

COMPRESSED AIR CHALLENGE LEVEL 1

December 8, 2010

7:30 am until 4:30 pm

NorthWestern

1944 Monad Road

Billings, Montana 59102

Cost: \$299*

*Tuition is **waived** for employees of companies that are NorthWestern Energy electric customers—limit of one employee per Large USB Choice Customer. Due to limited class size and limited opportunities to provide this training in Montana, the number of representatives from any single organization may be limited; a waiting list will be developed if needed. Northwestern Energy customers, please enter the following discount code when registering online: **NWEN**.

This training is valued at \$800

0.7 Continuing Education Units through Washington State University will be made available for this training

Class size is limited to 25 attendees

Key Learning Objectives

- Calculate the energy cost of compressed air
- Learn to actively manage compressed air systems
- Identify inappropriate uses of compressed air
- Establish a baseline for tracking improvements
- Find and fix system leaks

Who Should Attend

- Plant maintenance managers
- Plant and consulting engineers
- Compressed air operators and mechanics
- Compressed air vendors, sales staff, and technicians
- Efficiency organizations and utility staff

Agenda

7:30 Registration (breakfast provided)

8:00 Morning Session

- Welcome and Introduction
- Why Care About Air?
 - ♦ Compressed Air Challenge questionnaire pre-workshop assignment
- Study Your Supply Side
 - ♦ Typical components of the supply system
- Understand Your Demands
 - ♦ What is the demand side: Typical components of demand; inappropriate uses of compressed air; common leak locations and how to fix them
- Are You on Base?
 - ♦ Baseline basics and techniques

11:30 Lunch (provided)

12:30 Afternoon Session

- Stay Under Control
 - ♦ Controls, part-load efficiency, and storage; using controls; pros and cons
- Maintain System Efficiency
 - ♦ Simple, quick cost-cutting measures; system demand profile

2:00 Break

2:15 Afternoon Session Continued

- Get With the Plan
 - ♦ Seven Step Action Plan and Personal Action Plan

4:00 Summary and Evaluation

4:30 Adjourn

Course Description: Are your compressed air energy costs under control? Even the smallest compressed air system is a relatively large source of energy consumption and cost. Make your company more profitable with the Compressed Air Challenge™, a series of seminars that applies proven techniques to achieve cost-effective solutions. Optimizing your compressed air systems can lead to higher productivity, energy savings, increased product quality and greater efficiency. This training offers attendees the opportunity to use their own system data in seminar exercises, as well as mastery of compressed air system components and techniques. Attendees can apply training and implement changes immediately upon return to their work place.

Instructor: Jeff Yarnall, PE is a licensed mechanical engineer with over 30 years experience with compressed air systems, including: system design applications, installations, trouble-shooting, maintenance, controls and energy audits. Jeff has trained over 1,500 technicians, supervisors and engineers, applying his experience gained while performing hundreds of compressed air audits. He is a national Level 1 and Level 2 instructor for the Compressed Air Challenge™, a national educational effort to improve air systems efficiency throughout the United States.



Co-Sponsoring Organizations

NorthWestern Energy
Washington State University Extension Energy Program
Bonneville Power Administration
Northwest Food Processors Association

This training is provided by Compressed Air Challenge. For more information:
<http://www.compressedairchallenge.org/>

Northwest Regional Industrial Training program is coordinated and funded by the Northwest Energy Efficiency Alliance (NEEA), a private non-profit organization funded by Northwest utilities, the Energy Trust of Oregon, and Bonneville Power Administration. NEEA works in collaboration with its stakeholders and strategic market partners to accelerate the sustained market adoption of energy-efficient products, technologies, and practices. NEEA's market transformation efforts address energy efficiency in homes, businesses, and industry.

How to Register

Registration deadline is November 19, 2010

To register online: www.regonline.com/18neea-industrialtraining

Phone, fax, email, or mail the registration form below to:
 Phone: 888-720-6823
 Fax: 503-525-4800
 Email: industrial-training@industrial.nwalliance.org

NEEA Industrial Training c/o Ecos
 309 SW 6th Ave #1000
 Portland, OR 97204

Please make checks payable to NEEA Industrial Training c/o Ecos#2300

Questions

Visit www.nwalliance.org/participate/calendar.aspx or contact the training center at 888.720.6823 or industrial-training@industrial.nwalliance.org

Registration Form: Please register me for the **Compressed Air Challenge – Level 1** training on **Dec. 8, 2010:**

First Name _____	Last Name _____	Title _____	Phone/Fax _____
Company Name _____		Utility Provider _____	E-mail Address _____
Address _____			Please indicate special diet needs <input type="checkbox"/> Vegetarian <input type="checkbox"/> Other _____
City _____	State _____	Zip _____	
Participation approved by: Supervisor name _____		E-mail _____	

Payment Options

Please enclose a check with this registration form and mail to the above address. If paying by credit card or purchase order please call 888-720-6823 or fax registration form to 503-525-4800.

I authorize NEEA Industrial Training c/o Ecos to charge my Visa/MasterCard in the amount of _____
 _____ Expiration date ____ / ____

Card holder name (please print) _____ Address associated with card _____

Authorized Signature _____ City _____ State _____ Zip _____

Cancellation Policy: Full refund of training cost if attendance is canceled by **November 19**; half refund thereafter.