

# PROCESS INTEGRATION TRAINING WORKSHOP

## APRIL 5-7, 2016 · Vancouver, BC



**SYNOPSIS:** An in-depth, 3-day process integration course, with both theory and case studies (using NRCan's INTEGRATION software).

**OBJECTIVES:** To learn process integration techniques for identifying projects that will reduce energy use, greenhouse gas emissions and costs. The course provides the knowledge and tools for evaluating heat recovery projects and improving equipment operating conditions through a comprehensive approach that encompasses not just utility systems/services, but the process as a whole.

**OUTCOMES:** Participants will develop a good understanding of process integration principles. They will be able to apply process integration to their energy analyses. They will also be able to use the different modules of the INTEGRATION software.

**TARGET AUDIENCE:** Engineers specializing in industrial energy efficiency; process design engineers and plant project managers having to carry out analyses aimed at improving complex industrial energy systems. Limited to 15 participants.

DAY 1: Introduction to heat integration of industrial processes

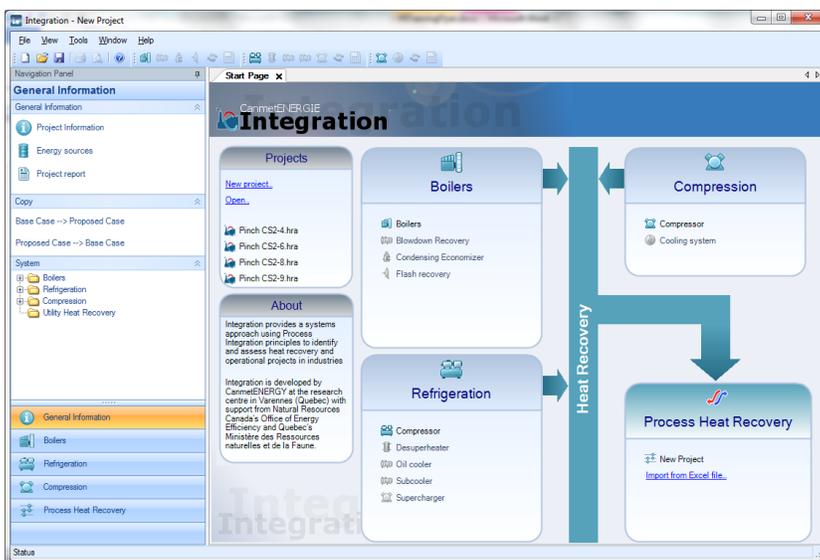
- Principles of global energy & pinch analysis
- Graphical representation of process streams and heat exchanges
- Determining minimum energy consumption and heat recovery potential of a process
- Identifying sources of energy inefficiency

DAY2: Steam system, refrigeration system and compression system. For each utility system:

- Overview of main equipment/principles
- Evaluation of energy performance and sources of waste heat; influence of operating parameters
- The utility system in a global analysis context: evaluation of heat recovery potential

DAY3: Process heat integration (continued)

- Pinch analysis of heat exchanger networks
- Heat integration for process and utility systems



**Trainers (licensed by NRCan):**

Alberto Alva, MSc, PhD, MBA (Process Ecology)  
Michael Ross, BSc (RER Energy)

**Date:** April 5-7, 2016

**Location:** Executive Suites Hotel  
4201 Lougheed Highway, Burnaby BC

**Included:** USB key with software & exercises;  
course binder; lunch & refreshments

**Cost:** \$1400 plus GST (for 3 days)

**Contact:** Michael Ross at (514) 564-9089 or  
michael.ross@rerinfo.ca

**SOFTWARE:** CanmetENERGY's INTEGRATION software, provided to course participants by NRCan, combines powerful engineering models with a friendly user interface. A practical, low-cost tool, it allows an energy expert to identify and evaluate energy saving projects in a global framework. Visit: [tinyurl.com/NRCan-Integration](http://tinyurl.com/NRCan-Integration)

