WVU POLLUTION PREVENTION NEWSLETTER

JULY 2024

INDUSTRY FOCUS: General Industry

Welcome to the latest edition of the WVU Pollution Prevention Newsletter! In this issue, we are excited to introduce the dedicated members of the WVU Pollution Prevention Team, committed to environmental stewardship. Explore valuable insights as we share industry best practices for enhancing energy efficiency and sustainability that should be relevant to most industries. You will also find P2 tips that can be implemented at home or in the workplace. Lastly, discover the range of services we offer to support Small and Medium-sized Enterprises and businesses throughout West Virginia. Stay informed, inspired, and engaged with our commitment to environmental excellence and community impact.

FEATURED IN THIS EDITION

WHAT IS POLLUTION PREVENTION

Pollution Prevention (P2) is one of the key approaches towards an initiative to improve the energy efficiency and productivity of key industries while prioritizing environmental sustainability. The initiative focuses on reducing or preventing pollution at its source.

The primary objective of our Pollution Prevention program is to provide technical assistance to Small and Medium Enterprises in **key industries** and within **disadvantaged communities** in West Virginia by assisting with identification, development, and implementation of P2 methods. The recommendations provided to the industries are designed to help the business lower operational costs by reducing expenditures, water and energy usage, waste, and disposal costs, while at the same time maintaining and often improving productivity.

Key Industries:

1. Food and Beverage Manufacturing and Processing
2. Chemical Manufacturing, Processing, and Formulation
3. Automotive Manufacturing and Maintenance
4. Aerospace Product and Parts Manufacturing and Maintenance
5. Metal Manufacturing and Fabrication

OUR SERVICES

1. **Pollution Prevention Assessments:** The project team will make a planned visit to your facility to assess and gather data on energy, water, material, and personnel use. Assessment data along with input from the facility managers will be used to develop P2 recommendations. A detailed report based on the findings will be submitted to the facility shortly after the on-site assessment.

2. **Energy Audits/Assessments:** Applying for a USDA-REAP grant and need an assessment? Want to save money? The project team will visit your facility and identify opportunities to improve energy efficiency. A detailed report will be provided to the business, including estimates of implementation costs, energy use savings, energy cost savings, and simple payback period for each identified opportunity.

3. **Training Workshops:** Training workshops will be conducted to help businesses learn P2 Best Practices, tools, techniques, and resources available, and how to modify their process or site to improve energy efficiency, productivity, and environmental sustainability.

4. **Technical Assistance:** The project team can provide on-site or off-site technical assistance on a variety of industrial concerns related to topics including pollution prevention, energy efficiency, sustainability, environmental impact, and process improvement. Contact us for assistance!

5. **USDA-REAP Application Assistance:** Applying for grant funding can be a challenge, especially for the small businesses that do not have an expert at grant-writing on the payroll. Our project team can help you navigate the application process and assist with completing the application for USDA-REAP funding.

P2 INDUSTRY FOCUS

Tips for General Industry

- **Reduce Machine Idling Time:** When equipment idles unnecessarily, money is being spent with no productivity. When possible, the idling of equipment should be avoided. Facilities should shut down equipment, when feasible, to minimize idle time. Consider adjusting scheduling of processes involving equipment with shorter, frequent bouts of idling. Reduced idle time comes with the benefit of lower energy costs and lower pollution emissions related to such equipment.

- **Adopt Lean Manufacturing Principles:** Lean manufacturing principles focus on minimizing waste without sacrificing productivity. By streamlining processes, industries can reduce material waste, improve production efficiency, and lower costs. Techniques such as Just-In-Time (JIT) production, 5S, and Kaizen are effective lean strategies.

- **Utilize Preventive Maintenance Programs:** Regular maintenance of equipment prevents unexpected breakdowns, extends the lifespan of machinery, and maintains operational efficiency. Implementing a preventive maintenance schedule can reduce downtime, improve safety, and ensure consistent product quality.

- **Implement Environmental Management Systems (EMS):** Adopting an EMS, such as ISO 14001, helps industries manage their environmental responsibilities systematically. This includes reducing waste, conserving resources, and ensuring compliance with environmental regulations. An EMS not only benefits the environment but also improves the company's reputation and can lead to cost savings through efficient resource use.

- **Install Variable Frequency Drives (VFDs):** Implement VFDs on motors and pumps to adjust the speed and torque based on real-time demand. This can lead to significant energy savings by optimizing motor performance, reducing wear and tear, and extending equipment life.

- **Practice Green Procurement:** Prioritize purchasing environmentally friendly products and materials. Look for items with eco-certifications and consider the entire lifecycle of products to reduce waste and environmental impact. This promotes sustainability and supports green businesses.

- **Utilize Waste Heat Recovery Systems:** Capture and reuse waste heat generated by industrial processes for heating, cooling, or power generation. This not only improves energy efficiency but also reduces the need for additional energy sources, cutting costs and emissions.

P2 @ WORK

Improve Sustainability at Work

- **Establish Printing Policies:** Printing documents should only be done when necessary. When electronic versions are sufficient, printing should be discouraged. Printing uses additional energy, natural resources, and complicates eventual disposal. Maintaining documents that could be digitized requires storage space. Electronic documentation can result in significant savings.

- **Use Energy Efficient LED Lights:** Replacing fluorescent overhead lighting with LED alternatives can significantly reduce electricity usage at a reasonable cost. LED tube bulbs that will work with existing fixtures can be used with minimal modification. LED lights cost less to run, have a significantly longer lifespan, and can produce better quality light than fluorescent lights.

P2 @ HOME

Make a Positive Impact at Home

- **Maintain your Automobile:** Timely servicing of automobiles helps to prevent unnecessary breakdown. Additionally, regular vehicle maintenance ensures that emissions are minimized and that fuel economy is maximized. Not only does this help the environment, but it also helps your wallet

- **Utilize Public Transportation:** In areas where public transportation is readily available, utilizing public transportation can have many benefits. Financially, utilizing public transportation can avoid significant costs of vehicle ownership, including maintenance and repair costs, fuel costs, insurance costs, toll fees, parking costs, and other costs. Environmentally, reduced traffic congestion and fewer vehicles on the road reduces emissions, benefiting the environment.

HIGHLIGHTING OUR IMPACT

The WVU Pollution Prevention (P2) team takes great pride in the impact we have within the borders of West Virginia since January of 2023. From energy savings to CO_2 reduction, the recommendations we develop for these businesses not only help these businesses improve their sustainability, but also their bottom line!

Look at the impact of the opportunities we have found! →

19 Energy Efficiency/P2 Assessments

38 Recommendations

With Annual Savings of…

$368,343 in Energy Costs

2,623 MWh of Electricity

11,102 MMBtu of Natural Gas

2,451 Metric Ton CO_2 Equivalent

WHAT'S NEW?

Safer Products: SaferChoice and Design for the Environment
August 12, 2024 - 12:00 to 1:00 PM (EDT)

Topic: ***EPA's "Safer Choice" and "Design for the Environment"*** – Learn about EPA's Safer Choice and Design for the Environment certifications and how you can have an impact by simply switching your household products.

Register Here or use the QR Code!

Energy Efficiency and Pollution Prevention Workshop
August 30, 2024 - 10:00 AM to 2:00 PM (EDT)

Topics:

- ***Energy Billing*** – Energy billing for commercial and industrial facilities can be confusing. Learn the ins and outs of energy and energy billing. A deeper understanding of your energy bills can help you find ways to save!
- ***Energy Efficiency and Industrial Systems*** – Learn about the different industrial systems and simple changes you can make to increase energy efficiency and lower energy costs.
- ***Pollution Prevention*** – Discover source reduction techniques that can save valuable resources and improve your environmental impact

Register Here **or use the QR Code!**

THE P2 TEAM

Faculty & Staff

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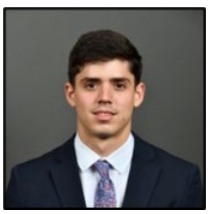

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Questions or Comments?