



**ENERGY MANAGEMENT AND AUDIT - CEM
REFRESHER TRAINING COURSE**

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CEM REFRESHER TRAINING COURSE





**ENERGY RATE STRUCTURE - 1
FOR ENERGY PROFESSIONALS**

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ENERGY SPECIALIST CURRICULUM COURSE



WHAT SHOULD YOU LEARN





Energy Bill Analysis

Types of Energy Pricing

Electrical Energy Purchasing

Electric Utility Daily Peak Loads

Utility Seasonal Peak Loads

ENERGY RATE STRUCTURE

✓ Understanding reasons for present energy costs - one of the earliest steps of an energy audit

✓ Determine Rate Structure for each form of energy used at facility unities, and contingency planning

✓ Energy Uses

Industrial Facilities

- ✓ Electric energy
- ✓ gas or light oil
- ✓ heavy oil
- ✓ coal
- ✓ purchased steam other

Commercial Facilities

- ✓ Electric energy
- ✓ gas or light oil

TYPES OF ENERGY PRICING

✓ Flat rates

✓ Block rates

- ✓ Declining
- ✓ Inverted

✓ Demand rates

- ✓ Demand charge
- ✓ Demand ratchet

✓ Time of use rates

- ✓ On-peak
- ✓ Off-peak
- ✓ Partial-peak

OTHER TYPES OF ENERGY PRICING

✓ Promotional rates

✓ Interruptible rates

✓ Seasonal rates

✓ Real-time pricing

ELECTRICAL ENERGY PURCHASING

Electric Purchase Opportunities
Subject to local, regional and national laws and regulations

Everyone

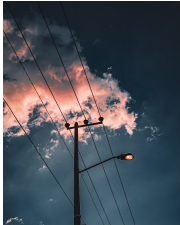
- ☒ Buy firm power from your LDC
- ☒ Buy interruptible power from your LDC

Some

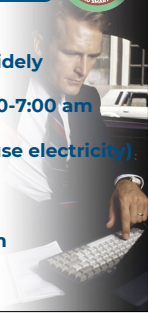
- ☒ Buy from Power Marketer (LDC or other)
- ☒ Buy from Power Broker
- ☒ Must pay all wheeling charges and other regulatory charges



ELECTRIC UTILITY DAILY PEAK LOADS



- ☒ Electric utilities experience widely varying loads each day.
 - Loads very low: Midnight to 6:00-7:00 am
- ☒ (homes & businesses start to use electricity)
 - Morning peak: 6:00-10:00 am
 - Evening peak: 5:00-9:00 pm
 - Loads drop: After 9:00-10:00 pm



UTILITY SEASONAL PEAK LOADS



Many utility loads differ significantly from season to season due to heating and air conditioning.

Loads may be low in spring and fall -- no heating or AC required.

Winter loads -- may be high from heating needs

Summer loads -- may be high due to AC needs

