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Maximizing the Efficiency of Your Facility Management Team

Saving Energy and Money For Wisconsin




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AGENDA

- Importance of Facility Management
 - Energy Planning Process
 - Facilities Management Planning
 - Success Story
- Resources and Professional Development
- Technical Assistance

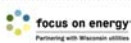
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Importance of Facility Management

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Why Energy Management is Important

- Provides a systematic approach for assessing energy costs
- Ensures projects or actions are meeting the project payback criteria
- Saves 5-10% on your annual energy bill by starting an energy awareness program
- Achieves 20-30% in savings by identifying deficiencies in equipment

Getting Started

- Assemble a motivated, cross-functional team of employees:
 - Budget or financial manager
 - Facility or maintenance manager
 - Upper-level manager (administrator, principal, etc.)
 - Interested building occupants (staff members, custodians, etc.)
 - Utility representative
 - Energy Advisor or another functional expert from outside the organization




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Energy Planning



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WHEN I WAS YOUNG, I WAS SCARED OF THE DARK...
NOW WHEN I SEE MY **ELECTRIC BILL** I AM SCARED OF THE LIGHT.

<https://s-media-cache-ak0.pinimg.com/564x/8c/d1/1e/8c01e40189d89239a1819a247a202.jpg>

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#1 - Establish Your Energy Use Baselines

- Build a utility history or baseline for each building
 - Gather utility bills for 1-2 years of usage
 - Acquire information from your utility or energy supplier
- Information from utility bills should include:
 - Electric use in kWh
 - Demand in kW
 - Natural gas in Therms
 - Energy costs
 - Billing cycle dates
 - Water usage (if applicable)
- Submetering

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Electricity

- Know your electric rate
 - When is your demand window?
- Review history
 - What is your baseline? When are your peaks?

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Natural Gas

- Be aware of your building’s natural gas usage
- Do you use a third party marketer? Should you?
 - Discuss with a supplier

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#2 - Set Energy Saving Goals

- Successful energy planning requires a focused, coordinated, and empowered effort
- Written energy goals should be **SMART**:
 - Specific
 - Measurable
 - Attainable
 - Relevant
 - Time Based
- Goals should be clearly stated, with an essential element being the timeframe for execution

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Example

- Goals
 - Reduce electrical energy use by 5%
 - Maintain occupant comfort
 - Document achievements
- What is the energy use of other school districts?
 - Per square feet
 - Pool

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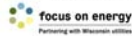
Board Mandated Energy Policies

Board Policy Manual

733-Rule

A. Heating and Air Conditioning

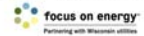
1. Classroom thermostats will be set at 68 degrees for heating and 76 degrees for cooling during the occupied times. For unoccupied times, heating will be set at 55 degrees and cooling will not occur.
2. Auditorium thermostats will be set at 68 degrees for heating and 74 degrees for cooling during the occupied times. For unoccupied times, heating will be set at 55 degrees and cooling will not occur.
3. Hallways, vestibules, stairwells, mechanical/electrical rooms, elevator equipment rooms, unoccupied storage areas and similar spaces will be adjusted to 55 degrees during the heating season.
4. Locker and shower rooms will be maintained at 70 degrees during the heating season.
5. Gymnasiums, locker rooms, swimming pools, food service occupancies, mechanical/electrical rooms, unoccupied storage spaces, vehicle service and storage buildings, industrial/shop occupancies, utility buildings and similar areas will not be air conditioned.



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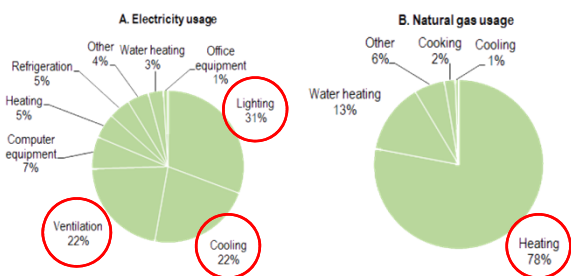
#3 - Complete Equipment Usage Information

- Apply a percentage profile per type of facility to the overall annual usage
- Complete a detailed inventory of equipment within each facility
- Involve your energy team to provide an understanding of how the equipment operates

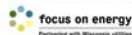


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Energy Using Equipment in Your Building



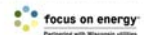
Energy Sources - Data from US Energy Information Administration



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Equipment Inventory


- Equipment List
 - Manufacturer
 - Location - plus image
 - Date installed
 - Model numbers
 - Wear items

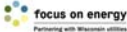


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Keep Up with Your Building

- Document any time you make a change
- Inventory when you upgrade
- Perform a small amount of upkeep tasks each week
- Regular maintenance
 - Filter changes




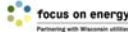


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#4 – Develop Your Energy Plan

- Prioritized energy plan should include:
 - Description of projects
 - ROI if equipment is not end of life
 - Schedule for completion
 - Budget
 - Task assignments
 - Relationships of energy projects each other
 - Potential changes to existing processes or schedules
 - Expected results

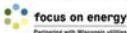




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#5 – Implement Your Energy Plan


- Ensure proper plan execution:
 - Certify your team consists of internal and external professionals to aid in project implementation
 - Confirm technical and financial details to move the project forward
 - Hire an architect or engineer to help design/redesign if needed
 - Weigh challenges and risks that may affect project scope and timeline
 - Address issues upfront to reduce barriers
 - Educate staff

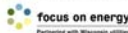


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#6 – Verify the Impact & Communicate Success

- Results of your energy management plan need to be measured to verify goals have been met
- Ongoing practice involving continuous review of utility data to monitor usage variances compared to historical data
- Continue to look for energy saving opportunities and repeat the process as needed

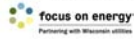




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Reinvest Focus on Energy Dollars

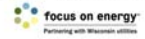
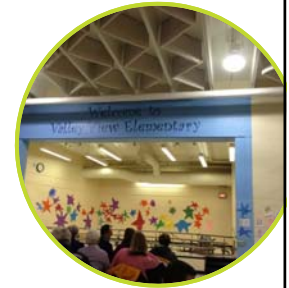
- Use Focus on Energy incentives to reinvest in projects shown to have a ROI within four or five years



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Success Story: SD of Menomonee Falls

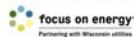
- Problem
 - Valley View Elementary School's lighting was in need of an upgrade



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Success Story: SD of Menomonee Falls

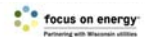
- Approach
 - District decided to install new LED fixtures for the flexibility, ease of use, and energy savings they provided



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Success Story: SD of Menomonee Falls

- Solution
 - LED fixtures and sensors were installed throughout the school
 - **Project cost** – \$118,000
 - **kWh saved** – 208,583
 - **Focus on Energy Incentives** – \$17,082
 - **Payback** – 4.40 years



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Resources and Professional Development

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ENERGY STAR

- Federal website:
 - www.energystar.gov
 - ENERGY STAR Portfolio Manager®** allows you to input energy use and building information to compare your results with similar buildings.

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ENERGY STAR – Statement Of Performance

048 No. 2065-0147

STATEMENT OF ENERGY PERFORMANCE

Building ID: 1111085
 Full 12-month Period Ending: January 31, 2013*
 Date SEP becomes available: N/A Date SEP Generated: April 25, 2013

Facility	School	Facility Owner	Primary Contact for this Facility
Year Built: 1997		N/A	N/A
Gross Floor Area (GFA): 205,471			
Energy Performance Rating² (1-100): 85			

Side Energy Use Summary ¹	
Electricity - On-Purchased (kBtu)	8,977,215
Natural Gas (kBtu)	2,887,502
Total Energy (kBtu)	12,288,417

Energy Intensity ²	
Site Intensity ²	52
Source Intensity ²	59

Estimates (based on the energy use)	
Greenhouse Gas Emissions (MTCO ₂ e/year)	1,138

Electricity Distribution Utility	
Wisconsin Electric Power Co. (Wisconsin Energy Corp)	100%

National Median Comparison	
National Median Site EUI ²	77
National Median Source EUI ²	142
% Difference from National Median Source EUI	-32%

Stamp of Certifying Professional

Based on the information contained on the site of my use in this building, I certify that the information contained within this statement is accurate.

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Energy Practices Guide

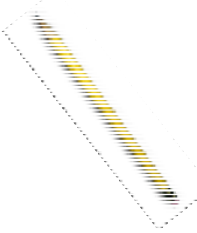
- Outline the basic steps in building an energy management program
- Provide general best practices and recommendations
- Visit focusonenergy.com/guidebooks to download your **FREE** copy today!

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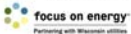

Classes and Trainings

- Building Operator Certification (BOC) Training
- Strategic Energy Management (SEM) Training
- School Building Energy Efficiency Education graduate courses
- Energy-related sessions at professional conferences such as WASBO, WASB, and WASDA

Course dates may be found at:
focusenergy.com/about/events



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Technical Assistance

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Maximize the Focus on the Energy Program

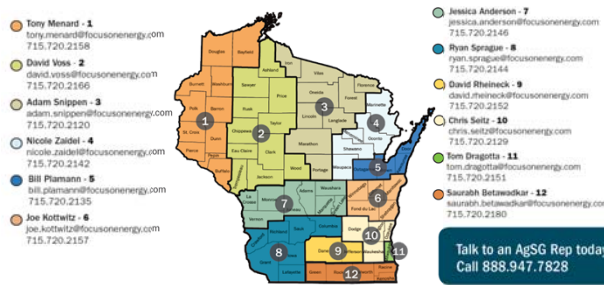
- Start talking with your Energy Advisor while in the planning phase of your project
- Invite your Energy Advisor to upcoming project planning meetings
- Include Focus on Energy language in your RFP to ensure your trade ally contractors use qualifying energy efficient equipment



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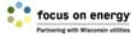


2018 Energy Advisor Territory Map



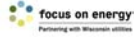
- 1 Tony Menard - 715.720.2158
- 2 David Voss - 715.720.2166
- 3 Adam Snippen - 715.720.2120
- 4 Nicole Zaidel - 715.720.2142
- 5 Bill Plamann - 715.720.2135
- 6 Joe Kottwitz - 715.720.2157
- 7 Jessica Anderson - 715.720.2146
- 8 Ryan Sprague - 715.720.2144
- 9 David Rhebeck - 715.720.2152
- 10 Chris Seitz - 715.720.2129
- 11 Tom Dragotta - 715.720.2151
- 12 Saurabh Betawadkar - 715.720.2180

Talk to an AgSG Rep today!
 Call 888.947.7828



Additional Assistance

- Green & Healthy Schools Wisconsin
- Wisconsin Assoc. of School Board Officials
- KEEP: WI K-12 Energy Education Program



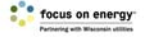
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Questions ?



Focus on Energy's Agriculture, Schools and Government Program

To speak with an AgSG Rep,
call **888.947.7828** or email
AgSGapps@focusonenergy.com



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