

Effective Energy Management

⌘ Integration of engineering principles with business management skills

"managing energy is not a technical problem, but one of how to best implement those technical changes within economic limits, and with a minimum of disruption."

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Effective Energy Management

⌘ **Permanent need for Energy Management:**

- ☒ direct economic return can be proven
- ☒ "California's Energy Crisis" now in the forefront of everyday life
- ☒ energy efficiency improves competitive edge for equipment manufacturers (3rd world markets)

Effective Energy Management

⌘ **Permanent need for Energy Management:**

- ☒ rapid changes in technology; need for upgrades
- ☒ national economy will benefit from move towards energy independence

Effective Energy Management

EMT Program: Key Components

"... good programs have been instigated by ONE INDIVIDUAL who has recognized the potential, is willing to put forth the effort in addition to regular duties- will take the risk of pushing new concepts, and is motivated by a seemingly higher calling to implement an energy management program."

EMT Program: Key Components

⌘ Development of Organizational Structure:

- ⊗ **Establish "Energy Committee"**
 - ⊗ Energy Manager
 - ⊗ Management/Administration
 - ⊗ Energy Coordinators
 - ⊗ Employees/Customers

EMT Program: Key Components

⌘ Development of Energy Policy

- ⊗ keep policy statement "SHORT" (1-2 pages) and easy to read
"EXECUTIVE SUMMARY FORMAT"
- ⊗ define **OBJECTIVES**
- ⊗ outline **ACCOUNTABILITY**
- ⊗ establish **REPORTING** standards
- ⊗ define required **TRAINING**

EMT Program: Key Components

⌘ Planning

"secret to workable plan is to have people who are required to implement the plan involved in the planning process."

- ☒ audit planning (BENCHMARKING)
- ☒ educational planning (TRAINING)
- ☒ strategic planning

EMT Program: Key Components

⌘ Reporting

- ☒ establish "energy index" for measuring and comparison purposes
Examples: btu/sq. ft.; kwh per building;
\$\$ per month or year
- ☒ customize reporting to individual circumstances

EMT Program: Key Components

⌘ Reporting:

- ☒ **EXECUTIVE SUMMARY APPROACH**
(K.I.S.S. principle)
- ☒ Computer spreadsheets

EMT Program: Key Components

⌘ Scheduling/Implementation

- ☒ must be sensitive to users
- ☒ be mindful of "rebate" inspections required

⌘ Feedback

- ☒ customer satisfaction
- ☒ reporting

⌘ Evaluation/Analysis

- ☒ "Energy Committee" +/- analysis

Energy Manager: Job Functions

⌘ "Technical"

- ☒ conduct audits/identify ECO's
- ☒ establish BENCHMARKS
- ☒ setting performance standards
- ☒ implement ECO's
- ☒ measure actual energy use

Energy Manager: Job Functions

⌘ "Policy-Related"

- ☒ monitor federal/state legislation
- ☒ monitor utility rebate programs available
- ☒ participate in organizations like ASHRAE/AEE

**Energy Manager:
Job Functions**

⌘ **“Public Relations”**

- ☒ educate other employees/customers on value of EMT
- ☒ setup system for soliciting ideas from others
- ☒ award recognition
- ☒ setup formal reporting system
- ☒ establish network of communication

⌘ **“Planning/Purchasing”**

- ☒ monitor energy costs and demand charges
- ☒ employ “life-cycle” cost analysis for selecting system and equipment types
- ☒ develop contingency plans for possible outages
- ☒ report to upper management

**Energy Manager:
Skills Needed**

- ⌘ Technical background w/ experience in energy-efficient design of buildings and equipment
- ⌘ Practical, hands-on experience with systems and equipment
- ⌘ “Goal-oriented” management style
- ⌘ Ability to work with people at all levels
- ⌘ Technical report writing
- ⌘ Verbal communication skills
