
Improving Process Profitability

Practical Methods to Reduce Steam Consumption, Utility Costs, and Energy Losses

*A 2-Day Seminar with
Online option*

Sponsored by:



When

October 27–28, 2026

8:00 am – 5:10 pm

Where

LNG Center of Excellence
115 W. Sale Road
Lake Charles, LA 70605

ABOUT THE COURSE

Energy losses are profit losses.

This practical two-day seminar focuses on short-term, low-cost, and no-cost opportunities to reduce energy consumption in refinery and hydrocarbon process plant operations. Participants will learn proven methods for saving steam, reducing utility costs, improving equipment efficiency, and identifying operating practices that quietly erode plant profitability. Topics include reducing steam, fuel, and electrical consumption while improving overall utility efficiency.

Many of the techniques discussed can be implemented with little or no capital investment, allowing participants to identify practical opportunities to reduce energy costs and improve plant profitability.

Designed for engineers, operators, supervisors, and technical personnel, this seminar emphasizes practical solutions that can be implemented in real operating facilities—not just theory.

Drawing on Norman Lieberman's 62 years of refinery and hydrocarbon process plant experience, the course is built around real-world operating problems, practical troubleshooting techniques, and lessons learned from decades of successes and mistakes.

Throughout the seminar, Norman Lieberman shares practical examples drawn from actual refinery and process plant operations, illustrating both successful energy-saving initiatives and costly lessons learned.

This seminar is based on Norman Lieberman's forthcoming McGraw Hill book, *Improving Refinery and Process Plant Profitability*.

COURSE DELIVERY

Improving Process Profitability is a 2-day seminar with the option to attend online. Norman and Elizabeth Lieberman will conduct the seminar from the McNeese campus. Participants may attend from their office, home, or in person. Light breakfast items and lunch will be provided for in-person attendees.

WHO SHOULD ATTEND

Process engineers, operations engineers, plant operators, maintenance and reliability personnel, production supervisors, utilities and energy-management personnel, and technical managers responsible for reducing operating costs.

ABOUT THE SEMINAR TEAM

Norman Lieberman – Speaker

Norman Lieberman is a chemical engineer with more than 60 years of experience in process design, plant operations, troubleshooting, and process optimization. He specializes in identifying practical solutions to refinery and chemical plant operating problems, improving plant reliability, reducing energy consumption, and increasing profitability through process improvements and equipment modifications.

Widely regarded as one of the process industry's most respected troubleshooting and distillation experts, Norm continues to share practical lessons learned from more than six decades of refinery and chemical plant experience.

In 2018, Norm received the Hydrocarbon Processing Lifetime Achievement Award, and in 2023 he was recognized by the American Institute of Chemical Engineers for his contributions to distillation technology.

Norm has delivered more than 1,050 technical seminars worldwide and is the author of eleven books, including *Troubleshooting Process Operations*, *Troubleshooting Natural Gas Processing*, *Process Design for Reliable Operations*, and *Process Equipment Malfunctions*.

Elizabeth T. Lieberman – Seminar Facilitator and Technical Consultant

Elizabeth Lieberman is a chemical engineer with more than two decades of experience in the process industries. Currently working as a consultant for troubleshooting oil refinery and chemical plant process problems, she also has experience in ceramic clay processing, refractories processing, and the conveying of non-Newtonian fluids (slurry flow).

She holds a Chemical Engineering BSc from the University of Wales (Swansea College), and LRIC in Chemistry and is the co-author of the book *A Working Guide to Process Equipment* (McGraw-Hill).

To learn more the seminar team and books by Norman Lieberman, visit website www.lieberman-eng.com.

AGENDA

7:30 AM - 8:00 AM
8:00 AM - 9:10 AM
9:30 AM - 10:40 AM
11:00 AM - 12:10 PM
12:10 PM - 1:00 PM
1:00 PM - 2:10 PM
2:30 PM - 3:40 PM
4:00 PM - 5:10 PM

SIGN IN (at McNeese; Zoom setup at work/home)
Session 1
Session 2
Session 3
Lunch
Session 4
Session 5
Session 6

20-minute breaks will be given between sessions.

PROGRAM SCHEDULE

DAY ONE: STEAM, POWER, AND ROTATING EQUIPMENT

- Saving steam in turbines
- Reducing steam consumption for pumps, compressors, and vacuum ejectors
- Optimizing pump impeller size versus variable speed motor drives
- Reducing energy consumption for centrifugal and reciprocating compressors
- Reducing electric power use for fin-fan air coolers and cooling towers
- Boiler level control
- Isentropic and isenthalpic expansion
- Using the Mollier Diagram to save steam

FIRE HEATERS AND COMBUSTION EFFICIENCY

Topics in this section will be presented at the conclusion of Day One and continued on Day Two as necessary.

- Excess air in fired heaters
- O₂ analyzers
- Minimizing NO_x emissions

FIRE HEATERS SECTION

(CONTINUED)

- Draft and fuel consumption
- After-burn on air preheaters
- Extending heater run lengths

DAY TWO: DISTILLATION, REBOILERS, RELIEF VALVES, AND HEAT LOSSES

- Measuring relief valve leaks accurately
- Maximizing relative volatility
- Optimizing distillation tower pressures
- Two-stage overhead condensers
- Pumparound optimization
- Improving steam stripping efficiency
- Once-through vs. circulating reboilers
- Saving steam in process reboilers
- Improving tray efficiency
- Estimating heat losses for insulated vessels

REGISTRATION

- **Early registration deadline: July 31, 2026, at 11:59 PM**
- Regular registration deadline: October 8, 2026, at 11:59 PM (Note: We will continue to accept registrations after this deadline if seats are available.)
- In-person cost: \$1,695 early registration; \$1,895 regular registration
- Online cost: \$1,195 early registration; \$1,395 regular registration
- 1.6 CEUs and 16 PDHs awarded to participants
- Register and pay online at:
<https://www.mcneese.edu/iiec/lieberman/>
- Or, use the QR code below to quickly access the registration page
- Purchase orders accepted.
- To register and pay any other way, please contact Amanda Hext, 337.562.4592, ahext@mcneese.edu
- Billing and receiving address:

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