



POLLUTION PREVENTION SERVICES

**Working together to achieve
economic and environmental results**

www.iowap2services.com

Pollution Prevention Services

- Statewide technical assistance program
- Pollution Prevention = Source Reduction
- What *is* “Source Reduction”?
 - Reducing waste at the *source*, instead of at the end-of-the-pipe or at the stack.
- EPA-sponsored program



Pollution Prevention Services

- Confidential
 - Protected by Iowa Code 455B.484A
- Non-regulatory
- Clients
 - Large Business & Industry
 - Institutions
 - Government Agencies



Pollution Prevention Services

- P2 Assessments
 - Opportunity Assessments – high level operational overview
 - Focused Assessments – deeper analysis into one system or operation
 - Thermographic Assessments
- Pollution Prevention Intern Program
 - Engineering interns matched with host companies
 - P2-related focus projects
 - Comprehensive engineering analysis with recommendations and implementation
 - Over \$109 million saved since 2001



Pollution Prevention Services



- Environmental Management Systems (EMS) assistance
 - Onsite / remote support
- Workshops and Training
 - Compliance assistance
 - P2 / sustainability topics
 - EMS support
- P2 Technical Support
 - P2 Resource Library
 - [P2 Infohouse](#)
 - Equipment availability
- \$109 million saved since 2001

Energy Efficiency Challenges

- Lack of data
- Site-specific considerations
- Time / staff resources available
- Cost of energy
- Various economic barriers
- Technology availability

Energy Efficiency Support

Pollution Prevention Internships

- In-depth analysis
- Long-term data collection
- Site-specific solutions
- Economically feasible recommendations
- Implementation

Equipment Availability and Support

- Deposit system
- Enhanced data collection
- Remote technical support
- Data analysis assistance and support

Common Energy Opportunities

- Boilers
 - Economizers
 - Increasing condensate return
 - Steam trap PM
- Compressors
 - Demand-side storage capacity
 - Inappropriate air use
 - Inefficient nozzles / fittings

Common Energy Opportunities

- Lighting
 - Overlit spaces
 - Poorly positioned fixtures
 - Effective controls
- Heat Recovery
 - Exhaust gases or vapors
 - Hot water heat recovery
 - Process heating surfaces (ovens, furnaces)

Energy Case Summary Profiles



P2 Profile:

Company: JBS Swift Pork Ottumwa (2019)

Ottumwa, IA

Project focus:

- Compressed air system analysis
- Included leak detection, end use applications, and generation opps

Identified opportunities:

- Rerouting inlet air ducts
- Adding storage capacity
- Efficient air nozzles
- Uninstall unnecessary equipment
- Lowering supply pressure



Total Savings:	\$382,964

<i>Implemented:</i>	<i>\$49,386</i>
<i>Recommended:</i>	<i>\$333,578</i>

P2 Profile:

Company: Woodward Resource Center (2017)

Woodward, IA

Project focus:

- Identify opportunities to improve boiler and steam system efficiency to reduce energy costs

Identified opportunities:

- Trap repair and replacement
- Insulation replacement and installation
- PM programs for traps and insulation



Total Savings:	\$1,515,627

<i>Implemented:</i>	<i>\$414,460</i>
<i>Recommended:</i>	<i>\$1,101,167</i>

P2 Profile:

Company: CNH Industrial America (2019)

Burlington, IA

Project focus:

- Improve the operating efficiency of exhaust fans and MAU's
- Prioritize and develop and implementation schedule

Identified opportunities:

- Exhaust fan timers
- HID replacement
- Implementation schedule beyond pilot building



Total Savings:	\$316,750
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<i>Implemented:</i>	<i>\$126,041</i>
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<i>Recommended:</i>	<i>\$190,709</i>
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P2 Profile:

Company: Principal Financial Group (2017)

Des Moines, IA

Project focus:

- Reducing energy consumption on the corporate campus by reviewing internal processes and procedures
- Focus on onsite café, cooling towers

Identified opportunities:

- Café appliances and electronics
 - Walk-in coolers
 - Dishwashers
 - Large-screen TV's
- Ventilation system improvements
 - Exhaust fan controls
- Cooling tower controls



Total Savings:	\$16,385

<i>Implemented:</i>	<i>\$11,385</i>
<i>Recommended:</i>	<i>\$5,000</i>

P2 Profile:

Company: Zoetis (2016)

Charles City, IA

Project focus:

- Evaluating the efficiency of the chilled water system
- Identify opportunities to reduce energy usage

Identified opportunities:

- Optimize chiller configuration
- Optimize pump configuration
- Install VFDs
- Piping, valve and tank insulation
- Optimized Draft Regulators (ODRs)



Total Savings:	\$61,350

<i>Implemented:</i>	<i>\$3,850</i>
<i>Recommended:</i>	<i>\$57,500</i>

P2 Profile:

Company: Shearers Snacks (2014)

Burlington, IA

Project focus:

- Heat recovery opportunities from line ovens
- Reduce natural gas usage and achieve a better plant air balance

Identified opportunities:

- Air-to-water economizers
- Air-to-air heat exchangers for rooftop heaters
- Air-to-air heat exchangers for oven heat
- Assess location of intake air vents



Total Savings:	\$918,254

<i>Implemented:</i>	<i>\$0</i>
<i>Recommended:</i>	<i>\$918,254</i>

Takeaways

- Good site-specific data is critical
- Meaningful, accurate analysis will take time
- Numerous resources to help
- There are ALWAYS projects that can be done
- Look at what others have done – share ideas
- Reach out to tell us what you need

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