





Team Lead/

Nick Datka **Buildings** & District Grant Writer Grounds Sup.



Bill Trewyn District Business Manager



Doug Bailey **EAHS** Science **EAMS** Science Teacher



Teacher



Director of School to

Work Opportunities



Mary Trottier District School Nurse

**Rural Community** 3,281 K-12 Students 37.8% Free/Reduced **Title I School District** 



Multi-Use School Buildings **Regional Red Cross Shelters** Average Building Age: 75 yrs. **Oldest Building Built: 1887** 



### **Team Challenges:**

- Lack of Regional Energy Resources
- Aging, Unhealthy Buildings
- Outdated, Unreliable Building Equipment ٠
- **Failed Operational Referendum** •
- Rising Inflation and Utility Costs
- Municipal Electrical Company •

### **The Energy CLASS Impact**



Energy Data-as-a-Service from CLOCworks, Inc. "Our Knowledge Will Save You Power!" The Elks team and CLOCworks, Inc. partnered for EASD's first benchmarking and utility studies. Ongoing adjustments now produce \$2,500 in savings each month!



# **The Energy CLASS Impact**

An evaluation of the High School air handling system revealed 22 broken dampers stuck in either open or closed positions, creating a 7 to 10-degree temperature variance around the building during winter months. Repairs resulted in better environments for students and staff, as well as energy savings.



# The Energy CLASS Impact

### The Energy

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### Space Heaters

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### Request for He

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opportunities

### **GENERAL GUID**

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### Heating (Equips

1. The standard season. The set Occupied temper

### ELKHORN AREA SCHOOL DISTRICT ENERGY PLAN

### Goals

1) To continue our District's efficient and effective use of energy.

To increase student and staff awareness/knowledge regarding energy usage in our schools. 3) To integrate energy management with energy education.

4) To apply knowledge gained from classroom experience to the day-to-day operation of District facilities.

5) To extend to citizens of the community applicable practices that are developed and maintained within the District

### Objectives:

1) Students and teachers will use ou laboratories' regarding energy use. 2) School building occupants will be strategies that reduce energy use. 3) Staff and students will know how to a

### Rationale

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Understanding the principles of energy components of sustainability. Knowledg learning the concepts or skills outlined the knowledge base and background to non-renewable energy starting in our so

### Why is energy management important

- Energy and resource conservation
- Financial savings/cost
  - Reduced pollution, waste, and CO2 Create an sustainable energy conse
- . Encourage staff and student as they
- Provide leadership through practicing



eports to Principals d energy shutdown

> property two issues. cy. All space heaters. tion Association. No or classroom. Some

### **EASD's First Energy Plan!**

- Conducted grassroots districtwide building audit •
- Gained feedback from staff and administrators •
- Held monthly draft meetings for review/revisions
- Was adopted by School Board on May 13, 2024 •
- **Implementation starting Fall 2024!** ٠

### **Addressing the Sleeping Giants**

The creation of 10-year Planned Maintenance and Capital Improvement Plans is needed next to address inefficiencies at EASD's largest buildings. This will impact the most students, provide the greatest savings, and allow these facilities to remain open for year-round community use.





### **Elkhorn Area High School**

- Built in 1965; Additions in 1999 and 2016
- 1,100 students & faculty
- 351,000 total sq. ft.: Largest building in town!
- Utility Cost per Square Foot: \$1.26
- Countywide Community Disaster Relief Site



1887 Bldg./Jackson Elementary

Attached buildings constructed in 1887 and 1939; Renovated 2003

580 staff & students

113,177 sq. ft.

Cost/SFt: \$1.76



Elkhorn Area Middle School

Built in 2003; Lapsed Energy STAR rating; Only Air Conditioned School

800 staff & students

143,400 sq. ft.;

Cost/SFt: \$1.74

### **Proposed Project Upgrades:**

| Goal      | Metrics                           | Strategy                                    | Action   | Lead(s)        | Timeline                      |
|-----------|-----------------------------------|---|--|----------------|-------------------------------|
| Reduce    | · · · ·                           | Upgrade two of the<br>targeted buildings to | Benchmark buildings<br>using DataWrangler                              | Energy Manager | 5/30/2025                     |
| energy    |                                   | Energy STAR levels                          | program  |                | Funded by EC Phase 2<br>Prize |
| usage in  |                                   |   | Contract full energy<br>assessment of EAHS<br>and EAMS                 |                |                               |
| LEA       |                                   |   |  |                |                               |
| buildings |                                   |   | Create new annual<br>equipment<br>maintenance plan                     |                |                               |
| by 20%    |                                   |   |  |                |                               |
|           | Natural gas use<br>(Therms/ year) |   | Implement new EASD<br>Energy Plan<br>districtwide. Revise as<br>needed |                |                               |

| Metrics    | Strategy   | Action   | Lead(s)                                | Timeline   |
|------------|--|--|--|--|
|            |  | ldentify and<br>implement upgrades<br>in 10-year Capital<br>Improvement Plan | Energy Manager &<br>Business Manager   | 6/30/2030<br>Funded by existing<br>Operations Budget   |
| (KwH/year) | Restructure after-hour<br>building usage<br>districtwide | Benchmark occupancy<br>usage using event<br>calendars                        | Community<br>Engagement<br>Coordinator | 12/31/2024   |
|            |  | Create new<br>community facility<br>use strategy                             |  |  |
|            |  | Modify EASD Cleaning<br>Plan   | Energy Manager                         |  |
|            | operational technology                                   | Source system and<br>vendor to work with<br>existing equipment               | Energy Manager                         | 6/30/2025<br>Funded with remaining<br>EC Phase 1 prize |

### **The Bottom Line**

# focus on energy®

Partnering with Wisconsin utilities

The EASD 2024-25 annual budget for utilities has already been reduced to reflect a minimum forecast of \$46,900 in energy savings next school year! This is based on continued benchmarking efforts and Wisconsin non-profit partner Focus on Energy support to review equipment operation.

### **The Bottom Line**

An extensive software system upgrade at Middle School will bring EASD into the next generation of efficiency operations.

| ERGY STAR <sup>®</sup> En | Elkhorn Middle Sc                    | October 31, 2023                            |
|---------------------------|--------------------------------------|---|
| 22                        | For Year Ending<br>Property Address  | 627 E. Court St.<br>Elkhorn, Wisconsin 5312 |
| 33                        | Primary Function                     | K-12 School                                 |
| out of 100                | Gross Floor Area (ft*)<br>Year built | 144,000<br>2003                             |
| -                         | Energy Use per sq. ft.               | 90.1 KBtu                                   |
|                           |                                      |   |
|                           |                                      | 1100  |

Flexible monitoring and adjustment of temperature controls will boost community usage and allow for more consistent learning environment.

Priority to also upgrade equipment and return its Energy STAR certification within next five years.

# **Moving Forward On Our Own**

- Frequent communication with EASD School Board & Administrators
- Community & Student stakeholder engagement
- Ongoing benchmarking
- Find data driven solutions
- Capitalize on non-profit support and grant funding

