

2007 Conservation Investment for the Future... Compressed Air Industrial Mentored Training



Presented by

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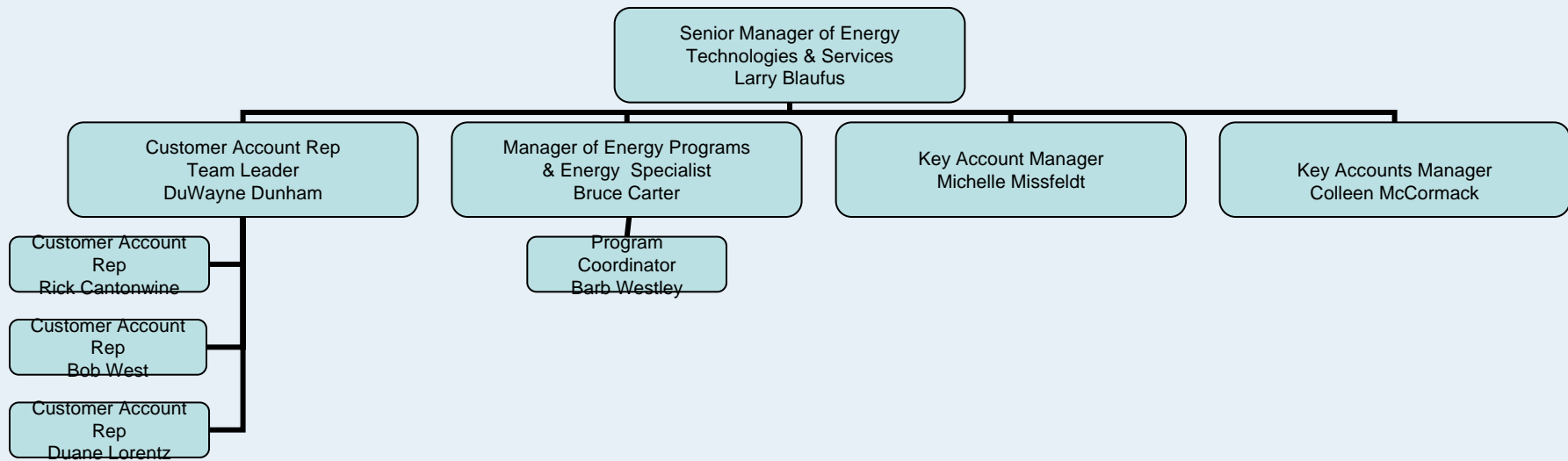
Diversified Power Supply



Three Legged Stool

- ◆ Purchase
- ◆ Generation
- ◆ Conservation

Power Supply - Conservation



Power Supply - Conservation



2007 BPA CRC & Utility Funded Programs

◆ Commercial Conservation Rebates	\$763,500
◆ NEEA Membership	\$257,000
◆ C & I Audits	\$100,000
◆ C&I Technical Assistance	\$50,000
◆ Residential technical Assistance	\$10,000
◆ Low Income Weatherization	\$440,000
◆ Residential Conservation Rebates	<u>\$350,000</u>
TOTAL	\$1,970,500

Power Supply - Conservation



2007 Loan Programs

◆ Res. weatherization for single family	\$720,000
◆ Res. weatherization for multi family	\$500,000
◆ Res. weatherization for mobile homes	\$90,000
◆ Heat Pumps/ Air-to-air and Geo	\$840,000
◆ Solar – Water heaters, pool heaters & PV	\$96,000
◆ C&I lighting and other custom projects	<u>\$250,000</u>
Total	\$2,496,000

IEA Cluster Training End Goals



- Identify System Champions for each participating facility
- Identify KPIs for each participating facility
- Develop Action Plans for each participating facility
- Demonstration Projects and Case Studies for each participating company
- Set up a 90-day post-training event/dinner to recap results, identify issues and facilitate ongoing networking
- Gain a corporate commitment by the participating facilities to Continuous Energy Improvement
- For 90 Days, provide Technical Advisors and Utility contacts who serve as follow-on coaches and direct resources for their respective facility and Systems Champion.
- Identify dates for Shop Floor Air course for team members
- Closer relationships between end customers, trade allies and sponsors

Course Benefits

- Actively manage Compressed Air Systems to reduce energy and repair costs
- Develop energy efficiency Key Performance Indicators (KPIs) and Action plans to improve performance
- Improve system control, efficiency, reliability and productivity
- Reduce unscheduled down-time
- Incorporate a leak prevention program in your operation
- Improve communications and management systems across plants
- Promote opportunities that do not require capital improvements
- Achieve economic viability and competitive advantage by maintaining a robust economy and keeping jobs local

Key Learning Objectives

- Only 10% of the energy used to make compressed air is delivered for end use
- In order to minimize waste, find alternative modes of work that minimize use of compressed air
- Supply Side: Every 2 lbs. of pressure increase = a 1% increase in energy costs and a 2% increase in leakage
- Demand Side: The most significant cost of running a compressed air system is energy. Therefore, the purchase of additional compressed air systems and dryers represents more than just a significant Capital Investment.
- Understand and apply life cycle costing
- Recognize inappropriate use of compressed air and common leak locations
- Tailor a Compressed Air System management action plan

Estimated Budget

Partnership with BPA & IEA

- ◆ Course Instruction = \$6,400
- ◆ Materials = \$2,900
- ◆ Meals/ Rooms Fees = \$1,000
- ◆ Cluster Coach Follow-up = \$2,600
- ◆ Recognition Dinner = \$1,700
- ◆ Event Planning Coordination \$7,100

- ◆ Total = \$21,700
- ◆ Plus energy audits = \$10,000
- ◆ Plus Incentives up to 25% of the cost of projects

Five Key Customers Participated



1. Adalis
2. All Weather Wood Treaters
3. Columbia Vista
4. Fiberweb
5. Frito Lay

Workshop Basics



Compressed Air Mentor Training Hosted by Clark Public held in Vancouver, WA on March 10th and 11th. The two-day mentored training focused on Continuous Energy Improvement by coupling classroom fundamentals with hands-on experience.

- ◆ In Day 1, participants attend Compressed Air Challenge (CAC-I) training
- ◆ Day 2, review a compressed air system in the field and develop system-specific action plans.

Workshop Instructors & Mentors



- ◆ Jeff Yarnall, Rogers Machinery Company, who taught participants about the fundamentals of energy savings practices.
- ◆ Eric Bessey of Compression Engineering Corp and David VanderBeek, IEA compressed air technical director, helped training participants develop action plans individualized for their company's specific compressed air needs.

Key findings coming out of the Mentor Training

- ◆ Process is well on its way to Meeting end goals & learning objectives
- ◆ Leveraging resources from Clark Public Utilities by borrowing their ultrasonic compressed air leak detector to conduct an audit.
- ◆ Conducting compressed air and a dust collection audits.
- ◆ Low to no cost individual opportunities specific to each site that are targeted for improvement.
- ◆ Custom compressed air projects that may qualify for incentives from Clark Public Utilities for up to 25% of the cost of implementation.

Continuous Improvement

- ◆ Learn from the past to operate for the future
- ◆ Long-range planning is important – our 5-year conservation plan
- ◆ Look beyond resource capacity...we can start saving today to impact future load requirements
- ◆ “I believe the compressed air workshop will be a success in every sense of the word,” said Blaufus. “Special thanks to our BPA and IEA partners. In my opinion, it was a huge success!” Larry Blaufus, senior manager of energy technologies