

# ENERGY REPORT CARD EXTRA EARTH DAY 2013

APRIL 2013



## EARTH DAY NETWORK

[Earth Day Network's Green Schools Campaign](#) strives to improve the quality of school environments all over America. It has been shown that green schools have many benefits, including improved student test scores, higher teacher and student retention, impressive improvements in children's health, and notable energy cost savings. Green schools can greatly reduce student sick days. More time in the classroom equates to more learning and better test



U.S. Secretary of Education Arne Duncan, along with White House Council on Environmental Quality Chair Nancy Sutley and Environmental Protection Agency Acting Administrator Bob Persiacle, announced today that Des Moines Public Schools is among 78 schools and districts recognized with the U.S. Department of Education [Green Ribbon Schools Award](#).

This is the second year of the national recognition for schools and the first year entire school districts were recognized. Des Moines Public Schools is one of only 14 districts in the nation to be honored.

Last year, Central Campus in Des Moines was one of the first schools to earn a Green Ribbon Schools Award.

Last month, for the second year in a row, Des Moines Public Schools was recognized as the [Energy Star Partner of the Year](#) by the U.S. Environmental Protection Agency.

## What Does Earth Day Mean Today?

On April 22 of each year people around the world plant trees, commute to work by bicycle and pick up trash in their neighborhoods to observe Earth Day, an event created to shine a spotlight on environmental concerns.

The first [Earth Day](#) was organized by Gaylord Nelson, a former U.S. senator from Wisconsin, in 1970 as a way to bring environmental protection onto the national political agenda.

While the first Earth Day was open to anyone who wished to participate, some of the most enthusiastic Earth Day observers were in schools and universities around the country.

That show of public support is credited with helping push Republican President Richard Nixon and Congress to pass the law that created the Environmental Protection Agency (EPA) in December 1970.



This image, known as the "Earth Flag", was created as a symbol of Earth Day by John McConnell, who helped pioneer the movement.

### [How you can participate](#)

- Carry a reusable water bottle
- Unplug electronics after you're done with them
- Replace old incandescent light bulbs with energy-saving compact fluorescents
- Bike to school or work
- Plant a tree

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## Aaron Hynes, Lincoln High School

A big project I did in IESA class was the green box energy labs. It had a lot of good information. One of the things I learned was rem is a monitoring device with a USB port. I also learned direct light consist of radiation straight from the sun. Solar panels are used further than 12,550 miles from earth. Solar panels have long term energy. Those are a few of the many things that I learned.

Gary Snyder was one of my recent tid bits. He was an American poet as well as an essayist lecturer and environmental activist. It was fun learn about what he did.

I recently learned about the yellow energy tag found on major appliances. It is good to know about it because it could save you money and help the earth out by using less energy. A few of the steps to reading it is: On the left under the headline Energy Guide the label describes the type of appliance it is. Another step on the right lists the manufacturer, the model numbers that fit this description, and the capacity. Then you want to look at the box to estimate the amount of energy used in an average year.

## Chris Ellie – East High American Made Jamaican Drum

I was sitting around, listening to Bob Marley, knowing that I had to do something for my Earth Day Project. I thought to myself that it would be cool to make my very own hand drum. So, I got about 10 plastic bottles and used duct tape to tape them in a ring shape. Then, I got a plastic bag and turn it into a single layer and very tightly taped it to the top of the bottle ring.

This is a great way to show my appreciation to the Earth. I am saving money and at the same time, I am being environmental friendly. Because all that matters these days is Saving Money, Reducing, Reusing and Recycling.

If you want to do of thing that I you think it is a it is anything but time. If you just plastic water the top off and you can use that chocolate chip opening to help longer then they the piece.



the same kind have done, but waste of time, a waste of take an old bottle and cut take the lid off, to put over a bag on the them stay fresh would without

## Alysia Vongsaly and Dilan Mendoza

Our project was created with recycled cans in order to create an IESA tin can man. We figured if we used the recycled cans it'll be a resemblance to the whole meaning of IESA, to recycle and reuse these cans for a cool and fun project. Simply we bought the used cans from home, cut out holes to put a string to hold all the cans together, and then used tape to attach any loose cans. Mainly using 7up and Mountain Dew cans to represent colors of IESA. Our main idea and goal for this project was to



show other students that you're able to use cans to create a project or just simply to reuse cans for a good purpose.

Reusing and recycling cans do so much more than what we think it actually does. Although we feel that if we just throw our cans in the river, sea, ground, etc. it doesn't mean as much. Recycling cans can reduce air pollution, water pollution, also even prevent animals that digest these cans from danger. A little act of kindness for our earth can go a long ways. Making our Up Cycle project was overall simple and fun DIY at home project as well. Not only did we create a tin can man but we also re-used and helped a few animals from the danger of cans thrown away in the environment!

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## Jonathan Reeves Earth Day Project

Earth day was on the 22<sup>nd</sup> of April 25, 2013 students came from different schools to central to see IESA's students projects and presentations to show that we are environmental friendly people who try to preserve the environment.

I think earth day is a very important day but slowly when time keeps going by people forget and it's getting worse that people that are forgetting about earth day because people will just start forgetting about to clean up and recycle things that are made to be recycle.



Nick Meye - Roosevelt

On Earth Day I helped kick off our fundraising efforts to go to the Dominican Republic next spring break. The exact fundraiser I helped with was the chocolate candy bar sales. The chocolate sales were going good at lunch and after. The things we are going to do in the Dominican Republic are help do service projects in the jungle. This is one in a life time opportunity to all who is going on this trip.

Another thing we needed to do for Earth Day was to create an up-cycle project, which is to take something and use it for something that it was not originally used for. The thing I built used an old rope, rope light and old pulley. So used to rope to hang it from a hook and used the rope light and wrapped it around the pulley a few times and made to other loops to make a dim, art type light. I got some of the things from an old salvage shop to help create it.

## Luis Cabral—North Evan Noring—East

On Earth Day we built a solar car and boat. The wagons were powered by a lamp shining on the solar panels. We demonstrated the carriages to the kids and explained how they work. The kids spent like 20 minutes at our table and seemed to enjoy watching the solar rover zip along.

The sun transmits energy in the form of radiation. When this radiation is absorbed by the solar cells, a chemical reaction occurs, causing rapid electron movement. Because of the way the cells are made with layers of material with different atomic structures, the electrons are forced to move in one direction, creating direct current. It then flows into an inverter which converts the DC into alternating current to be usable in your home.







# ENERGY REPORT CARD EXTRA EARTH DAY 2013



Riley Dunlap, Elijah Young, Riley Alexander,  
Allison Lumadue  
Lincoln High School

## Earth Day Globe

Earth Day at IESA is based on projects that students in the class do to promote Earth Day as a whole. Our project we did was all for the kids and some adults that came through our station. We got a 3' by 5' poster and decided to draw a globe to fill up most of the poster. On the side of it we put in bold words "Earth Day" each in a different illustration of the environment. One half on the globe was half of the continents and the other half was the IESA logo hand drawn.

The purpose of drawing this globe was for all that wanted to participate to be able to draw them anywhere on the outside perimeter of the globe that they wanted and to sign their name where the IESA logo was. When they signed it there was a sort of pledge they were making towards the environment to make it as clean and safe as possible. We also had handouts with word searches on them for people to take as they pleased. The words on the word search were environment, clean, air, etc.

The end results turned out really well. Over 135 people had drawn themselves on the poster and also had signed it. The poster itself looks really colorful and we as a group are all really proud of the end result.



# ENERGY REPORT CARD EXTRA EARTH DAY 2013

Sam Norland

## What will future cities look like?

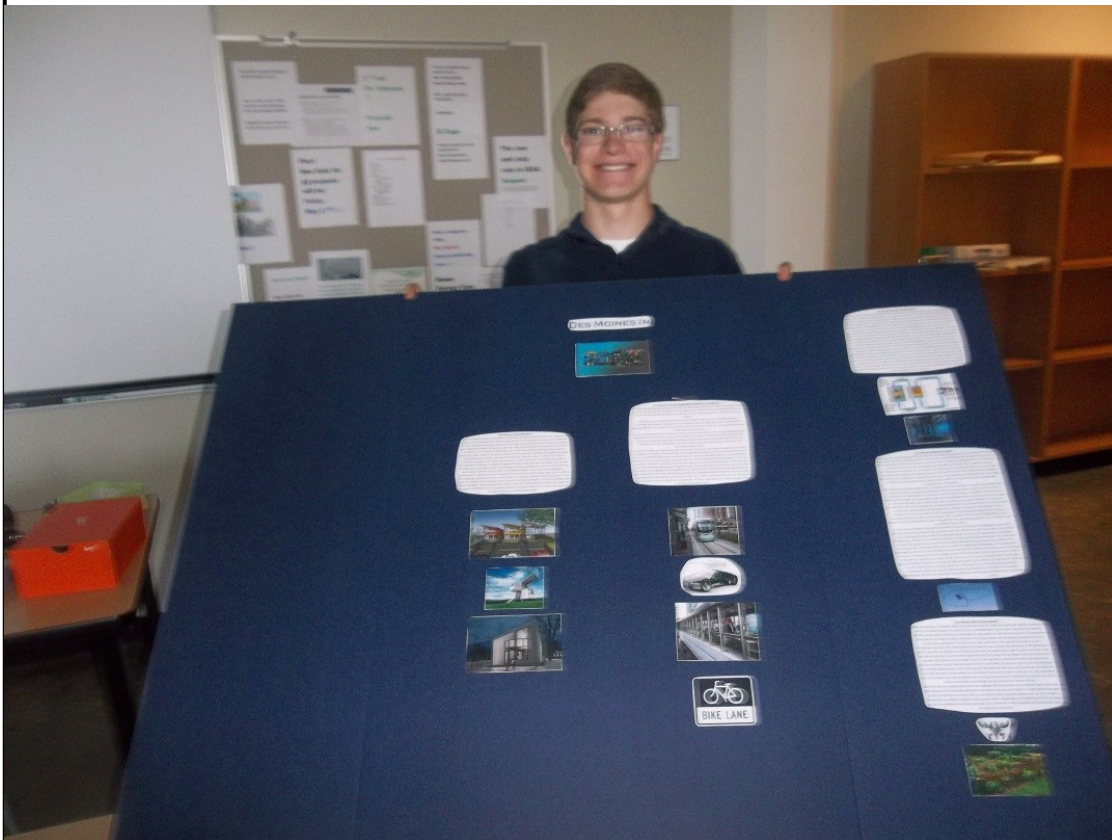
I completed my Earth Day project on a futuristic topic: What will Des Moines look like in 2062? Early in the 20<sup>th</sup> century, the year 2000 was supposed to bring an end to war and famine, flying cars, and colonization of planets throughout the galaxy. Needless to say, this did not happen, and is not looking to come to fruition within the foreseeable future. I chose a time frame in which I could remain creative, while still remaining within the realm of reality.

I looked at what a futuristic Des Moines could possibly look like through five scopes: housing, transportation, energy,

waste-management, and food production, all with a growing population and hotter climate in mind. If the city planners of Des Moines of the future are to successfully accommodate a proposed larger population, they will need to take all of these factors into account.

My proposition included an expansion (both upward and outward) of downtown Des Moines, and the implementation of readily available public transportation, where the most common modes of transportation are light rail trains and bicycles. In addition, Des Moines will need to adopt alternative energy sources, such as solar panels in residential

areas and the use of now-safe nuclear fusion reactors for a city population of around 500,000. With the efforts of Des Moines' citizens, an increase in waste produced does not necessarily mean bad news as long as people responsibly dispose of their waste through recycling and the use of biodegradable materials.





# ENERGY REPORT CARD EXTRA EARTH DAY 2013

## Sy'Anne Dysart - Roosevelt Shoe Box Shelves

The first step in making a shoe box shelf is buying a shoe that comes in a box such as Nike, Jordan, and Adidas. Take the shoes and stuffing out of the box. Pick a place in your room or wherever you want your makeshift shelf to be.

Open the top and nail one of the longer sides to the wall. Nail shoe box up from the inside. Now close the top and put whatever you want to display on the shelf like shoes, stuffed animals, or little trinkets.



## Kiely Ann Frazier How Up-Cycling Can Help You Earth Day 2013

This being my second Earth Day Fair, it was my favorite event of the year. We (the IESA students) work all year towards this one event and are so thankful to share with all of the Central Students and Administration.

Innovation can make a world of a difference in your home. From using simple K-cups for planting seeds, to using tin cans for pencil or utensil holders. Not only will it save you money, but slow down the growth of dumps and landfills.

I hope that the Earth Day Fair will become a big event every year; where all students and Administration see how hard we work on improving our Earth.

Special thanks to Mr. Beall, Dakota Lupkes-Heim, also Sierra and Charity from the 3<sup>rd</sup> grade class.



# ENERGY REPORT CARD EXTRA EARTH DAY 2013

## Ted Appel—Roosevelt

For my earth day project, I made a poster board consisting of three major environmentalists of the 20<sup>th</sup> century. They included Rachael Carson, Jay “Ding” Darling, and Ansel Adams. Each of these environmentalists significantly contributed to their cause. Rachael Carson wrote Silent Spring which kick-started the modern environmental movement.

Jay “Ding” Darling used satire in his comics to show the destruction of the environment. Ansel Adams contributed with his black and white photographs of the environment. His photographs gave a meaning to show why people should save mother earth.

Also on Earth Day, I helped run the candy bar stand. This candy bar stand was to sell candy bars for one dollar. With the money that was made, it would help send some of my classmates to the Dominican Republic to help the environment. They also recognize the culture and experience new ideas that may be applied to the lowan environment.



## Tyler Chapman—Lincoln Andy Jones—Lincoln

### Candy bar sales at Earth Day

We started our day at central when we got there we helped set up, then after that we sat there and handed out our handouts. We had two handouts. First we had a crossword that had some types of renewable energy, and things that had to do with recycling.

Then we had facts about energy usage and what types of energy we use. It was also about how much consumption of energy we use. Another thing that we had was the poster board, and that had types of non-renewable energy and some pictures that have to do with energy.

When more people started coming we helped hand out candy bars and that was fun because we sold a lot of candy bars. We also sold a few tomato and pepper plants.





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## Hunter Lee – Lincoln Energy Report Card: IESA April 2013

This month in Iowa Energy and Sustainability we are getting ready for Earth Day. We have numerous things we are doing to for Earth Day including many projects. One of the projects we are doing is an up cycling project. This means that you take anything and change its obvious use and make it for something else. We also have a basic Earth Day project which means you can do anything related to Earth Day from the environment. We will have a big presentation set for Monday April 22, 2012.

We are also gearing up for our Spring Break 2014 trip to the Dominican Republic. We have many fund raisers that we are doing already to bump the cost down of the trip. We have a cookie dough fundraiser that we are doing. Also, on Earth Day, we are going to sell candy bars and tomato and pepper plants that anyone wants to buy to help with our trip costs.

[Learn how to create a bird-friendly environment on your property.](#)

[Learn more about starting a vegetable garden.](#)

## Riley Moore - North

For my earth day project, I made birdfeeders out of plastic bottles. They are simple and easy to make. All you need is a plastic bottle, some scissors, and some wire.

In 5 minutes, you have an awesome looking birdfeeder and plus you save the environment from having to break down another bottle, which takes about 500 years to fully break down.

The bird feeders were a big attraction at the Earth Day event in the lobby at Central Campus. We lost official count with the large crowds but estimate we handed out in the range of 200 bird feeders.





# ENERGY REPORT CARD EXTRA EARTH DAY 2013

**Megan Beveridge—Lincoln**  
**Elissa Roland—Lincoln**

Megan and Elissa went to Central Campus to explain to little kids what their projects were about. They had fun handing out small activities like word crosses and coloring pages with the children but also getting to interact with them as well. They explained to them how light bulbs worked and the meaning of Earth Day. They were giving out advice on more ways to recycle and ways to clean up the environment around them. We had fun doing this.

[More FUN stuff for kids!!](#)



**Tanner Nath—Lincoln**

My experience in our 2013 IESA Earth Day science fair at central campus was amazing. We had about 20 to 30 tables full of posters, handouts, demonstrations, and much more on display. We had 2 or 3 elementary schools show up and walk through and learn things about famous people and things about earth day. Then we had some adults come through and check out the displays. We also gave each person a bag with a little patch about earth and a single pack of seeds.

There was another part to our earth day projects and that was to have an upcycling item of some sort. Upcycling is where you take an old or used item and turn it into a useful piece of art or item. My upcycling project I choose was I took five bamboo sticks, yellow ribbon and five little flowery beads and turned it into a wind chime. I have put it outside and tested it and the outcome was successful. It worked and I was proud of myself for making something from bamboo, ribbon and beads.

Overall I think the science fair was successful and we should have it again. The best thing I liked about it was teaching and showing little kids and adults what earth day is and how it's important to this world. What I learned from this experience was that if you do the smallest and simplest stuff it can help the world in some shape or form. Always remember that recycling can help save earth and save its species surrounding it.

# ENERGY REPORT CARD EXTRA EARTH DAY 2013



**Jerson Valenzuela—North**  
**Breana Markey—Lincoln**  
**Energy Report Card: Earth Day 2013**

On April 22<sup>nd</sup>, the IESA class participated in an Earth Day project fair. In this fair, the students were asked to prepare and present both an Earth Day project as well as an up cycling project. We, Breana and Jerson, took it upon ourselves to combine both into one big project. We took under consideration that we would be dealing with kids much younger than us. What better way to get them more interested in a subject than to give the kids and interactive presentation.

The project we worked on utilized plastic water bottles, ketchup bottles, sports drink bottles, and other sorts of bottles. To use the majority of the bottles we decided on making an interactive arts & crafts project. We cut the bottoms, and tops of the bottles off, and kept a few of the bottle caps. We used the bottoms of the plastic bottles as stamps; the very bottom of the bottle has a floral like design. We used the caps by placing foam stickers on the top and then they were used as smaller stamps. As for the tops of the bottle, and ketchup bottle, we wanted to give kids a treat by making Earth Day chocolate chip pancakes. We took an empty ketchup bottle, made sure to clean it up, and filled it with green pancake batter. The top of the bottle was used as a way to pour out the chocolate chips while also serving the purpose of containment.

Our interaction with the kids went smoothly. Most of the kids thoroughly enjoyed creating a masterpiece with parts of a plastic bottle. They also enjoyed the bite sized green pancakes, which were served fresh and made to order. We also saw a few of the same kids come back more than once, or bringing over friends with comments like: "They used [a] ketchup [bottle] to make pancakes". It was a great experience and we hope to have inspired the young ones that visited our table to reduce, re-use and recycle.



# ENERGY REPORT CARD EXTRA EARTH DAY 2013

## Sam Muncell, Jacy Wilmes, Anna Romeo—Lincoln

On Monday, April 22<sup>nd</sup> our trio of Iowa Energy and Sustainability students embarked on the Earth Day of a life time. There were numerous booths set up in the main lobby of Central Campus. All booths different in their own way, but all of them with having a semi-same main message, and that is to protect this great planet Earth that we live on.



There was booths ranging from homegrown plants in Dixie cups, to homemade bird feeders in Gatorade, and Pure Leaf iced tea bottles. But our display included none

of the above. We (Sam Muncell, Jacy Wilmes, and Anna Romeo) had a display of miniature models that consisted of a wind turbine, hydroelectric car, solar panel with a halogen lamp, and a multi-meter that read the total voltage of the solar panel. We had all of the models on display and in working condition for the students and guest's that stopped by to see what was going on.

The wind turbine, although inside, was powered by the artificial wind of a fan. For our Hydrogen powered car we would charge up the distilled water with electrons by giving it power from a battery pack, then it would be stored in the fuel cell until the plugs were inserted connecting the fuel cell to the engine, then when the switch was activated the car would move courtesy to the electron filled distilled water.

Besides having a display and handouts or experiments for Earth Day we had the opportunity to make an up cycling project, which is taking an old item and transforming it with other household items to give it a new use. Sam Muncell's up cycling project was on display as well at the booth. He took an old thick book (699 pages to be exact) carved out about 550 of those pages then planted an Italian Goth tomato plant inside the carved out cavity of the book.

Anna Romeo as well participated in the up cycling project by taking an old sock and filling it with uncooked rice grains then warming it in the microwave for two minutes with the help of a glass of water so the rice filled sock did not catch on fire.

Then you would use the warm sock as a heating pad. If whoever is reading this stopped by this year, we thank you for that. If not we would look forward to seeing you next year, it will be a lot of fun again!

## Brenda Guzman Martinez – Lincoln High School

Earth day was founded April 22, 1970 it is a day people are even more friendly to our planet earth. A day in which one goes out of their way to do something special for our planet and remind others to do the same. While teaching our young to treat and care for the land, water, plants, animals and everything that builds this planet earth this home.

For earth day this year in my IESA (Iowa Energy and Sustainability) we had to do a project over a topic we really liked and I picked to work with my friend Jonathan. After looking at all the possibilities we had in front of us we finally picked wind. Why? Because wind is a powerful thing that can give one enough energy that our homes need and maybe sometimes even more.

Working on our project I learned many things for example, there are

four main parts to a wind turbine: the base, tower, nacelle, and blades. The blades capture the wind's energy, spinning a generator in the nacelle. The tower contains the electrical conduits, supports the nacelle, and provides access to the nacelle for maintenance.



The base, made of concrete and steel, supports the whole structure. All this help build up a well-rounded turbine that provides energy from the wind that we use in our homes. And even though I did not have the opportunity to go to the earth day far I am sure that every one that stopped by walked out with knowledge.



# ENERGY REPORT CARD EXTRA EARTH DAY 2013

## Zoey Mauck—Roosevelt Benefits of the Bicycle

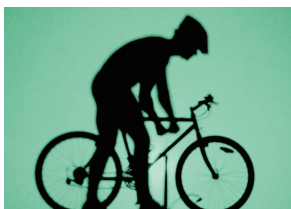
Biking is not strictly an athletic activity, but it can be enjoyed by all age groups while encouraging physical activity and environmental awareness. Beginning with your first ride on a tricycle as a young child all the way to your older adult years on a road bike, anyone can bike for athletic purposes, transportation purposes, or just for fun! In society today, biking is a small part of the commuting world, but local clubs and organizations aim to make the streets more friendly to riders, encouraging a larger population to commute via bike.

One aim to tackle this goal is to encourage all age groups to participate. Once a child starts riding their bike, they have entered a whole new world of possibilities

including eco-friendly transportation, a fun activity to enjoy with friends, and a new way to maintain physical health. Biking clubs are popping up for younger students across the globe, creating a new community and admiration for staying healthy and conserving fuel.

I have started a cycling club at Roosevelt High School, The Rider Cyclers, composed of students from each grade and of all abilities. Our goals are not only to have fun while exploring our community by bike, but also to build friendships, maintain physical health, and volunteer for events throughout the community. We plan on creating a “Bike to School Day” in May, volunteer at local bike shops, participate in charity rides, and even ride RAGBRAI this summer. Biking reduces fuel emissions and increases our awareness for keeping the environment clean since local roads and parks are where we ride. In the future, our club, in

addition to other clubs, hope to spread love for the bike community to people of all ages, and bring with it environmental awareness, admiration for the outdoor community, and a love for the sport.





**SITE ENERGY USAGE**  
**JULY 2012 – JANUARY 2013**  
 Percentage of change as compared to same time period from previous year  
**SCORECARD**

TOUCHDOWN		1ST AND GOAL		OFFSIDE	
Site	% Chg	Site	% Chg	Site	% Chg
Studebaker	-63.80%	Jefferson	-9.40%	Brubaker	44.30%
Lovejoy	-31.80%	Stowe	-8.90%	Findley	41.10%
Moulton	-16.40%	Oak Park	-4.90%	Hanawalt	30.80%
Morris	-12.80%	King	-4.70%	Pleasant Hill	27.00%
Mitchell	-12.50%	Carver	-4.60%	River Woods	17.30%
Edmunds	-11.80%	Jackson	-2.50%	Hillis	13.50%
Howe	-10.10%	McKinley	-2.50%	Park Avenue	11.70%
		Casady	-0.40%	Cattell	11.20%
Hiatt	-58.30%			Wright	10.80%
McCombs	-50.40%	Goodrell	-8.60%	Samuelson	9.70%
		McCombs GH	-4.20%	Phillips	8.10%
Hoover/ Meredith	-21.10%			Hubbell	8.00%
Moore (Scavo)	-12.10%	Roosevelt	-9.40%	Garton	7.10%
		North	-5.80%	Perkins	6.00%
CNC	-11.90%	Central Campus	-5.00%	Woodlawn	5.90%
Prospect	-2.60%	Walker Street	-4.40%	Smouse	5.70%
		Central Academy	-0.40%	Madison	4.80%
				McKee	3.60%
		Welcome Center	8.80%	Cowles	2.80%
				Greenwood	2.80%
				Monroe	2.30%
				South Union	1.30%
				Capitol View	0.60%
				Willard	0.50%
				Windsor	0.50%
				Brody	22.90%
				Hoyt	20.00%
				Merrill	15.10%
				Weeks	13.70%
				Callanan	10.60%
				Harding	6.00%
				Van Meter	15.20%
				Aviation Lab	11.30%
				Kurtz	9.40%
				East	5.10%
				Lincoln	2.50%
				Dean	25.10%
				Walnut	15.80%

Blue indicates ENERGY STAR® labeled buildings  
 \* Buildings under construction during same time period last year

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 E-mail: [brenda.walker01@dmschools.org](mailto:brenda.walker01@dmschools.org)