings in Wisconsin



Certifications by Facility Type

ENERGY STAR certifications in Wisconsin are highly concentrated in three sectors: K-12, retail buildings and office space. K-12 schools represent 326 of the 582 certified buildings, 56 percent of all certified buildings.

Figure 4: Number of ENERGY STAR Certified Buildings in Wisconsin by Facility Type²

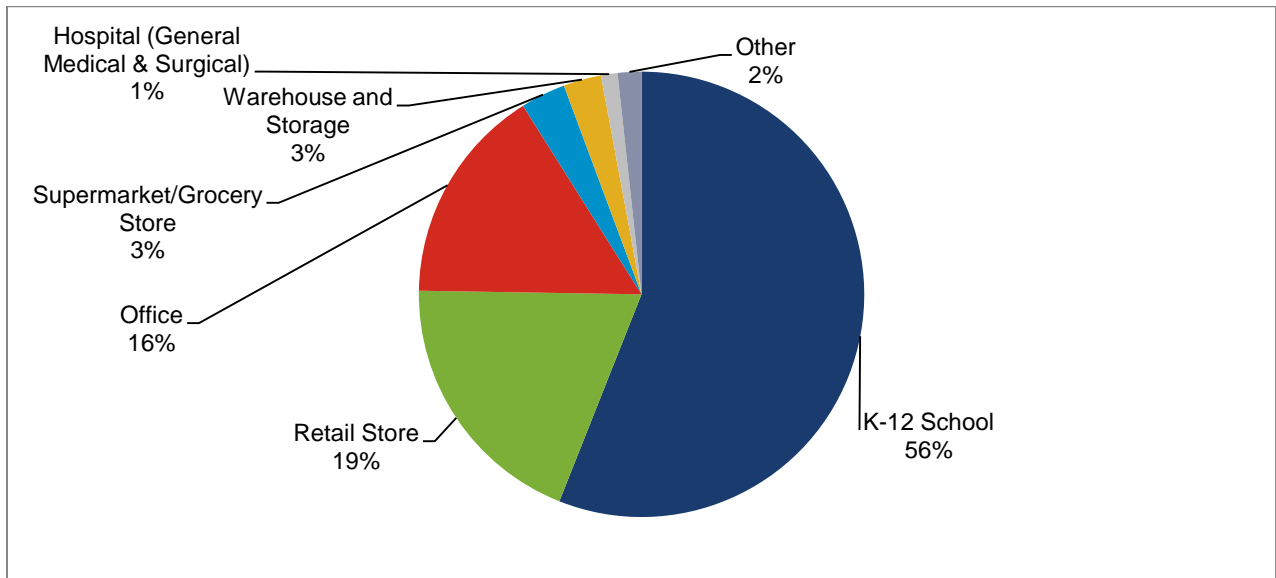


K-12 schools, retail stores and office space account for 91 percent of all ENERGY STAR buildings in the state.

A dozen different categories of buildings account for the remaining 9 percent of ENERGY STAR buildings in Wisconsin. The majority of these buildings are supermarkets or warehouses with a smaller number of medical facilities. The remaining categories included under “Other” each have two or fewer ENERGY STAR buildings in the state.

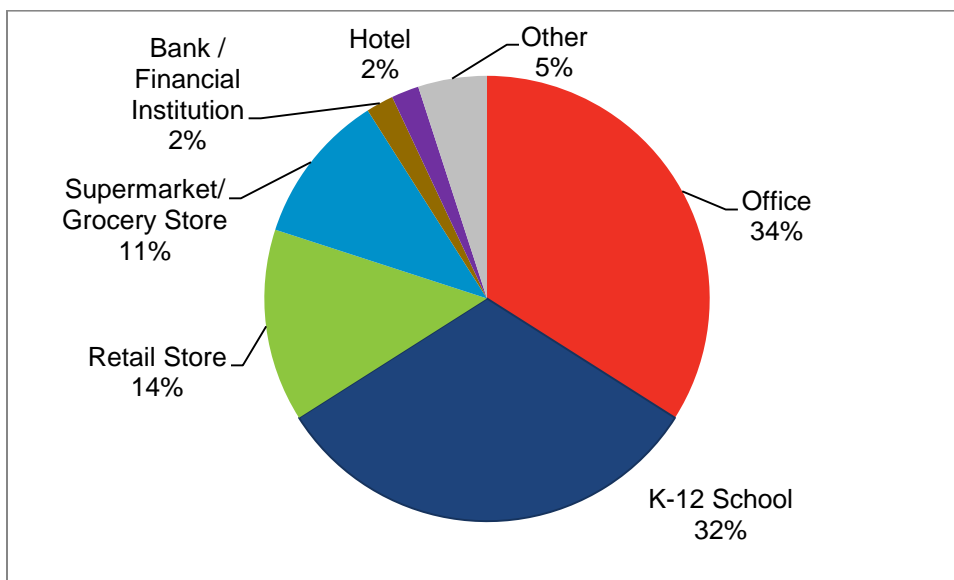
² Buildings in the “other category” include: Bank Branch, Hotel, Worship Facility, Medical Office, Frozen Fried Potato Processing, Distribution Center, Cookies and Crackers, Container Glass, and Other

Figure 5: Percentage of Wisconsin ENERGY STAR Certified Buildings by Facility Type



Compared to national data, Wisconsin’s mix of certified buildings is more heavily concentrated in K-12 facilities with fewer certified office buildings and supermarkets.

Figure 6: Percentage of U.S. ENERGY STAR Certified Buildings by Facility Type^{xi}



Because K-12 schools represent over half of all certified buildings in the state, it is useful to consider the trends in K-12 buildings separate from other facilities. The next two sections look at trends in ENERGY STAR certification for K-12 facilities and for all other types of facilities in the state.

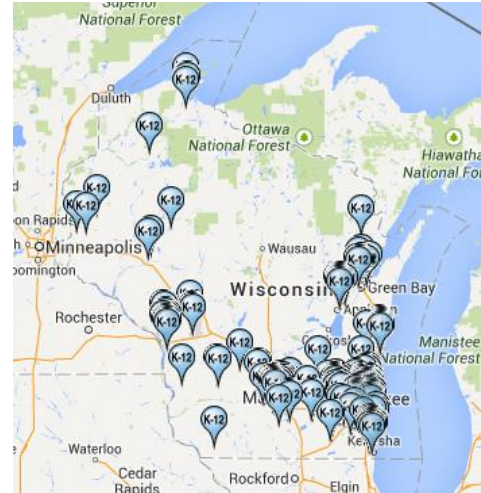
ENERGY STAR Certified Schools in Wisconsin

More than half of all ENERGY STAR certified facilities in Wisconsin are K-12 schools. This compares to schools making up 32 percent of certified buildings nationally.

Certified schools are located throughout the state with many of the schools in the most populous areas of the state.

Districts with ENERGY STAR certified schools range from the state's largest district, Milwaukee with 78,000 students, to small districts like Cornell and Cuba City, which have less than 500 students each.

Figure 7: Location of ENERGY STAR Certified K-12 Facilities in Wisconsin



Efforts to achieve ENERGY STAR certification for Wisconsin's K-12 schools accelerated rapidly beginning in 2006 with new certifications nearly doubling annually through 2008. The rate of certifications dropped slightly in 2009 and 2010 and then reduced sharply beginning in 2011. In 2012 and 2013 a total of 16 K-12 schools were newly certified and 12 of those schools were in the Kenosha District.

Figure 8: Number of ENERGY STAR Certifications for K-12 Facilities in Wisconsin Annually

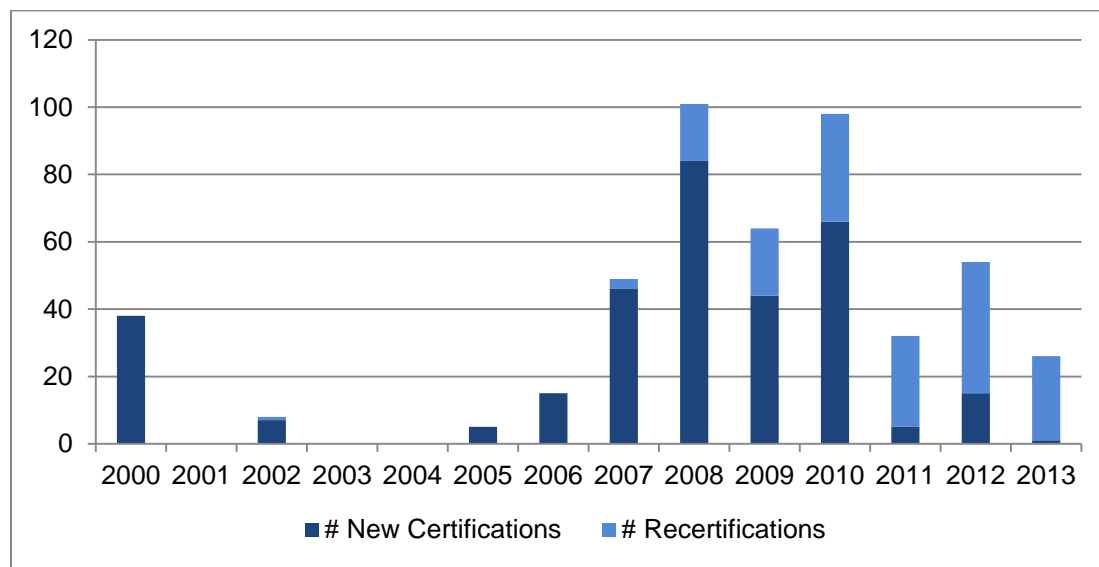
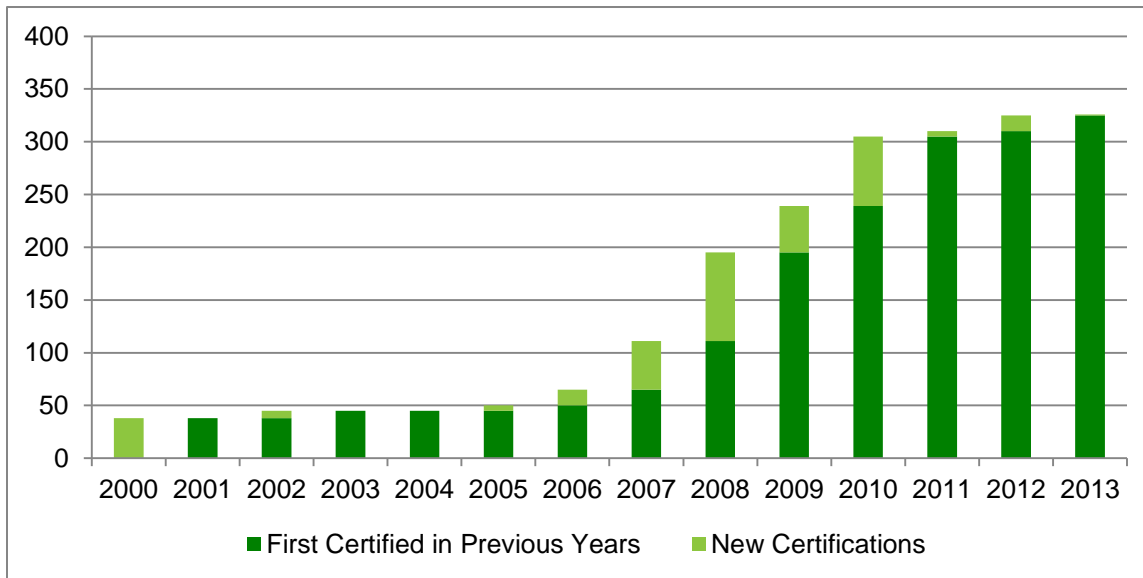


Figure 9: Cumulative Growth of ENERGY STAR Certified K-12 Facilities in Wisconsin



The 326 K-12 schools certified are part of 51 of Wisconsin’s 445 school districts. Some districts have one certified school building while nine districts have more than 10 certified K-12 schools. In nine districts all K-12 schools are ENERGY STAR certified (see list on page 27) and in 29 districts more than half the K-12 Schools are certified.

The district with the most certified K-12 schools is the Milwaukee Public School System with 44 certified buildings. Five Wisconsin school districts also have an office building certified and one parochial district has both a school and worship facility certified so that school systems represent a total of 332 buildings, of which 326 are K-12 schools.

Several factors might help to explain the sharp increase in ENERGY STAR certifications for Wisconsin’s K-12 schools. First, in 2006 Focus on Energy—Wisconsin’s statewide energy efficiency and renewable energy program—provided about two-thirds of the state’s K-12 school districts with benchmarking data that showed each district how their school facilities compared to similar K-12 buildings around the state.^{xii} Participating school districts were able to see how newer schools compared with older ones and to see how their own efforts to save energy compared to other districts. Anecdotal evidence suggests that the benchmarking motivated some school personnel—especially those whose schools ranked near the bottom of the benchmarking report—to invest more heavily in energy efficiency, to raise the efficiency of their school buildings. Because results were confidential to each school there is no clear way to measure the overall impact of benchmarking effort, though both Focus staff and personnel at specific school districts indicate that the report was influential.

Additionally, beginning in 2007 multiple Wisconsin school districts launched performance contracting arrangements with

The Focus benchmarking was really influential. We went from having inefficient buildings to having some of the most efficient in the state, because the data motivated me to do all we possibly could to change our status. Data is a motivator.

Erin Green
 Director of Business
 Greendale School District

Energy Education, Inc., a private entity that contracts with schools and other organizations to facilitate energy and resource savings. Between 2007 and 2009 Energy Education, Inc. was involved with 15 districts that certified one or more K-12 school facilities. In 2011 the US Department of Energy and US Environmental Protection Agency awarded Energy Education, Inc. its ENERGY STAR award for Sustained Excellence in recognition of Energy Education, Inc.'s work with more than 1,100 organizations around the nation.^{xiii} Other entities, including Focus on Energy, provided technical assistance to school districts interested in reducing energy costs, and Focus on Energy also provided cash incentives for efficiency projects throughout this timeframe.

In the spring of 2008 Lieutenant Governor Barbara Lawton issued an ENERGY STAR challenge to Wisconsin's schools asking them to:

1. Make a commitment to improve energy efficiency by 10 percent or more.
2. Measure and track the energy performance of their organization's facilities where possible using ENERGY STAR Portfolio Manager.
3. Develop and implement a plan consistent with the ENERGY STAR Energy Management Guidelines to achieve energy savings.
4. Educate staff and community members about energy efficiency.

Lawton's goal was to engage 100 school districts and 127 of the state's 504 districts had committed to her challenge by 2009. This included 15 districts that already had at least one certified K-12 facility. Of the 100+ new districts that committed to Lawton's challenge, 19 districts had one or more ENERGY STAR certified K-12 school by the end of 2009.

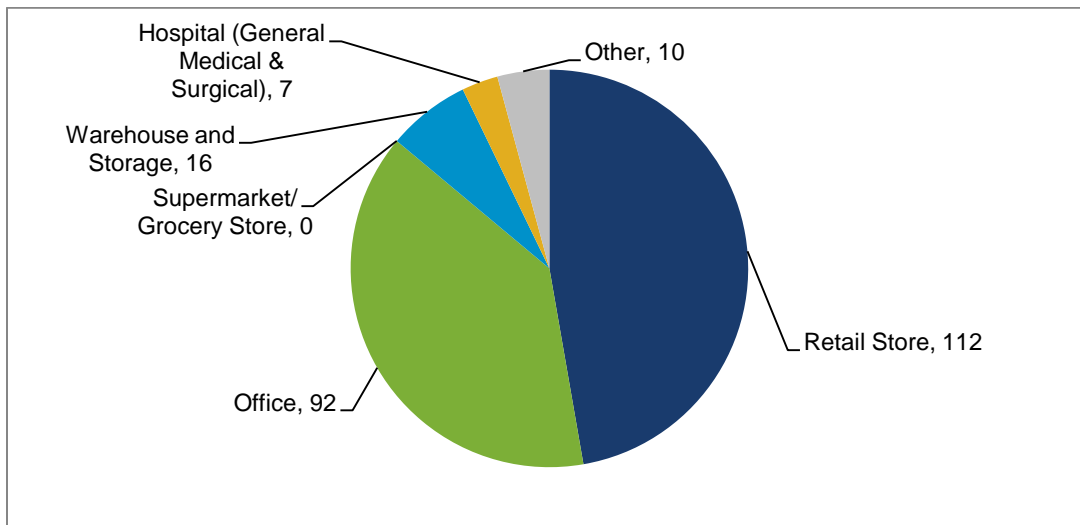
It is likely that all of these factors—comparative building performance information, a public challenge, additional technical assistance, and project incentives—helped to spur the growth in certifications between 2006 and 2010.

ENERGY STAR Certification Trends in Non-School Buildings in Wisconsin

After schools, the two largest categories of ENERGY STAR certified buildings in Wisconsin are retail space (112 buildings, representing 19 percent) and offices (92 buildings representing 16 percent of all certified buildings). Other types of buildings included here are supermarkets (19 buildings), warehouses (16 buildings), medical facilities (7), and other (10 buildings).

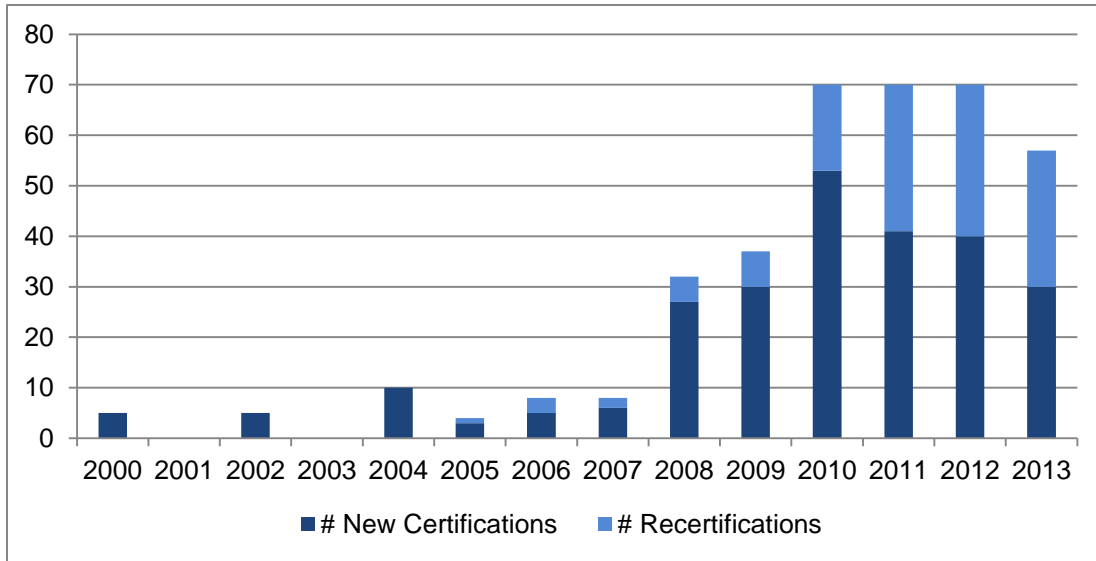
Four retail companies—Kohl’s, Target, Sears, and JC Penny—account for 98 of the 112 retail buildings, more than 87 percent of the certified buildings in Wisconsin’s retail sector.

Figure 10: Breakout of ENERGY STAR certified Non-School buildings in Wisconsin



Relative to other kinds of buildings in Wisconsin, certification peaked in 2010 and has dropped slightly each year since 2010. In 2012 and 2013 combined there were 83 new building certifications and 40 of these were retail buildings.

Figure 11: Number of ENERGY STAR Non-School Certifications in Wisconsin Annually



Number of Annual Certifications Earned Per Building

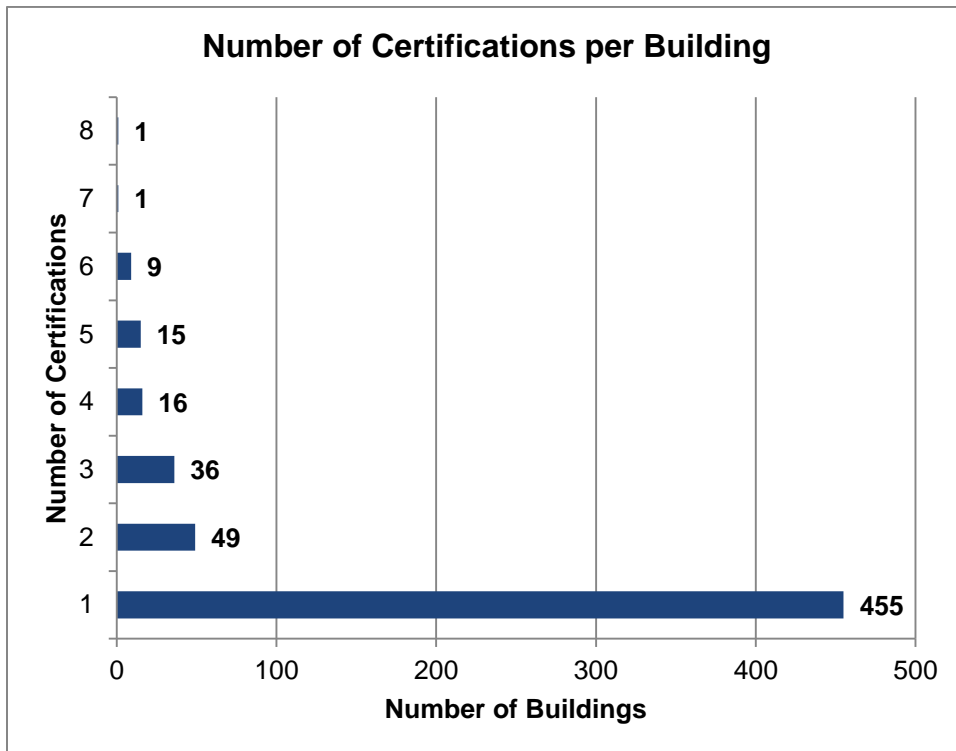
The ENERGY STAR certification signifies that a building performed more efficiently than 75 percent of other similar buildings across the country over a 12 month period. Buildings can therefore apply for a new ENERGY STAR certification each year though this is not required. Over 78 percent of the ENERGY STAR buildings in Wisconsin earned one certification.

Wisconsin's K-12 and office buildings represent the vast majority of buildings that have earned multiple certifications. Of the eleven buildings with six or more certifications, five of the buildings are K-12 schools in Sun Prairie, Wisconsin.

Once we started certifying the consensus was to continue. I believe the school board liked seeing how we compared to the best of the best.

Greg Klaas
Energy Manager
Sun Prairie Area School District

Figure 12: Number of Certifications per Building



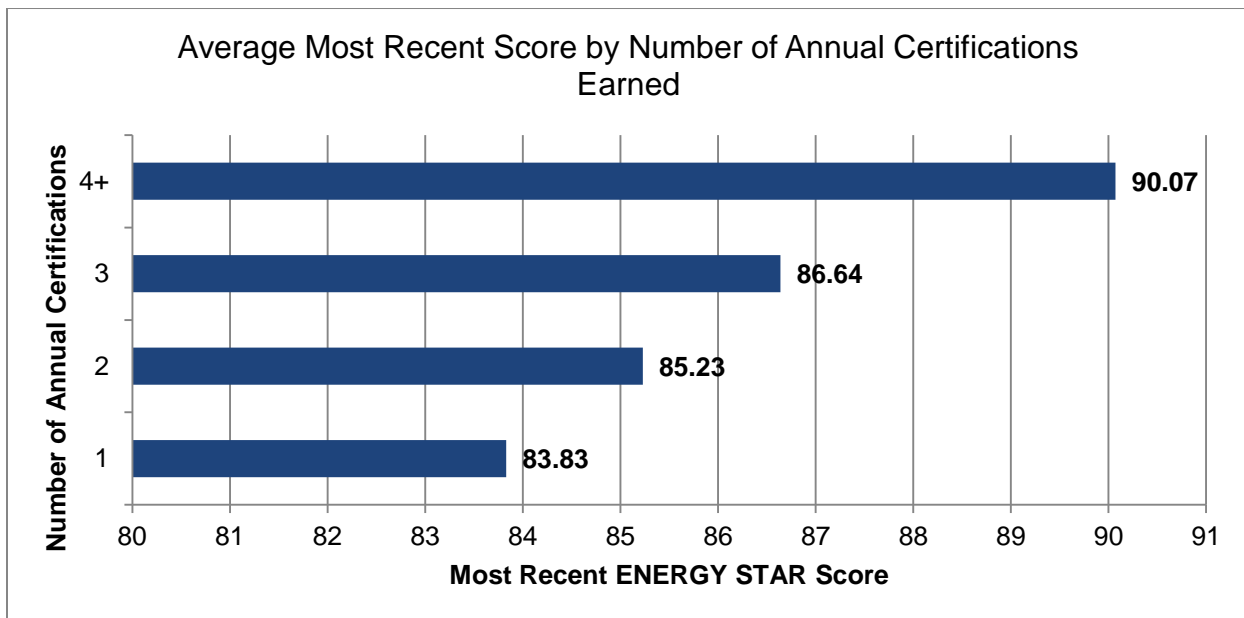
Average Score by Number of Years Certified

Nationally buildings that earned certifications over several years tend to be more energy efficient. ENERGY STAR's analysis, of more than 35,000 buildings with complete data in the Portfolio Manager from 2008 – 2011, shows that those buildings achieved average annual savings of 2.4 percent over that timeframe, saving 7 percent across the three years^{xiv}. Buildings that earned the ENERGY STAR certification over multiple years have higher average scores.^{xv}

In Wisconsin, buildings that earned certifications over multiple years tend to perform more efficiently than buildings with only one ENERGY STAR certification. Buildings with only one certification in Wisconsin scored an average of 83.83. The most recent score for Wisconsin buildings that earned an ENERGY STAR certification in four or more years averaged 90.07.

There is little information available to explain why so few Wisconsin buildings recertify. While ENERGY STAR Portfolio Manager is available at no cost to building owners and property managers, updating energy usage data does require an ongoing time commitment. It is feasible that there are also other barriers to recertification; this is an area that merits additional research given the clear energy-saving benefits associated with benchmarking activities.

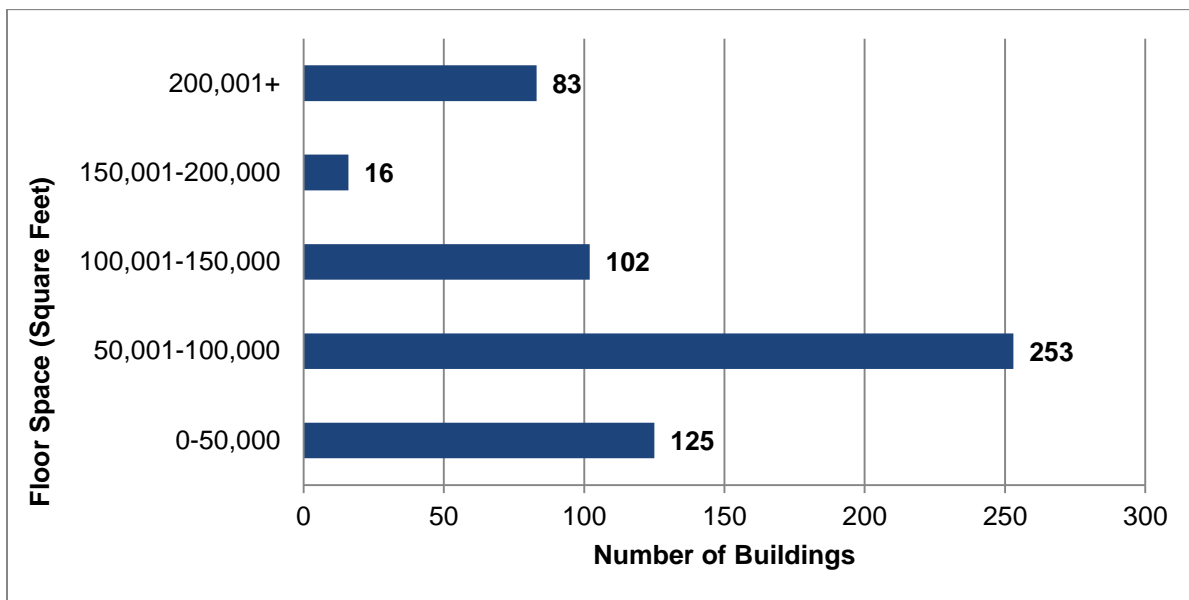
Figure 13: Average Score by Number of Years Certified



Number of ENERGY STAR Certified Buildings by Floor Space

ENERGY STAR buildings in Wisconsin range in size from US Banks' 3,200 square foot facility in Grafton to the 1.7 million square foot St. Luke's Medical Center in Milwaukee. There was no substantive difference in the breakdown of square footage of certified schools and other buildings in the state. About 65 percent of the ENERGY STAR buildings in Wisconsin are smaller than 100,000 square feet; the median size for an ENERGY STAR certified building in the state is 85,000 square feet, which is the size of elementary schools in various Wisconsin communities and somewhat smaller than typical Kohl's department stores.

Figure 14: Number of ENERGY STAR Buildings by Floor Space³



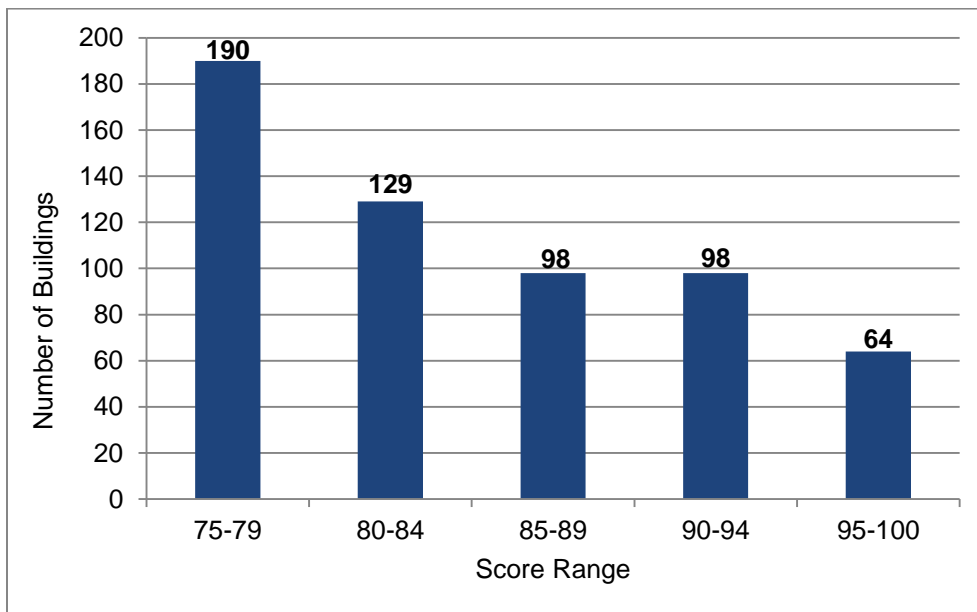
³ Data in this chart adds up to 579. Floor space is not available for 3 facilities.

Most Recent ENERGY STAR Scores of Certified Buildings

ENERGY STAR scores compare a building’s energy performance over one year to the performance of other similar buildings across the country and adjust for a variety of factors such as weather, square footage and operating hours. In order to earn a certification, a building must receive a score of 75 or higher, signifying that it performs more efficiently than 75 percent of similar buildings across the country.

The average ENERGY STAR building in Wisconsin received a score of 85, which is close to the national average of 86.^{xvi} Wisconsin has 11 buildings that received a score of 100; they are listed on page 29 of this report.

Figure 15: Most Recent ENERGY STAR Scores of Wisconsin’s Certified Buildings⁴



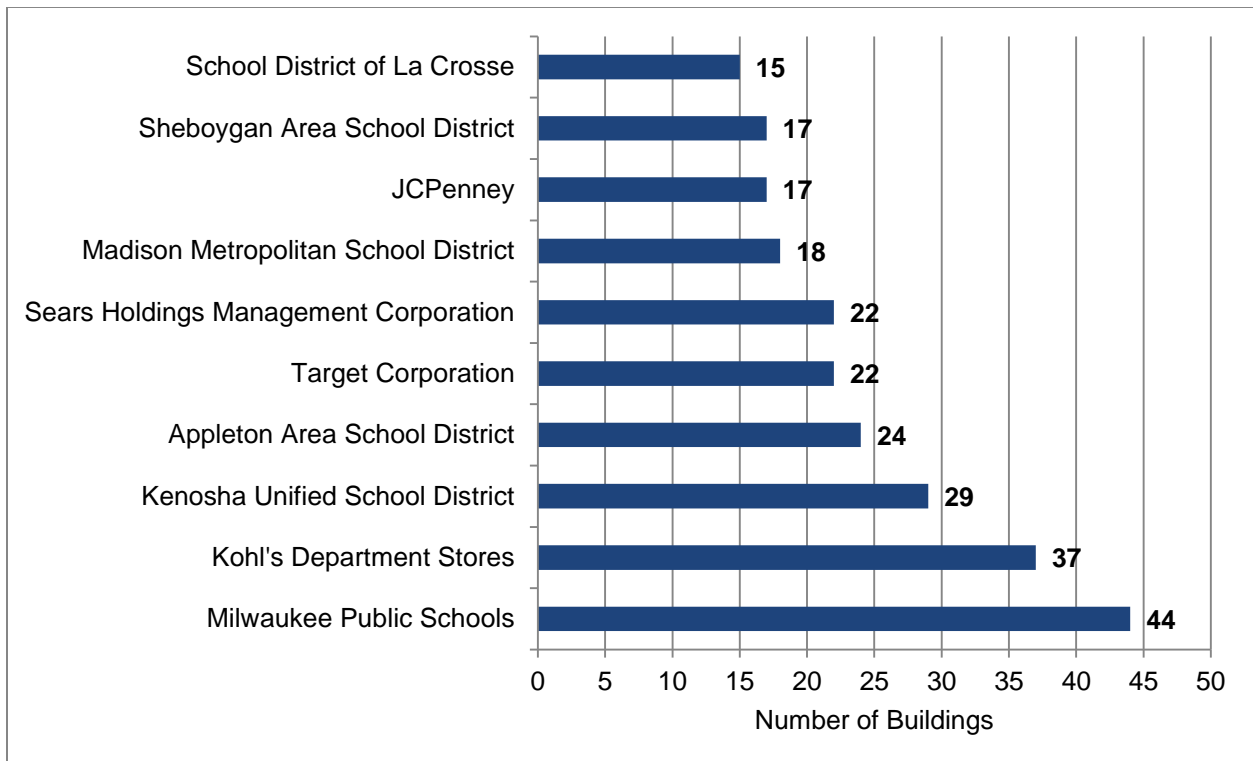
⁴ Data in this chart adds up to 579. Ratings are not available for 3 facilities.

Top ENERGY STAR Certified Building Owners

Several institutions are responsible for a large number of ENERGY STAR certified buildings in the state. Collectively, the 10 organizations in Figure 8 own nearly 42 percent of all ENERGY STAR buildings in Wisconsin. The list includes six school districts and four retail chains.

Four retail companies account for more than 87 percent of the certified buildings in Wisconsin's retail sector: Kohl's, Target, Sears, and JC Penney.

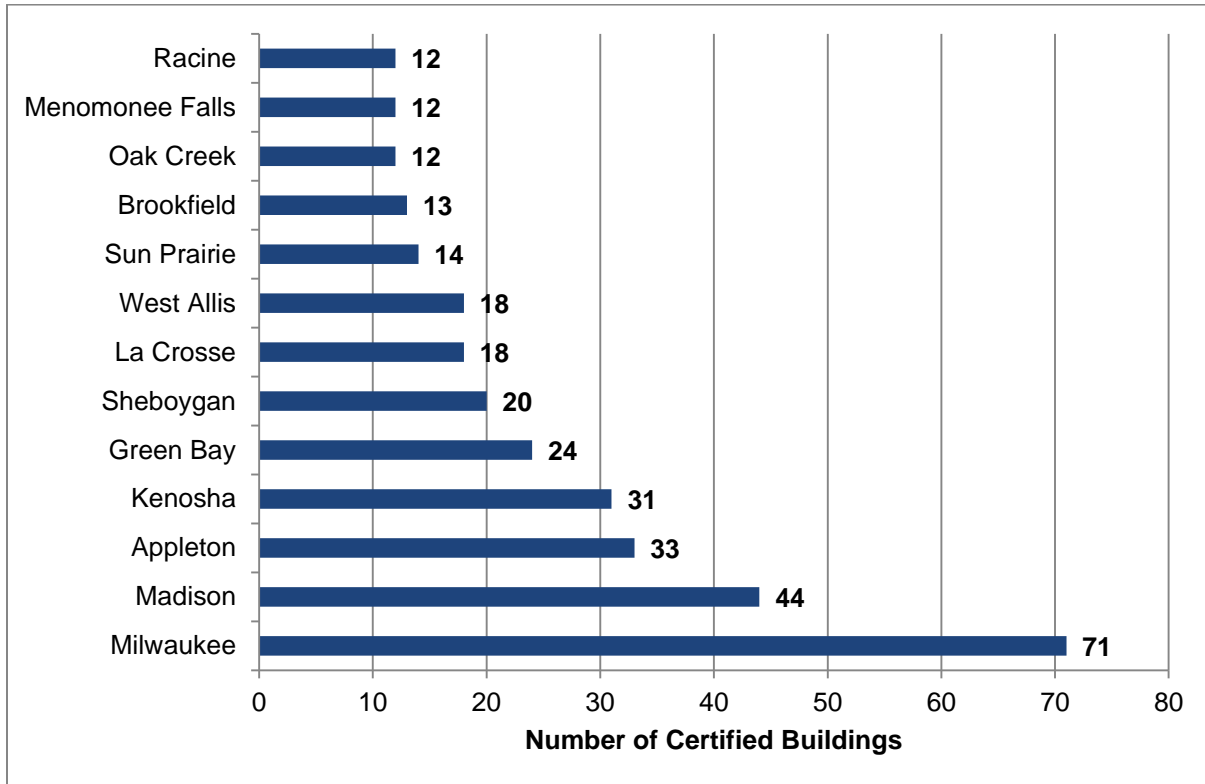
Figure 16: Top ENERGY STAR Building Owners



Communities with the Most ENERGY STAR Buildings

Whether through voluntary energy saving competitions, incentives, recognition, assistance, permitting processes, or regulations, cities across the country play a unique role in supporting the energy efficiency of buildings. Thirteen Wisconsin communities are home to 10 or more ENERGY STAR certified buildings;⁵ these buildings represent more than 50 percent of all certified buildings in Wisconsin.

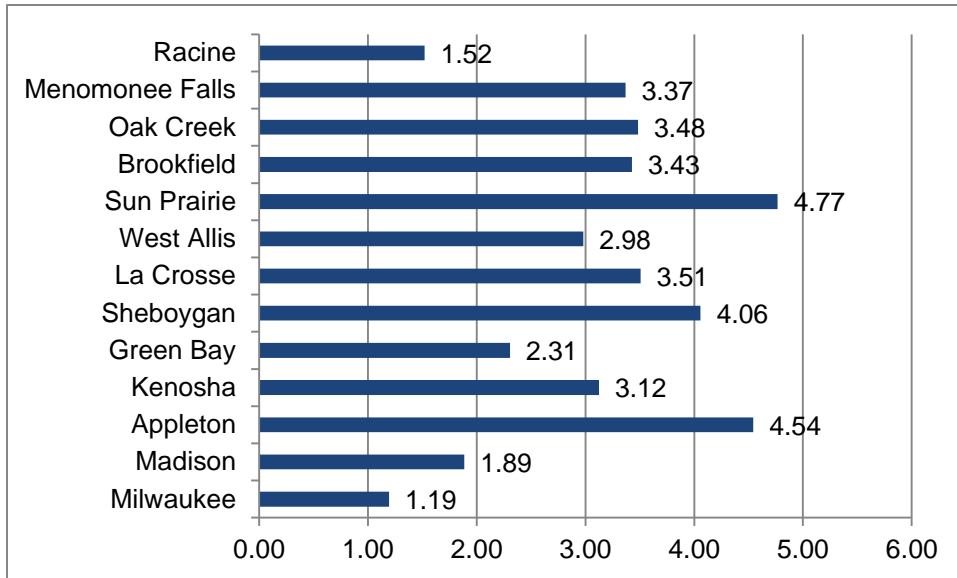
Figure 17: Wisconsin Communities with the Most Certified Buildings



While the number of ENERGY STAR certified buildings has some relationship to population, several smaller Wisconsin communities have a high per-capita rate of certified buildings. The next chart compares Wisconsin communities based on ENERGY STAR certified buildings per 1,000 residents. In this analysis, Appleton, Sheboygan and Sun Prairie emerge as the communities with the most ENERGY STAR certified buildings per capita.

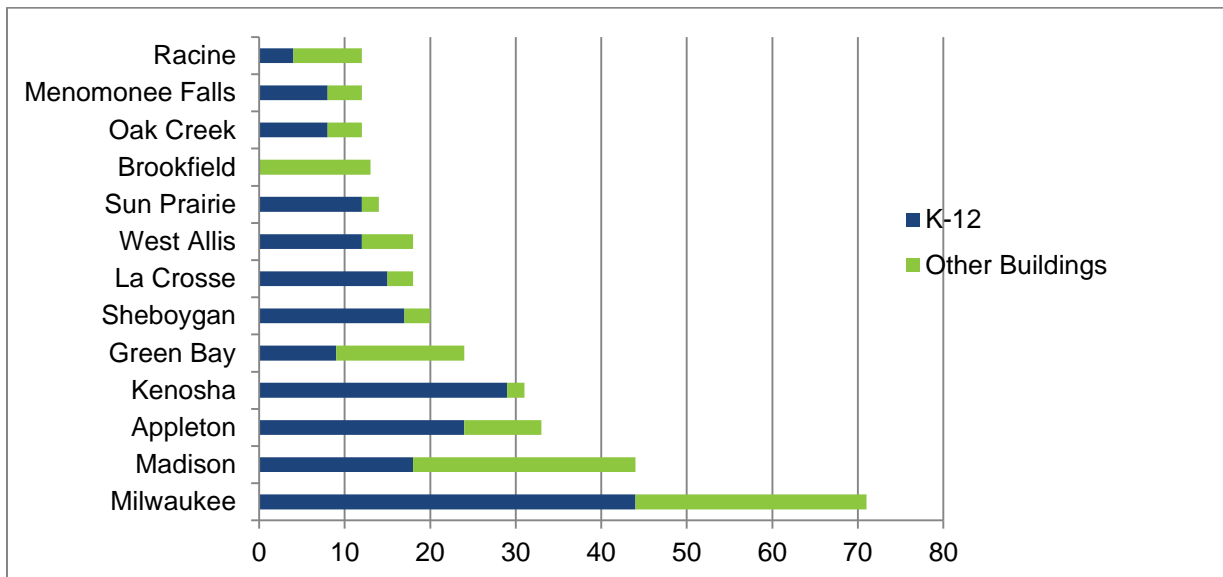
⁵ We refer here to 'communities' rather than 'cities' because in some cases it is difficult to verify whether a building is located within city limits or in a similarly-named village or township.

Figure 18: Wisconsin Communities with the Most Certified Buildings per 10,000 Residents



The certification of K-12 facilities is significant in the list of communities with high numbers of certifications. On average, K-12 facilities represent about 60 percent of certified buildings in these communities, which is consistent with the fact that 56 percent of all facilities certified in Wisconsin are K-12 schools. There is, though, considerable diversity in schools vs other buildings; in Kenosha, K-12 schools represent almost 94 percent of certified buildings while no schools are certified in Brookfield.

Figure 19: Certified Schools and Other Buildings in Select Wisconsin Communities



Over the last decade numerous Wisconsin cities launched initiatives to promote energy efficiency. More than 140 Wisconsin communities participated in the Energy Independent Communities program, for example, committing to reduce their energy usage 25 percent by 2025.^{xvii} For the most part Energy Independent Communities have focused on public sector buildings and operations. Separate from that initiative a few communities have also aimed to encourage residents or businesses to pursue energy efficiency. The State Energy Office and University of Wisconsin-Extension have created *Energy on Wisconsin*, a web-based resource center for communities interested in energy efficiency.^{xviii}

As part of Milwaukee's 10-year sustainability plan issued in 2013, *Refresh Milwaukee*, that city has implemented a Milwaukee's Better Buildings Challenge which encourages businesses, universities, school districts and other facility owners to use ENERGY STAR Portfolio Manager to track and manage energy costs.^{xix} Under *Refresh Milwaukee* the city has a goal of improving the energy efficiency of 1,000 businesses and reducing city energy usage 20 percent by 2020.

ENERGY STAR Buildings by Year Built

Wisconsin’s ENERGY STAR buildings are both old and new. Constructed in 1857, Racine’s Julian Thomas Elementary School is the oldest in the state to earn an ENERGY STAR certification (pictured below).

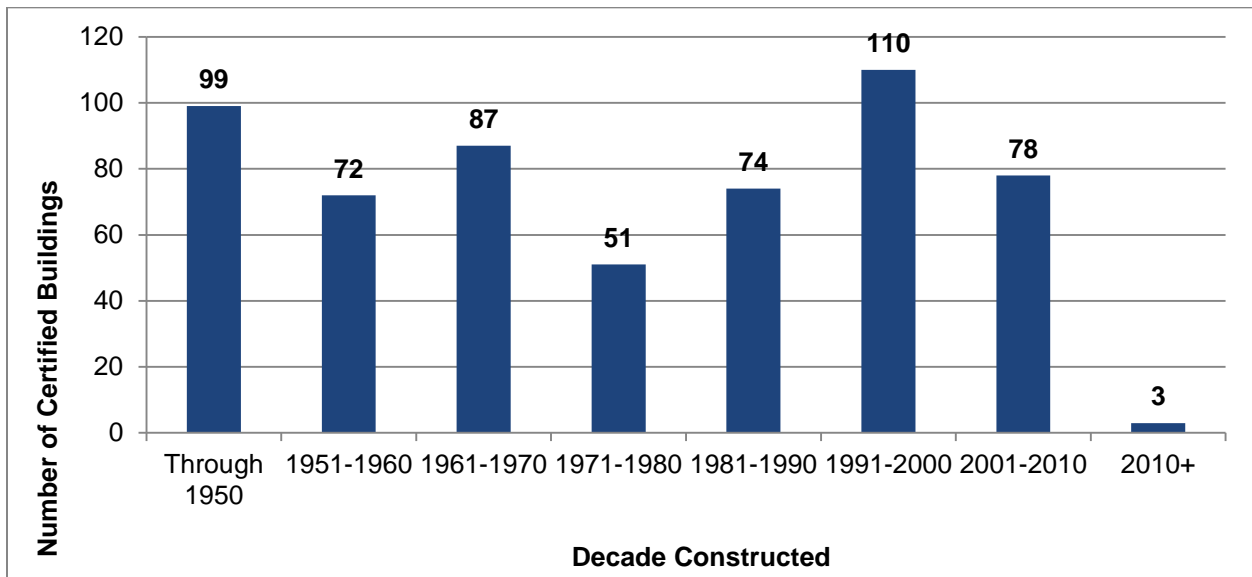
Eleven buildings in Wisconsin—10 public schools and Milwaukee’s Federal Building—earned an ENERGY STAR certification and were built before 1900. Over 54 percent of all certified buildings in the state were built before 1980, compared to 34 percent of buildings certified nationally.^{xx}

The age of certified buildings in Wisconsin is a reflection of the age of certified schools. The median construction date for a school earning ENERGY STAR certification in Wisconsin is 1962.



Julian Thomas Elementary School in Racine was built in 1857 and ENERGY STAR certified in 2008

Figure 20: Number of ENERGY STAR buildings by Year Built ⁶

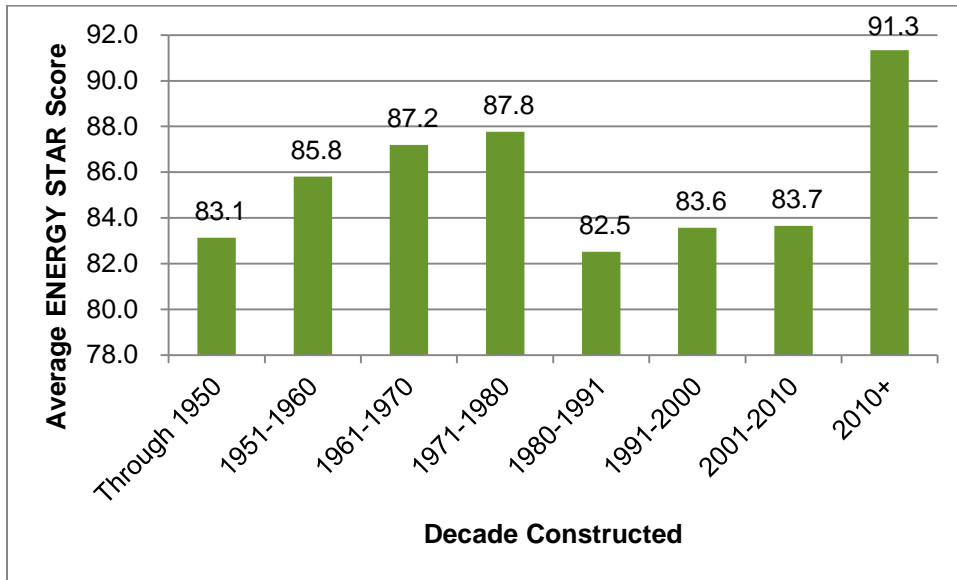


Based on scores from the most recent certification earned, the average score for ENERGY STAR buildings by decade constructed is lowest for buildings constructed between 1980 and 1991 (82.5) and

⁶ Data in this chart adds up to 579. Construction years are not available for 3 facilities.

highest for buildings constructed after 2010 (91.3). As per Figure 19, there are only three ENERGY STAR certified buildings in Wisconsin built after 2010

Figure 21: Average ENERGY STAR score by decade of construction⁷



⁷ Data in this chart adds up to 579. Construction years are not available for 3 facilities.

Wisconsin's Leaders & Notable ENERGY STAR Buildings

As of December 31, 2013 Wisconsin had 582 ENERGY STAR certified buildings, representing a total of 71.8 million square feet.

Companies with the Most ENERGY STAR Buildings

Company	# Certified Buildings	Total Square Footage Certified
Kohl's Department Stores	37	3,396,704
Target Corporation	22	2,670,587
Sears Holdings Management Corporation	22	2,146,420
JC Penney	17	1,724,572

Public Institutions with the Most ENERGY STAR Buildings

Institution	# Certified Buildings	Total Square Footage Certified
Milwaukee Public Schools	44	3,440,941
Kenosha Unified School District	29	3,082,141
Appleton Area School District	24	2,467,117

School Districts with All K-12 Schools Earning ENERGY STAR Certification

School District	# Certified Schools	Total Square Footage Certified
Oconomowoc Area School District	9	1,082,955
School District of Menomonee Falls	7	1,056,548
Fort Atkinson School District	6	703,572
South Milwaukee School District	6	793,000
Stoughton Area School District	6	590,245
Ashwaubenon School District	5	691,032
Whitefish Bay School District	4	588,949
Arrowhead Union High School District	1	218,020
Lake Country School District	1	125,000

Most Common Facility Types with ENERGY STAR Certifications

Facility Type	# of Certified Buildings	Total Square Footage Certified
K-12 School	326	35,712,685
Retail Store	112	10,461,950
Office	93	14,927,526

Buildings with the most ENERGY STAR certifications

Building	City	Number of years certified	Total Square Footage	Highest score received
Milwaukee VA Regional Office	Milwaukee	8	102,747	98
Lincoln Center III	West Allis	7	61,067	90
C. H. Bird Elementary School	Sun Prairie	6	80,609	95
Eastside Elementary School	Sun Prairie	6	66,960	91
Horizon Elementary School	Sun Prairie	6	93,997	98
Royal Oaks Elementary School	Sun Prairie	6	84,530	90
Westside Elementary School	Sun Prairie	6	71,836	90
United Healthcare	Eau Claire	6	92,419	93
One Park Plaza	Milwaukee	6	228,261	96
US Cellular	Madison	6	105,193	83
CG Schmidt Milwaukee Office	Milwaukee	6	32,772	90

Buildings that have received a score of 100 (ENERGY STAR's most efficient)

Building	Facility Type	City	Total Square Footage	Year Constructed
Muskego Elementary School	K-12 School	Muskego	34,950	1924
Mill Valley Elementary School	K-12 School	Muskego	34,360	1925
Madison Elementary School	K-12 School	Sheboygan	71,556	1953
Donges Bay Elementary School	K-12 School	Mequon	64,256	1965
Lakeshore Middle School	K-12 School	Mequon	85,448	1965
Cataract Elementary School	K-12 School	Sparta	18,133	1966
Magee Elementary	K-12 School	Genesee	45,084	1976
Full Spectrum Solar	Warehouse and Storage	Madison	6,875	1979
Onalaska Middle School	K-12 School	Onalaska	123,400	1979
WPPI Energy	Office	Sun Prairie	49,858	1991
West Bend Mutual Ins. Bldg	Office	West Bend	1,032,385	1992
Waterloo City Hall	Office	Waterloo	11,394	2000

Wisconsin's Largest ENERGY STAR Certified Buildings

Building	Facility Type	City	Total Square Footage	Highest score received
St. Luke's Medical Center	Hospital (General Medical & Surgical)	Milwaukee	1,718,168	76
West Bend Mutual Insurance Bldg	Office	West Bend	1,032,385	100
Franciscan Skemp Mayo Healthcare	Hospital (General Medical & Surgical)	La Crosse	900,460	91

Wisconsin's Smallest Buildings with an ENERGY STAR Certification

Building	Facility Type	City	Total Square Footage	Highest score received
US Bank	Bank Branch	Grafton	3,200	81
Edgerton City Hall	Office	Edgerton	5,100	96
Verizon Wireless	Retail Store	Fitchburg	6,082	98
Mead Wildlife Area Education & Visitor Center	Office	Milladore	6,208	85
Full Spectrum Solar	Warehouse and Storage	Madison	6,875	100
MSA Professional Services	Office	Rhineland	8,064	81
Valley New School	K-12 School	Appleton	9,062	99

Wisconsin's Oldest Buildings with an ENERGY STAR Certification

Building	Facility Type	City	Total Square Footage	Highest score received	Year Constructed
Julian Thomas Elementary School	K-12 School	Racine	79,332	79	1857
089-Brown Street Academy Elementary School	K-12 School	Milwaukee	110,514	84	1882
256-Henry Longfellow Elementary School	K-12 School	Milwaukee	71,421	77	1886
176-Golda Meir Gifted & Talented School	K-12 School	Milwaukee	48,035	76	1890
131-Dover Street Elementary School	K-12 School	Milwaukee	66,629	75	1890
232-Kagel Elementary School	K-12 School	Milwaukee	52,519	75	1891
Columbus Elementary School	K-12 School	Appleton	38,943	89	1893
368-Trowbridge Street Elementary School	K-12 School	Milwaukee	52,623	83	1894
220-Hopkins Street Elementary School	K-12 School	Milwaukee	87,114	75	1894
274-Alexander Mitchell Elementary School	K-12 School	Milwaukee	90,706	80	1894
Milwaukee Federal Building and US Courthouse	Office	Milwaukee	532,712	91	1899

FURTHER INFORMATION

- **Featured Research and Reports on ENERGY STAR:** <http://www.energystar.gov/buildings/about-us/research-and-reports>
- **How to Apply for ENERGY STAR Certification:** <http://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/earn-recognition/energy-star-certification/how-app-1>
- **ENERGY STAR Buildings Locator:**
http://www.energystar.gov/index.cfm?fuseaction=labeled_buildings.locator

ENDNOTES

ⁱ U.S. Department of Energy, *2011 Buildings Energy Data Book: 1.2.3 Buildings Aggregate Energy Expenditures, by Year and Major Fuel Type*, March 2012.

<http://buildingsdatabook.eren.doe.gov/TableView.aspx?table=1.2.3>

ⁱⁱ McKinsey and Company, *Electric Power and Natural Gas Practice: Unlocking Energy Efficiency in the U.S. Economy*, July 2009.

http://www.mckinsey.com/Client_Service/Electric_Power_and_Natural_Gas/Latest_thinking/Unlocking_energy_efficiency_in_the_US_economy (see full report page 55)

ⁱⁱⁱ U.S. Environmental Protection Agency, *Portfolio Manager DataTrends: ENERGY STAR Certification*, March 2013. <http://www.energystar.gov/buildings/tools-and-resources/datatrends-energy-star-certification>

^{iv} U.S. Environmental Protection Agency, *Ten Reasons to Pursue ENERGY STAR Certification*.

<http://www.energystar.gov/buildings/about-us/how-can-we-help-you/build-energy-program/business-case/10-reasons-pursue-energy-star>, accessed September 18, 2013.

^v The scores benchmark performance against national data. The data source and its year vary for different building types, although the most common is the 2003 Commercial Building Energy Consumption Survey. U.S. Environmental Protection Agency, *ENERGY STAR Plan for the Next Generation of Performance Benchmarking*, September 23, 2013.

<http://www.energystar.gov/buildings/sites/default/uploads/tools/ENERGY%20STAR%20Plan%20for%20the%20Next%20Generation%20of%20Performance%20Benchmarking.pdf>

^{vi} U.S. Environmental Protection Agency, *How to Apply for an ENERGY STAR Certification*, June 2013.

http://www.energystar.gov/buildings/sites/default/uploads/tools/PortfolioManager_ApplyforES.pdf

^{vii} U.S. Environmental Protection Agency, *Energy STAR Snapshot: Measuring Progress in the Commercial and Industrial Buildings Sector*, Spring 2013, 1-2, 10.

http://www.energystar.gov/buildings/sites/default/uploads/tools/ENERGY_STAR_Snapshot_Spring_2013.pdf, accessed October 3, 2013.

^{viii} U.S. Environmental Protection Agency, *Portfolio Manager DataTrends: Benchmarking and Energy Savings*, October 2012. <http://www.energystar.gov/buildings/tools-and-resources/datatrends-benchmarking-and-energy-savings>

^{ix} U.S. Environmental Protection Agency, *supra* note iv.

^x U.S. Green Building Council, *LEED for Existing Buildings: Operations and Maintenance, Recertification Guide*, October 2013. <http://www.usgbc.org/sites/default/files/Recertification%20Guidance%20Oct2013.pdf>

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- ^{xi} U.S. Environmental Protection Agency, *Portfolio Manager DataTrends: ENERGY STAR Certification*, March 2013. <http://www.energystar.gov/buildings/tools-and-resources/datatrends-energy-star-certification>
- ^{xii} Email correspondence with Charlie Schneider, Facilities Management Director, Cooperative Educational Services Agency (CESA) 10 and past Director of Focus on Energy's Schools & Government Program
- ^{xiii} <http://energyeducation.net/2011/03/energy-education-receives-highest-us-epa-honor-energy-star-award-for-sustained-excellence/>
- ^{xiv} U.S. Environmental Protection Agency, *supra* note x.
- ^{xv} U.S. Environmental Protection Agency, *supra* note iv.
- ^{xvi} U.S. Environmental Protection Agency, *ENERGY STAR Certification*, March 2013. http://www.energystar.gov/buildings/sites/default/uploads/tools/DataTrends_Certification.pdf; to calculate the average in Wisconsin, the most recent score was used for buildings that received multiple certifications.
- ^{xvii} Wisconsin State Energy Office, *EI Communities*, February 2014. <http://www.stateenergyoffice.wi.gov/section.asp?linkid=1514&locid=160>
- ^{xviii} Wisconsin State Energy Office and University of Wisconsin-Extension, *Energy on Wisconsin*, February 2014, <http://energyonwi.uwex.edu/>
- ^{xix} City of Milwaukee. February 2014, <http://refreshmke.com/>
- ^{xx} U.S. Environmental Protection Agency, *supra* note xii.