



# POWER SMART INDUSTRIAL ENERGY EFFICIENCY TRAINING

## ALLIANCE MOTOR MANAGEMENT TRAINING LEVEL I

### Date and Location

May 14, 2007  
Delta Vancouver Airport Hotel  
3500 Cessna Drive.  
Richmond, BC  
V7B 1C7  
Phone: 604-278-1241  
[www.deltavancouverairport.com](http://www.deltavancouverairport.com)

### Overview

This informative one day workshop is designed to show you how to assist your customers to reduce energy costs and increase the reliability of their motor systems.

### Who should attend?

This workshop will be of value to Consultants, Motor Shop sales, marketing and shop personnel working directly with BC Hydro customers who have large industrial facilities.

### What will participants learn?

During this one day workshop you will learn how to:

- Evaluate and select optimum motors for different industrial applications.
- Record motor tracking inventory and maintenance actions.
- Develop and use guidelines for motor repair and rewind.
- Use the electric power system and management of power transmission and driven loads as they relate to motor operation and use.
- Establish an effective motor systems maintenance plan.

- Leverage basic functions of Motor Master software to evaluate motor purchase and repair decisions.
- Locate resources for additional technical support on motor systems.

### Did you know?

- Motor-driven equipment accounts for up to 90 per cent of electricity costs in B.C. industrial plants.
- The purchase price of a motor accounts for less than 5 per cent of the life-cycle cost of the motor.
- The average purchase price for electric motors is \$70 per horsepower.
- The operating cost for electric motors averages \$120 per horsepower for each year of operation.



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### Presenters

Gilbert McCoy, a registered Professional Engineer, has been with the WSU Energy Program and the Washington State Energy Office for over 20 years. He has provided technical assistance and energy auditing services to both industrial and public sector clients. Gil has authored over 40 energy-related

publications including Energy Management for Motor-Driven Systems and the Energy Efficient Electric Motor Selection Handbook. Gil served as lead engineer for the development of the USA Department of Energy MotorMaster+ motor energy management software, and also was involved in design of the AirMaster+ compressed air system assessment software.

### Agenda

8:00am – 8:30

Registration & Breakfast

#### 8:30 – 12:00 Morning Session

- Overview of motor systems
- Motor applications
- Motor efficiency – how it is measured, classified, and affected by environment and load
- Motor operation
  - Load type, control and variation
  - Operating environment
  - Power Quality
- Motor Management Basics
- Electronic adjustable speed drives
- Power factor correction

12:00 – 1:00pm Lunch

#### 1:00pm – 4:30pm Afternoon Session

- Motor system maintenance
  - Managing maintenance
  - Failures and their causes
  - Avoiding failures with proper installation, setup and preventative maintenance
  - Predictive maintenance to foresee and forestall failures
- Motor rebuilding
  - Steps in motor repair and rewinding
  - Repair or rewind actions that can affect the energy efficiency or the motor
  - Guidelines to use in specifying motor repair and rebuilding
- Guidelines and methods to evaluate repairing versus replacing motors
- MotorMaster+
  - Overview of Software Tool Capabilities
  - Motor Selection Decisions



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**To register, please fax this page to Lisa, BC Hydro at 604 453-6282**

### Registration Fee

Power Smart Alliance members and EASA repair shops working with BC Hydro customers: \$200 plus GST = \$212

GST #121454151

Includes breakfast, breaks and lunch. Also includes a manual and tip sheets.

Register early – seating is limited

### Registration Form

Name: \_\_\_\_\_ Position/Title: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Business Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

Do you have any special dietary needs? \_\_\_\_\_

### Cheques made payable to BC Hydro

and send to:

Alliance Motor Management Training  
BC Hydro Power Smart  
900 – 4555 Kingsway  
Burnaby, BC V5H 4T8

### Cancellation Policy

Up to one week prior to workshop start date –  
full refund less \$50 processing fee.

Less than one week prior to workshop – no refund.

### For more Information:

Bill Atamanchuk  
604-453-6320  
william.atamanchuk@bchydro.com

### Credit Card

Credit Card:  Mastercard  Visa

Card #: \_\_\_\_\_

Expiry Date: MM \_\_\_\_\_ YY \_\_\_\_\_

Name as shown on card: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Cardholder will pay total amount shown to card issuer according to  
cardholder agreement.

Or call to provide credit card information over the phone.

Payment, in full, is due two weeks prior to seminar start date