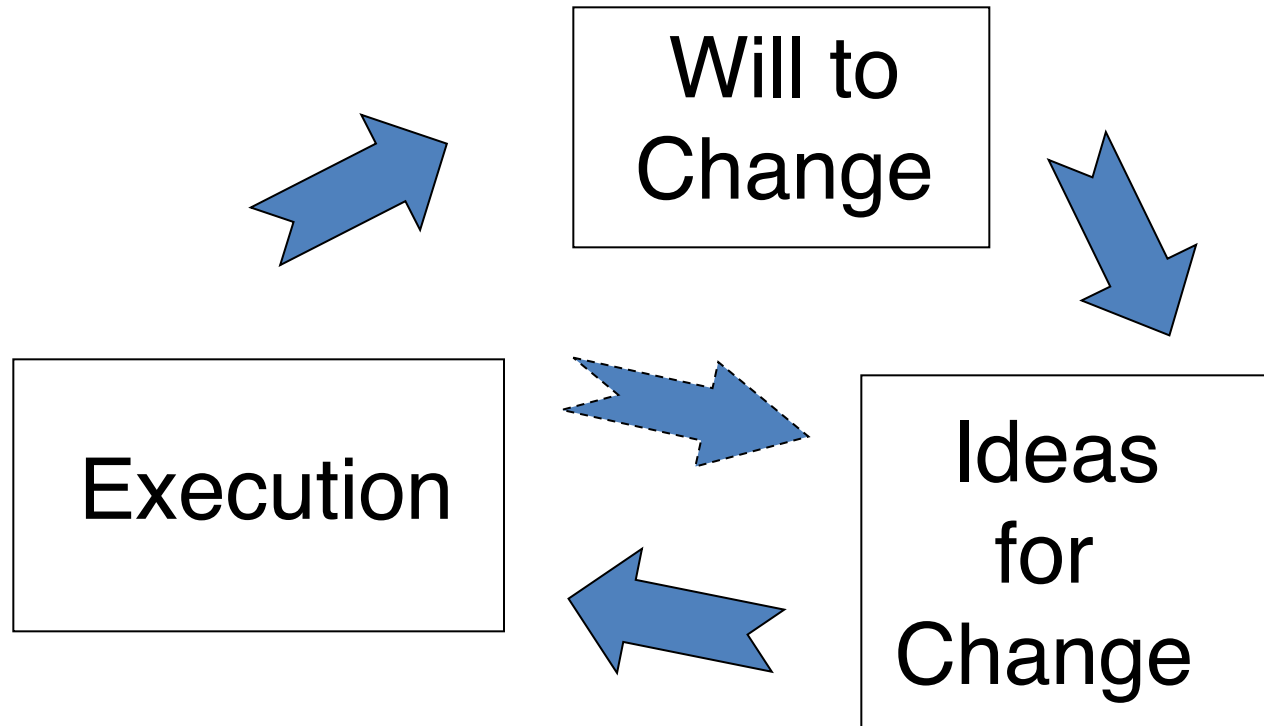


Key Ingredients to Spread & Deepen Results



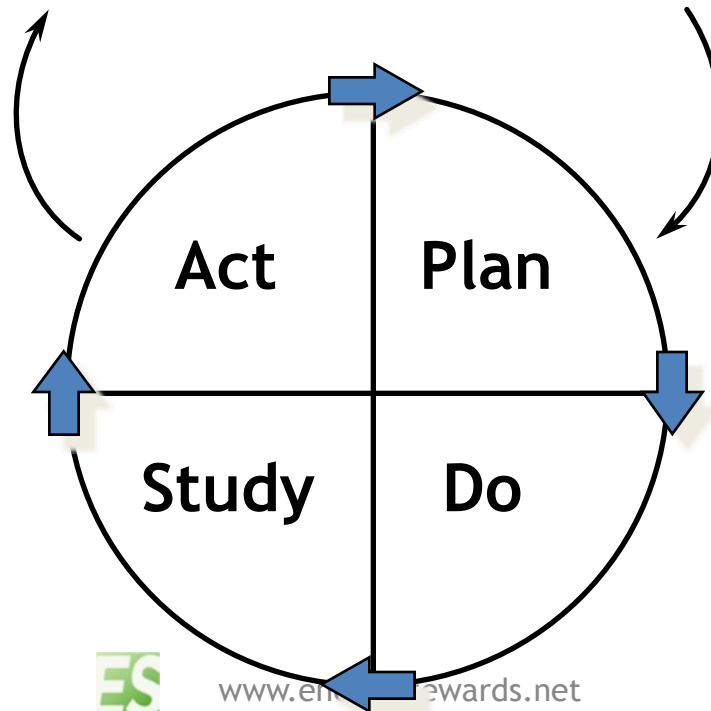
Rapid Improvement Associates, LLC - Energy Stewards Web Platform

Basic Method To Guide

1. What are we trying to accomplish?

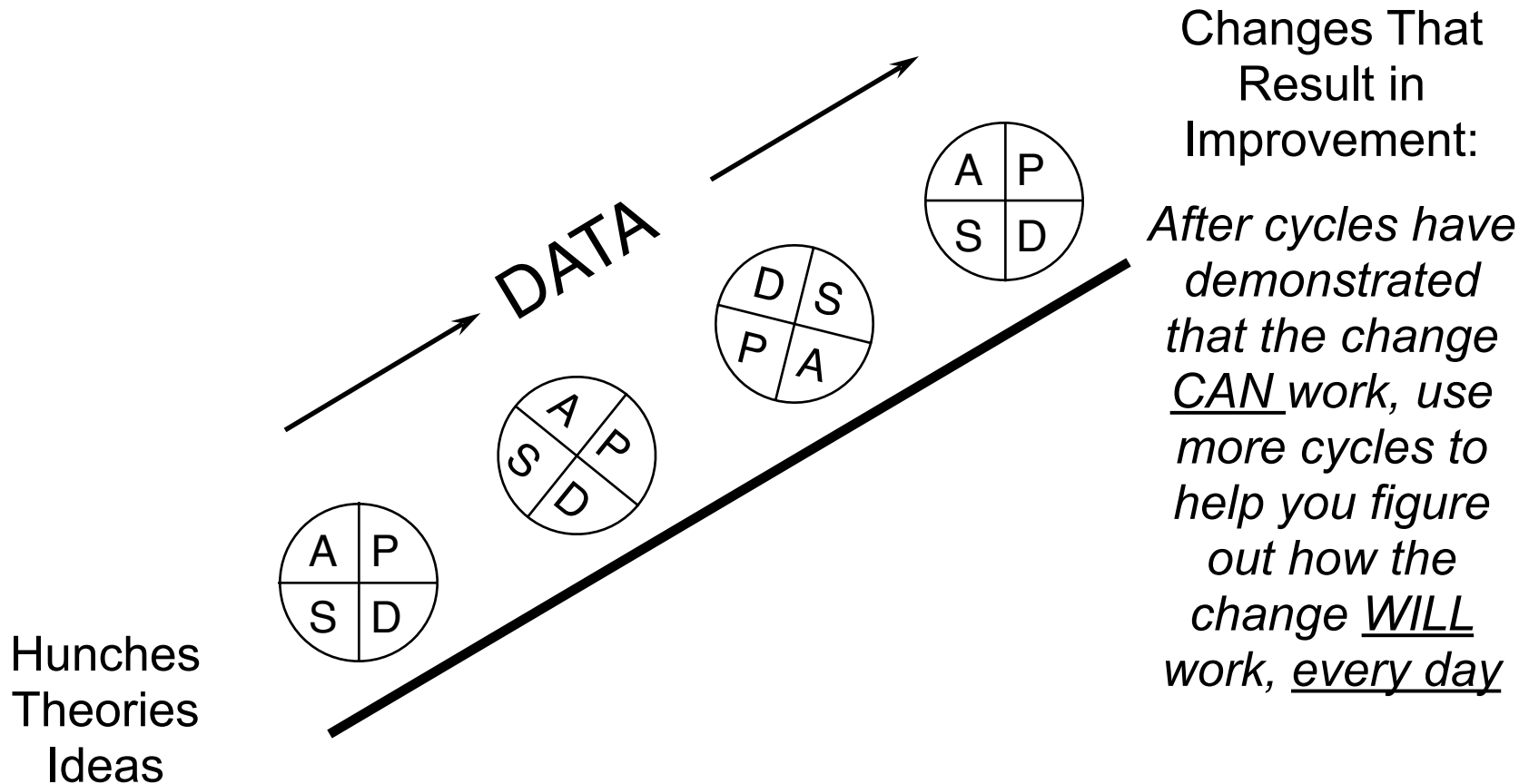
2. How will we know that a change is an improvement?

3. What change can we make that will result in improvement?



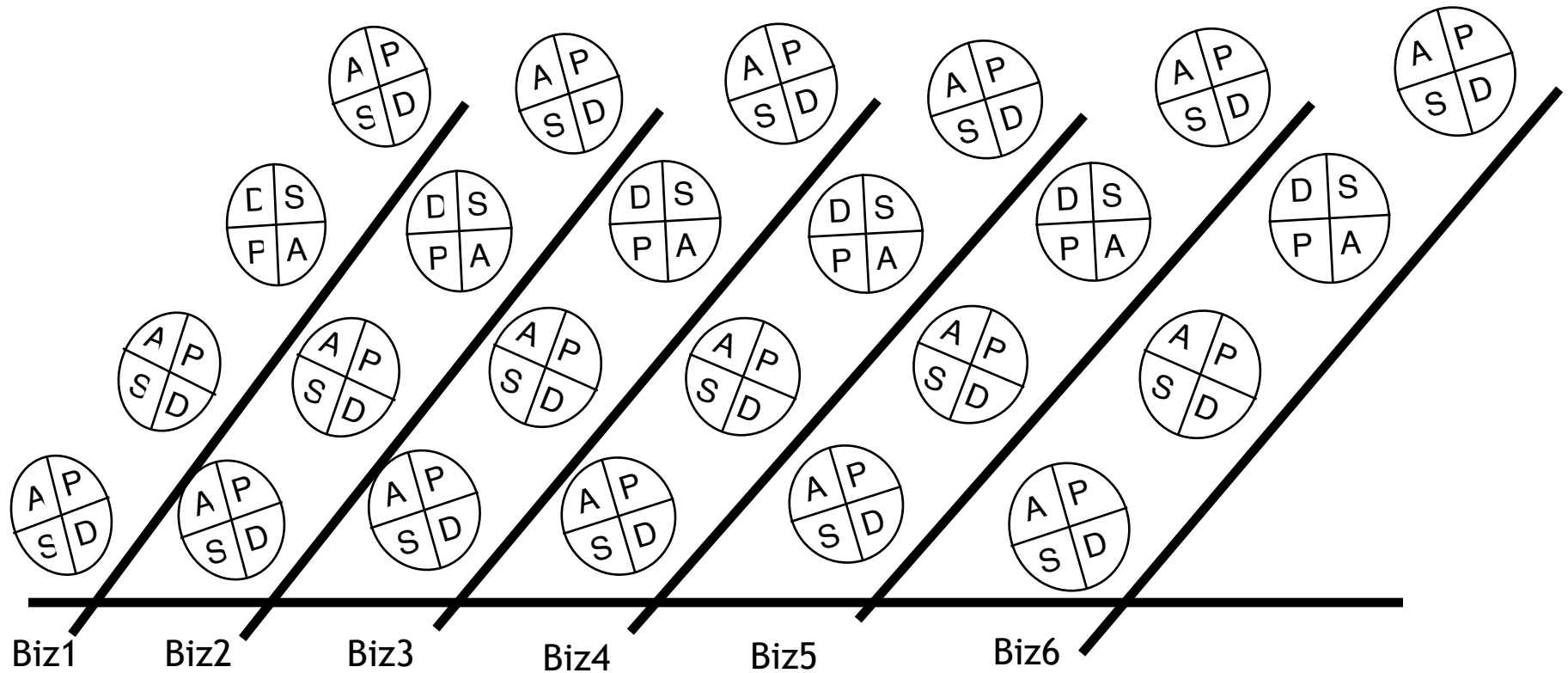
Langley et al. (1996), The Improvement Guide, Jossey-Bass: San Francisco.

Repeated Use of Cycle



Investigation —————> **Demonstration** —————> **Implementation**

To Quicken: Multiple Cycles of Testing, Standardizing, Sharing



With Regular (monthly, quarterly) management at least review & decision on next steps.

Successful Collaborative Attributes

- ✓ Success important to leadership
- ✓ Participants share common bond
- ✓ Clear target, measures . . . Some know how to do well
- ✓ Applications & deadlines help make the important, *urgent*
- ✓ Reports, reviews & celebrations
- ✓ “Action Table” & web site integrated with overall program, culture & values

A Web Tool to Support

The screenshot shows the Mpower Business Champions web tool interface. At the top left is the logo with a green 'M' and 'POWER' text, and a blue box with 'BUSINESS CHAMPIONS' text. To the right, it says 'ENERGY STEWARDS®' and 'Mpower Business Champions' with a date 'Nov. 6, 2013'. Below this, it lists sponsors: 'SPONSORED BY: EPA, MADISON GAS AND ELECTRIC AND CITY OF MADISON'. A navigation bar includes links like 'EMAIL OUR ENERGY ADVISOR', 'MANAGE CLIENTS', 'HELP', 'MY ACCOUNT', and 'SIGN OUT'. A sidebar on the left has a 'BUILDING GROUP' menu with options like 'home', 'buildings', 'our team', 'electricity use', 'gas use', 'energy production', 'water use', 'ENERGY STAR®', 'update meter data', and 'action tables'. Below this are 'FORUMS' and 'RESOURCES' sections. The main content area is titled 'PROJECT GROUP DASHBOARD' and includes a mission statement: 'Mpowering Madison & its partners helping local businesses adopt "green" practices to improve energy efficiency and reduce waste in their facilities, resulting in lower financial and environmental costs.' It features a table titled 'Most Improved Energy Use' with columns for Building, Change from Baseline: Energy Use, Actions Taken/% of Total, Current ENERGY STAR® Rating, \$/SqFt, and Last Complete Month. The table lists five buildings: GHC - John Q. Hammonds, GHC - Hatchery Hill, Uniek, Inc., Madison Metro. Sewerage District, and Saris Cycling Group. At the bottom, there's a 'Project Results to Date' section showing statistics like 'Total Active Buildings: 25', 'Tracking Transportation: 7', 'Tracking Water Use: 7', 'Tracking On-Site Production: 0', and 'Actions Taken/% of Total: 358 / 17%'. It also shows 'Change from Baseline Year: Energy Use -4.41%' and 'Energy Cost (12 months): \$4,033,352'. The footer contains links for 'ABOUT THIS PROJECT', 'CONTACT US', and 'CONNECT: OUR BLOG' with social media icons, and a copyright notice for '© 2013 Rapid Improvement Associates, LLC'.

MPOWER BUSINESS CHAMPIONS

ENERGY STEWARDS®
Mpower Business Champions
SPONSORED BY: EPA, MADISON GAS AND ELECTRIC AND CITY OF MADISON

Nov. 6, 2013

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Launched: March 2009

BUILDING GROUP

- home
- buildings
- our team
- electricity use
- gas use
- energy production
- water use
- ENERGY STAR®
- update meter data
- action tables

FORUMS

RESOURCES

PROJECT GROUP DASHBOARD

Mpowering Madison & its partners helping local businesses adopt "green" practices to improve energy efficiency and reduce waste in their facilities, resulting in lower financial and environmental costs.

Most Improved Energy Use

Building	Change from Baseline: Energy Use	Actions Taken/ % of Total	Current ENERGY STAR® Rating	\$/SqFt	Last Complete Month
GHC - John Q. Hammonds	-28.9%	62/83%	42	\$2.42	5/2013
GHC - Hatchery Hill	-21.3%	26/35%	23	\$3.47	5/2013
Uniek, Inc.	-16.9%	37/62%	NA	\$3.62	9/2013
Madison Metro. Sewerage District	-14.6%	2/2%	1	\$35.81	1/2013
Saris Cycling Group	-9.4%	0/0%	NA	\$1.28	1/2013

[View All Buildings](#)

Project Results to Date

Total Active Buildings: **25**
Tracking Transportation: **7**
Tracking Water Use: **7**
Tracking On-Site Production: **0**
Actions Taken/% of Total: **358 / 17%**

Change from Baseline Year: **Energy Use -4.41%**
Energy Cost (12 months): **\$4,033,352**

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- ✓ Targets energy, water use in existing buildings
- ✓ Integrated with ENERGY STAR® Portfolio Manager
- ✓ Building energy use a simple doorway to many sustainable actions

Integrated For Use by Range of Project Partners

- City Government
- Health Care Systems
- School Districts
- Non-Profits
- Faith Communities
- Architectural Firms

. . . Today totaling 400+ properties nationally



Uniek, Inc.

232,600 sq ft
805 Uniek Dr.
Waunakee, WI 53597
Project Contact: [Brian Duzan](#)

Our Scorecard

Actions Taken/% of Total: 37/62%
Current ENERGY STAR® Rating: NA
Energy Cost (12 months): \$842,571 per sq ft: \$3.62
Metric Tons CO₂ (12 months): 7327
Water Use (annual gal/sq ft): 16.7
Last Complete Month: September 2013

Recent Activity

06/20/2012 **Actions Common to All**
06/20/2012 **Actions Common to All**
04/25/2012 **Milestones for All**
04/24/2012 **Actions Common to All**
04/24/2012 **Actions Common to All**

[Project Notes](#)
[Track Our Transportation](#)
[Take Action](#)

Energy Summary

Change from Baseline Year: Energy Use -16.9% Tons CO₂ -11.5%

Baseline Year ending Dec 2011

Click "View Details" on your building's graph to view a detailed version.
Rollover a specific point on the graph to view the exact month and value details.
Note: CO₂ graphs are CO₂ pounds/SqFt.

☒ kWh/SqFt ☐ CO₂/SqFt ☐ \$/SqFt

☒ Therms/SqFt ☐ CO₂/SqFt ☐ \$/SqFt

Building Electricity Energy Use



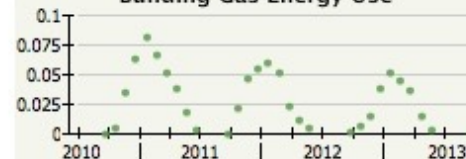
232600 sq ft

Total \$/SqFt: \$3.62

[VIEW DETAILS](#)

ENERGY STAR® Award/Year: NA / NA

Building Gas Energy Use



232600 sq ft

Total \$/SqFt: \$3.62

[VIEW DETAILS](#)

ENERGY STAR® Award/Year: NA / NA

How Will We Know Improvement?



BUSINESS CHAMPIONS

ENERGY STEWARDS®

Mpower Business ChaMpions

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[ENERGY STAR®](#)

[update meter data](#)

[action tables](#)

FORUMS

RESOURCES

Notes

On electric, gas, water or similar graphs, each dot represents property energy use or cost for a calendar month.

Note seasonal variation over the years. Mouseover a dot to see the month, totals.

The ENERGY STAR and Energy Intensity graphs are "weather normalized." And each dot is a rolling 12-month calculation. This allows you to easily see the real energy use trend in your property over time, factoring out, for example the effect of a warmer winter one year or hotter summer another.

What trends or "story" do you see in the data? Does it

UNIEK, INC. MONTHLY ENERGY USE

[+Edit Your Action Table](#)

[+Mark Special Event](#)

Monthly Energy Use Details

Review *Notes*, left. Use *Edit Action Table* or *Mark Special Event*, above, with dates to note key events on graphs. Download data to spreadsheet for further analysis, bottom.

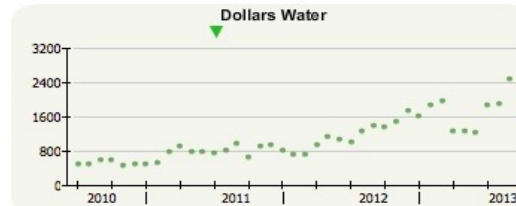
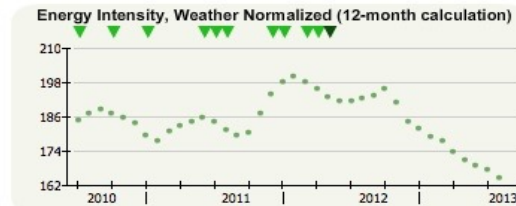
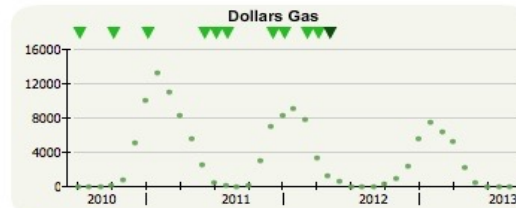
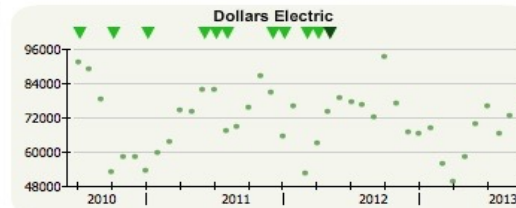
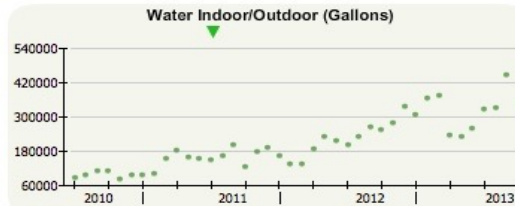
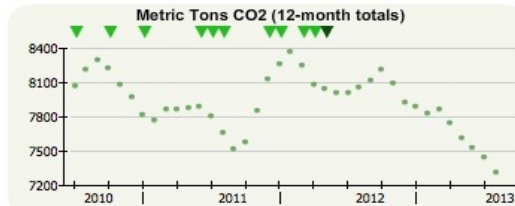
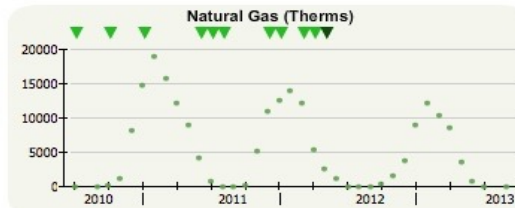
▼ 1-4 Actions Taken in Month ▼ 5-9 Actions Taken in Month ▼ 10 or more Actions Taken in Month ▼ Special Events

14 Actions for April 2012

Completed prior to ChaMption - 20.05 Install programmable thermostats that can be secured.

Maintain (already doing) - 10.11 Use fans to circulate warmed/cooled air.

Maintain (already doing) - 10.14 Set office thermostats when occupied at 68° in winter and 78° in summer.



Example: Uniek, Inc.

- ✓ Started with Mpower 2011
- ✓ Reduced weather-normalized energy use intensity, CO2.
- ✓ Reduced energy use by -17% (most recent 12 months vs. 2011)



BUSINESS CHAMPIONS

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FORUMS

RESOURCES

MONTHLY ENERGY STAR[®] RATINGS (12-MONTH)

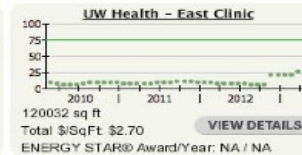
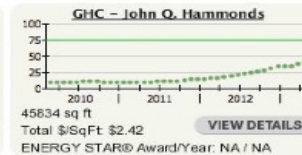
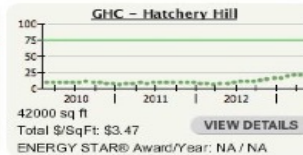
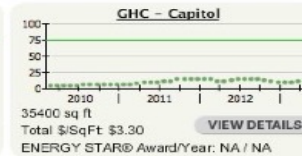
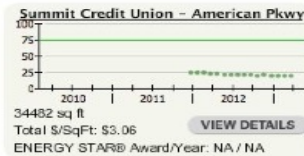
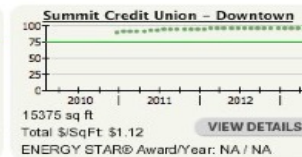
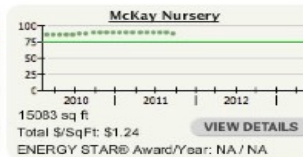
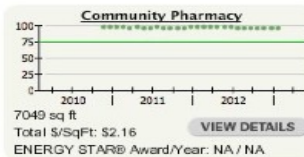
The ENERGY STAR[®] rated property types in our portfolio. TRENDING UP? Indicates improved energy use performance.

(February 2010 - May 2013)

Click "View Details" on your building's graph to view a detailed version.
Rollover a specific point on the graph to view the exact month and value details.

☒ ENERGY STAR[®] Ratings ☐ Energy Intensity (weather normalized)

Subset [View All](#) Building Type [View All](#)



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Example: Current Mpower participants

- ✓ ENERGY STAR scores, on 0-100 scale
- ✓ Up = improvement
- ✓ All weather normalized
- ✓ Each can compare energy use performance to own history, each other, similar buildings nationally

Launched: January 2011

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[ENERGY STAR®](#)
[update meter data](#)
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FORUMS

RESOURCES

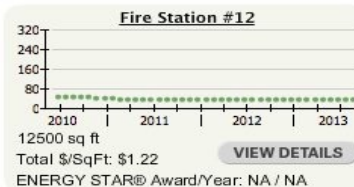
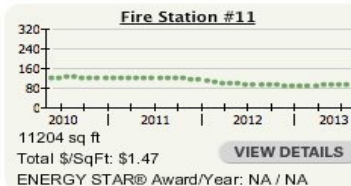
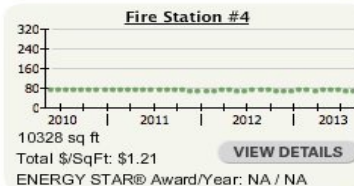
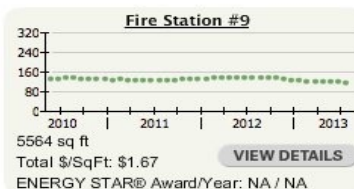
MONTHLY ENERGY INTENSITY, WEATHER NORMALIZED (12-MONTH)

All properties in our portfolio. TRENDING DOWN? Indicates improved energy use performance.
(May 2010 - August 2013)

Click "View Details" on your building's graph to view a detailed version.
Rollover a specific point on the graph to view the exact month and value details.

☐ ENERGY STAR® Ratings ☒ Energy Intensity (weather normalized)

Subset Fire



Example: City of Madison Fire Stations

- ✓ Energy Use Intensity, all on same scale.
- ✓ Down = improvement
- ✓ 12 stations, \$198,000 in annual energy costs
- ✓ -8.9% most recent 12 months vs. 2011



ENERGY STEWARDS®

Energy Stewards InitiativeSPONSORED BY:
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[HOME](#)[MANAGE CLIENTS](#)[EMAIL OUR ENERGY ADVISOR](#)[HELP](#)[MY ACCOUNT](#)[SIGN OUT](#)**BUILDING GROUP**[home](#)[buildings](#)[our team](#)[electricity use](#)[gas use](#)[energy production](#)[water use](#)[ENERGY STAR®](#)[update meter data](#)[action tables](#)**FORUMS****RESOURCES****BUILDINGS IN OUR GROUP****Summary Results to Date**Total Active Buildings: **21**Tracking Water Use: **19**Tracking On-Site Production: **2**Actions Taken/% of Total: **390 / 22%**Change from Baseline Year: **Energy Use 3.10%**Energy Cost (12 months): **\$257,797**Subset Building Type Baseline Year ending

Click a heading to sort the list of buildings.

Building	Change from Baseline: Energy Use	Actions Taken / % of Total	Current ENERGY STAR® Rating	\$/SqFt	Last Complete Month
Bethel - University City, MO	-23.2%	4/5%	45	\$0.76	7/2013
Good Shepherd - Decorah, IA	-9.7%	27/32%	89	\$0.44	8/2013
Camp Kinard/Dining Hall - SC	-8.2%	20/24%	NA	\$1.97	8/2013
St. Andrew - Racine, WI	-8.1%	56/67%	92	\$0.68	8/2013
Redeemer - Columbus, OH	-3.5%	9/11%	56	\$0.91	6/2013
First Lutheran - Decorah, IA	-2.1%	47/56%	96	\$0.47	7/2013
University - East Lansing, MI	0.6%	78/93%	75	\$0.97	8/2013
Emmaus Evangelical - Racine, WI	2.3%	13/15%	65	\$0.78	6/2012
Orfordville Luth - Orfordville, WI	3.6%	17/20%	95	\$0.32	3/2012
St. Stephen's - Monona, WI	5.3%	46/55%	75	\$1.40	3/2012
Bethesda Lutheran - Morehead, MN	5.7%	0/0%	28	\$1.88	7/2013
Mount Olive - Rochester, MN	6.5%	0/0%	81	\$0.89	6/2013
Wooden Cross - Woodinville, WA	6.6%	0/0%	60	\$0.69	11/2012
Our Saviour's-Arlington Heights, IL	9.2%	42/50%	47	\$0.66	8/2013
Peace Lutheran - Fargo, ND	12.1%	25/30%	45	\$1.06	7/2013
Spirit of Joy - Orlando, FL	12.9%	0/0%	51	\$0.59	4/2013
St. Matthew's - Wauwatosa, WI	14.5%	0/0%	59	\$0.91	8/2013

Compare to Self, Peers, Nationally

Customized Action Table

Heart, integrated with program

Improve Energy Efficiency	
Category	Action
Actions Common to All	20.01 Ensure proper weatherization of building (i.e. doors and windows have tight seals; Insulate and/or coat windows to reduce heat gain/loss; outside walls are adequately insulated; caulk and insulate around electrical outlets, where service lines enter building, between wood and masonry, etc.)
Actions Common to All	20.02 Centralize refrigerators by eliminating surplus and multiple small units.
Actions Common to All	20.03 For south facing windows consider awnings, levelors or meco shades (lets light not UV in) to reduce heat capture in summer.
Actions Common to All	20.04 Install aluminum reflectors in fluoresent fixtures.
Actions Common to All	20.05 Install programmable thermostats that can be secured.
Actions Common to All	20.06 Insulate hot water heater.
Actions Common to All	20.07 Plant trees south of the building to increase shade, on west as a wind buffer or anywhere to offset emissions.
Actions Common to All	20.08 Replace incandescent exit signs with Energy Star LED fixtures.
Actions Common to All	20.09 Replace overhead fluoresent fixtures with T-8 or T-5 lamps.
Actions Common to All	20.10 Replace screw-in incandescent bulbs with energy star compact fluoresent bulbs.
Actions Common to All	20.11 Ensure timers or sensors are installed where appropriate (i.e. outside lighting, restrooms and other spaces intermitantly used).
Actions Common to All	20.12 Research and Identify efficient operations/process equipment.
Actions Common to All	20.13 Upgrade electronics and appliances to Energy Star efficient models (don't forget high efficiency vending machines).
Actions Common to All	Other - Completed other energy efficiency measure (please describe in forum).

This table allows you to record the actions you have taken to improve use of energy.

Use the "Jump to action topic..." drop down menu to navigate quickly to an Action Topic.

Jump to action topic...
 Jump to action topic...
 ES Project Management
 Reduce Use - "Free" Savings
 Improve Energy Efficiency
 Conserve Water (and Energy!)
 Buy Renewable Energy
 Install Renewable Energy
 Reduce Transportation
 Increase Employee Education/Awareness

- **Download** a copy of current filled in Action Table. Useful for reports.
- **Download** a blank Action Table. Useful for team discussion and taking notes.
- **Please send us ideas to improve the way our Action Table works.**

Update, Share Action Table

Action	Action Code	Action Date	
01 Welcome review 3 short Getting Started videos here .	D	04/25/2012	Add Forum Post
<input type="checkbox"/> Milestones for All 02 Welcome Meeting on site with Mpower Team.			
<input type="checkbox"/> Milestones for All 03 Energy baseline data submitted	D	08/11/2011	Add Forum Post
<input type="checkbox"/> Milestones for All 04 Water baseline data submitted	D	08/11/2011	Add Forum Post
<input type="checkbox"/> Milestones for All 05 Energy assessment completed by your utility and/or Focus On Energy	D	05/09/2011	Add Forum Post
<input type="checkbox"/> Milestones for All 06 Energy assessment completed by Campos Comprehensive Engineering	D	06/16/2011	Add Forum Post
<input type="checkbox"/> Milestones for All 07 Meet with Dane County Clean Air Coalition	D	06/07/2011	Add Forum Post

Check, Update Energy Use . . .

Use Meters and Meter Data from this list

Building Name	Building Square Foot Size	Meter Name	Meter Type	Actions	
Cafe Costa Rica	N/A	G229217	Natural Gas	Update Meter	Update Data
--	--	E306932	Electricity Grid Purchase	Update Meter	Update Data
Community Pharmacy	7049	E284434	Electricity Grid Purchase	Update Meter	Update Data
--	--	G209506	Natural Gas	Update Meter	Update Data
--	--	E281887	Electricity Grid Purchase	Update Meter	Update Data
Filament Games	3760	E277357	Electricity Grid Purchase	Update Meter	Update Data
--	--	G179977	Natural Gas	Update Meter	Update Data
--	--	E278482	Electricity Grid Purchase	Update Meter	Update Data
--	--	commute	Transportation Commute	Update Meter	Update Data
--	--	work	Transportation Work	Update Meter	Update Data
GHC - Capitol	35400	CC electric	Electricity Grid Purchase	Update Meter	Update Data
--	--	CC gas	Natural Gas	Update Meter	Update Data
--	--	CC water	Water Indoor/Outdoor	Update Meter	Update Data
			Transportation	Update	Update

- In Energy Stewards or from Portfolio Manager®
- ...From utility accounts
- ...Month-by-month or via upload of spreadsheets.
- ...Testing “automatic” updates via WegoWise
- All entries sync between Portfolio Manager & ES

Invite Key Team Members

OUR TEAM

Invite Someone to Join your Team

Ask others to join your effort. Include a note about project background and why you want them on the team.

Full Name	Username	Currently Signed In
Michael Campos	michael.campos@covance.com1	n/a
Warren Gaskill	wgaskill@tds.net	

You have been invited by Warren Gaskill of Covance Laboratories, Inc. to join Mpower Business ChaMpions.

testing 1

Please join the effort to improve our building's energy efficiency. Follow the link below to sign up for an account.
<http://www.energystewards.net/mpower/login/?action=register>



Share Learning/File Reports

ADD NEW POST

Use this page to share information.

Add text, attach a file, link to a website. You can describe your entry using the check boxes, which helps us sort the entries when viewing.

Title:

Message:

Building:

Associated Action Categories:

- ☐ Actions Common to All ☐ Actions Helpful to Renters ☐ Helpful to Larger Energy Users ☐ Helpful to Smaller Energy Users
- ☐ Milestones for All

Attach File: (optional)

no file selected

(Only DOC, DOCX, XLS, XLSX, PPT, PPTX, PDF, ZIP, JPG, PNG, and GIF file types)

☐ Place in Forum Photo Gallery:



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BUILDING GROUP

FORUMS

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- [add new post](#)
- [photo gallery](#)
- [project gallery](#)
- [for project staff](#)

RESOURCES

Our Group Action
Table Categories

In All Building Areas

Engage Others

Unique to Certain
Areas

Milestone

Effective Practice

FORUMS

Post a report, ask a question, look for ideas and answers.

Search Posts:

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Have a Question? Ask Us:

[Submit](#)

Efficient Buildings Forum

Our Group // Most Recent Posts

- Notes from the 24 Sept. meeting...
- In Progress (Partially Done) - 4 Complete formal building energy assessment with energy advisor from your local utility or state program (if available) to help identify your actions and incentive potential. Option: Complete building assessment with your G
- Maintain (already doing) - 40.7 If you don't have it already, build a vestibule (or double entrance doors) at main entrance better control indoor air in all seasons.
- Done - 41.3 Install high-efficiency hot water source
- Done - 40.8 Update old outdoor central air conditioning unit with current, high energy efficient unit.

[View All](#)

All Groups // Most Recent Posts

Our Group // Most Popular Posts

- Smart thermostats
- Recommended Light Levels in Church Buildings
- Bulletin announcement for your congregation
- Maintain (already doing) - 12 Related Programs ~ Implement a recycling program for appropriate items for member convenience and as a way to raise funds for your conservation program.
- Warren, First English was just awarded the E-Star certifiact for the year ending June 2011, how do we reflect this on the site?

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Energy Stewards Platform

Useful web tool for certain programs

- ✓ Engage a community of users . . . step up an energy management program for a targeted portfolio.
- ✓ Partners bring other key elements
 - Commitment by leadership & participant
 - Growing a peer network – an affinity of users
 - Application to join ... stay engaged ... no “deadwood”
 - Specified period to take action (1 year)
 - Webinars/ Lunch & Learn/ File Reports
 - Link to other support resources (utility, federal & state programs, program allies)

Make simple to try something. . . Make important, urgent!

Contact

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