

Understanding Energy Audits

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Focus on Energy

Program **Mission**

Promote energy efficiency in Wisconsin
by supporting energy efficiency projects
that....

otherwise would not be completed

This is YOUR program

- Funding comes from your utility payments
 - Average is 1.2% of rates

Why it Works

Why It Works

Rate payer can choose to pay either..

- \$2500+ per kW for new power plants
- \$500 to “free up” an existing kW through improved efficiency

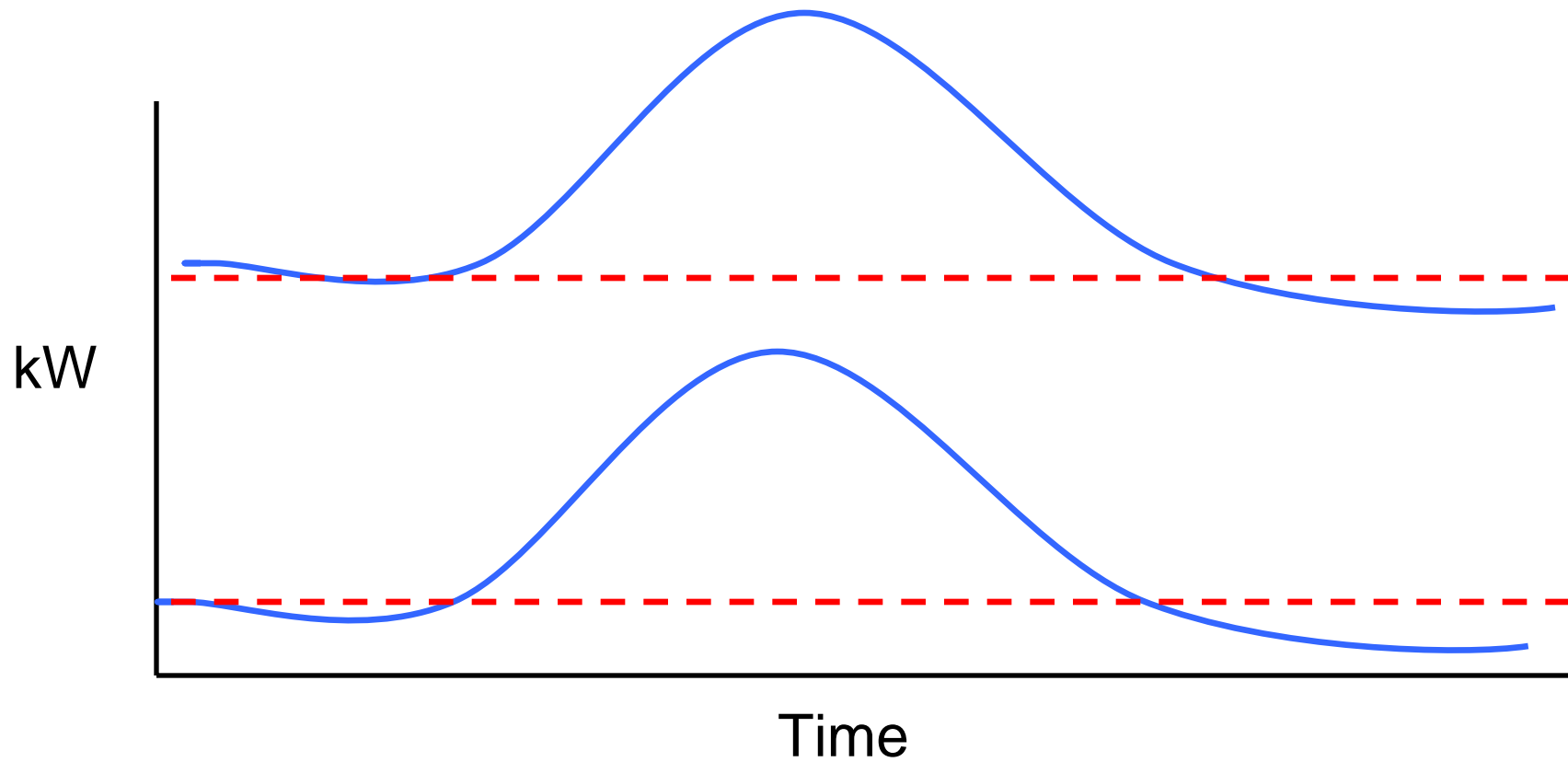
Win-Win-Win

- **Win** for ratepayers: keeps rates as low as possible
- **Win** for Wisconsin economy: keeps dollars in the state
- **Win** for Wisconsin businesses: Increases margins and infrastructure

Energy Audits

- Understanding your potential
 - What is your total bill?
 - Apply an assumed savings percentage
 - What can you do with this?
 - Can I afford to hire an auditor?
- Begin an ongoing process!

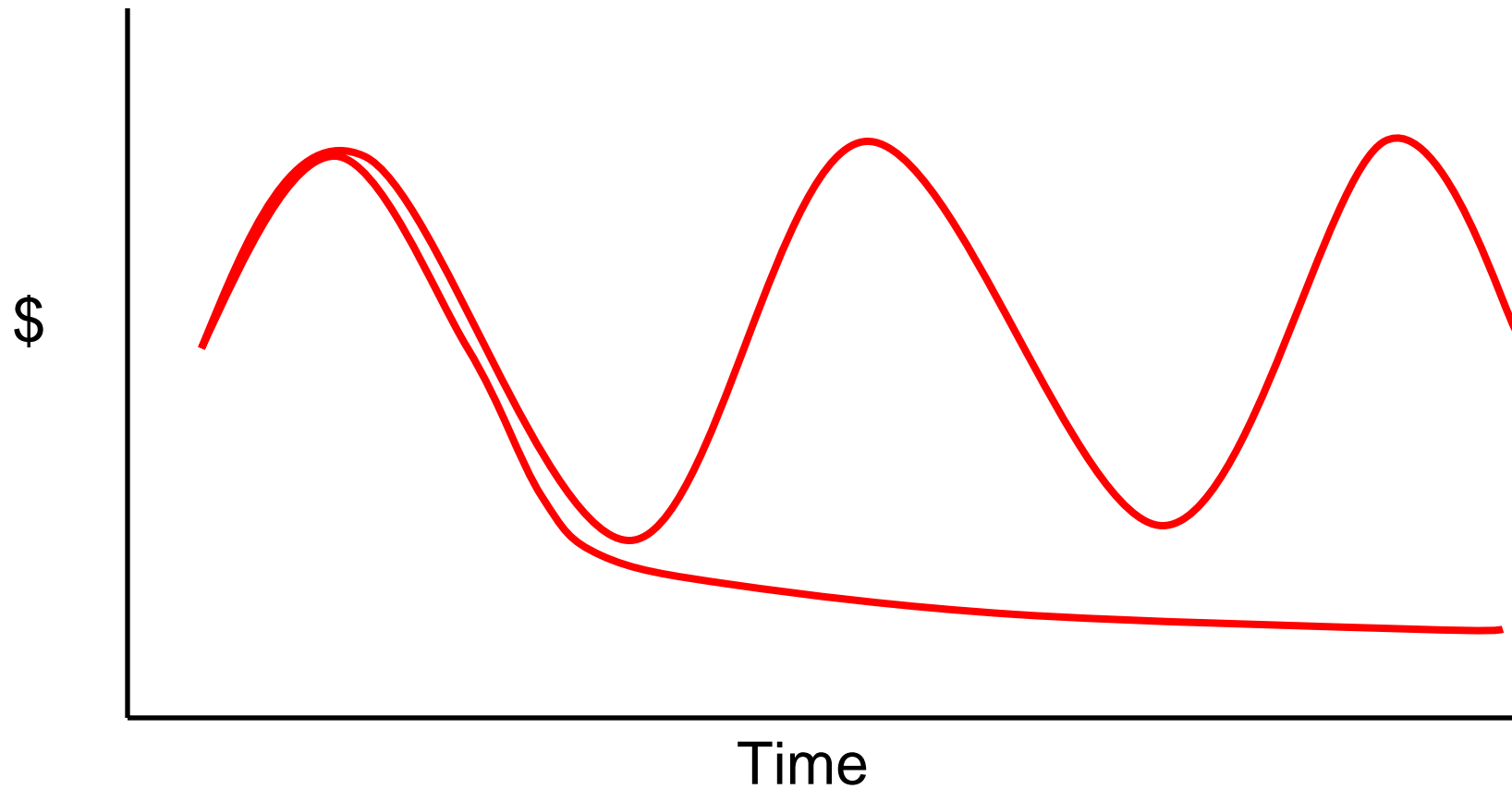
Education/Information



Energy Audits

- What is the purpose?
 - Educate Business Owner?
 - Reduce Operating Costs?
 - Increase “Green-ness” of Company?
 - Prepare for Carbon Economy?
 - To begin on ongoing process!

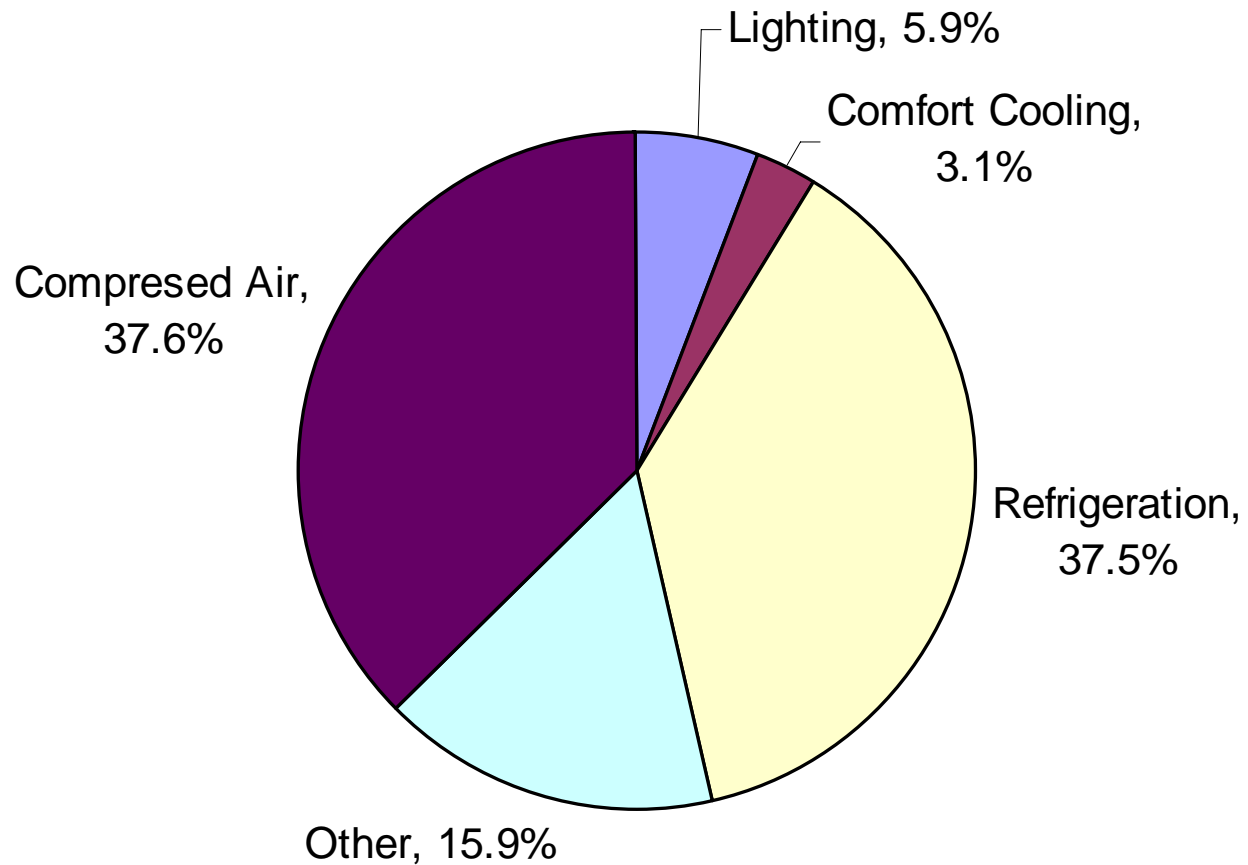
Energy Audits



Education/Information

- Educate Business Owner
 - Quantify Energy Profile
 - KPI

Education/Information



Education/Information

- Key Performance Indicator
 - Energy's fraction of unit production cost
 - Used to set goals or track performance
 - BTUs/Lb
 - kWh/unit
 - Without KPI, hard to track energy use due to variations in production

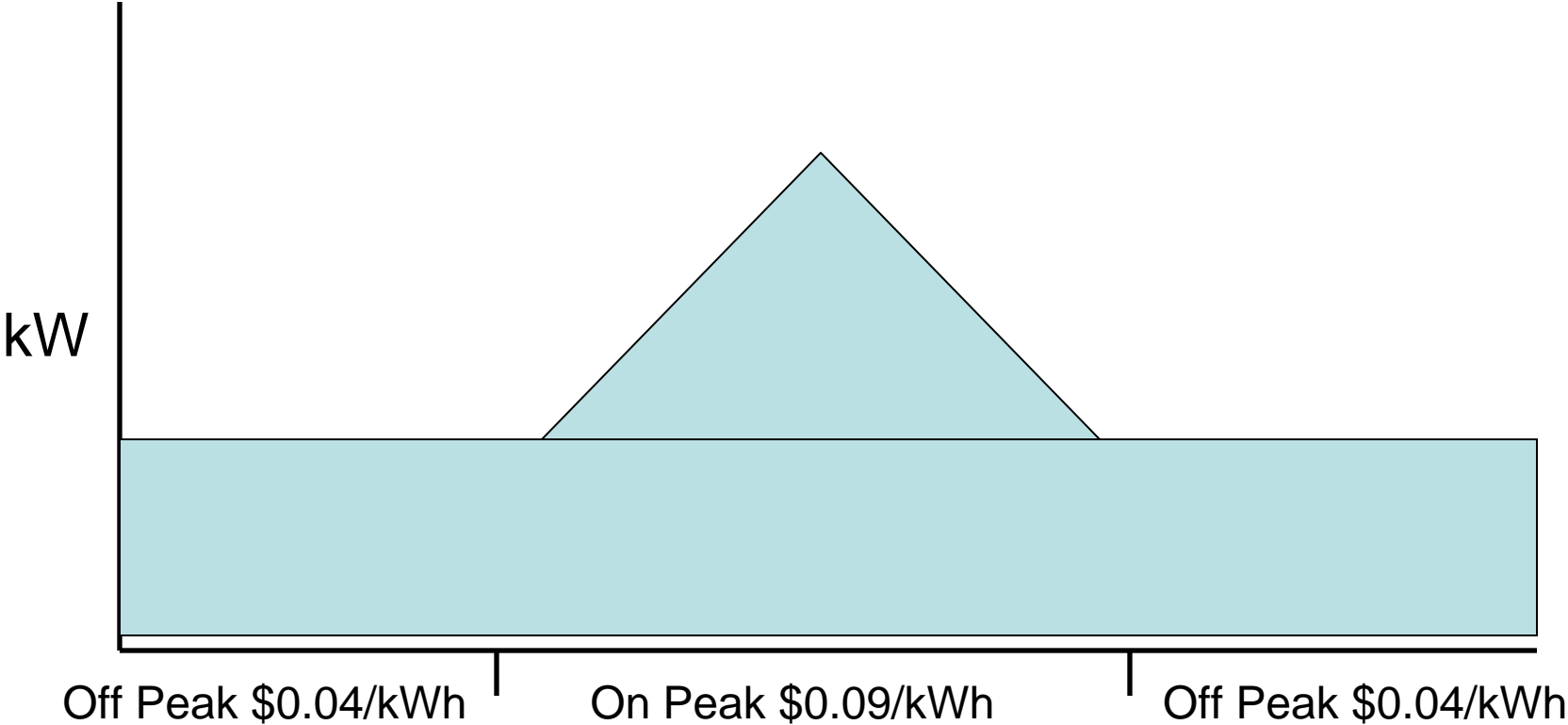
Energy Audits

- What is the purpose?
 - Educate Business Owner?
 - **Reduce Operating Costs?**
 - Increase “Green-ness” of Company?
 - Prepare for Carbon Economy?

Reducing Operating Costs

- Don't necessarily have to save energy to save money on utilities
 - Time of Use Optimization
 - Peak Shaving
 - Interruptible Opportunities
 - Contact your utility

Reducing Operating Costs



Energy Audits

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Energy Audits

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Energy Audits

- Prepare for Carbon Economy
 - Lots of unknowns
 - Coming soon
 - Strict protocols

Energy Audits

- Define criteria that will be used to evaluate the results
 - Payback criteria?
 - Less than 1.5 yr for sure
 - 1.5-2.5 years possibly with incentive
 - More emphasis on a specific system (failing)?
 - Budget criteria?
 - Cash flow?

Getting The Most From an Energy Audit

- Do I even need my existing equipment?
- Is my existing equipment working properly?
- Is this the most efficient model/design for a certain piece of equipment?

Lighting

- Opportunities To Eliminate Lamps
- Task lighting
- Optimize light output levels
- Change all fixtures to fluorescent

Compressed Air

- Eliminate Leaks
- Assess True End-Use Needs
- Verify Controls Functioning Properly
- Install more efficient compressor

Steam Systems

- Find/Repair Steam Traps
- Tune-up your boiler
- Heat recovery opportunities
- Install more efficient Boiler

Pumps and Fans

- Look for good opportunities to reduce speed of pumps or fans
- For varying demands consider VFD
- For steady demands consider trimming impellers

Ventilation

- Check building balance
- Consider filtration
- Assess need duration
- Install another exhaust fan

Process Improvements

- Identify where energy is used in process utilization effectiveness
 - Heat
 - Compressed Air
 - Cooling
 - Electricity
 - Steam

What Should I Expect?

- Quantify Energy Savings
- Quantify Cost Savings
- Estimate Project Cost
- Estimate Simple Payback

After the Audit

- Divide Identified Projects
 - For Sure
 - Maybe
 - No Way
- Contact Vendor(s)
- Contact Focus on Energy
- Utilize Focus feasibility study incentives

How Does Focus Work?

- Incentives
 - Prescriptive
 - Custom
 - Feasibility study incentives
- Technical Support
 - Energy Advisors
 - PEM
 - Self Audits
- Education/Training

Remember!

Make Energy Management on
Ongoing Process!!

**We can help you
be a part of the solution.
For your company and your community**

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