

Managing the Manufacturing Energy Team

Strategies in Energy Program Management



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Imagine the result

Agenda

- ARCADIS Overview
- Energy Management Basics
- Corporate Team Structures
- Agency Programs
- Utility Rebate Programs
- SP for Environment
- Q&A

Company Overview

ARCADIS delivers technical excellence and client satisfaction in consulting, design, engineering, urban planning, architectural and project management services.

We focus our services on three main business lines, each with their own strengths and strategies.

Infrastructure

Environment

Water

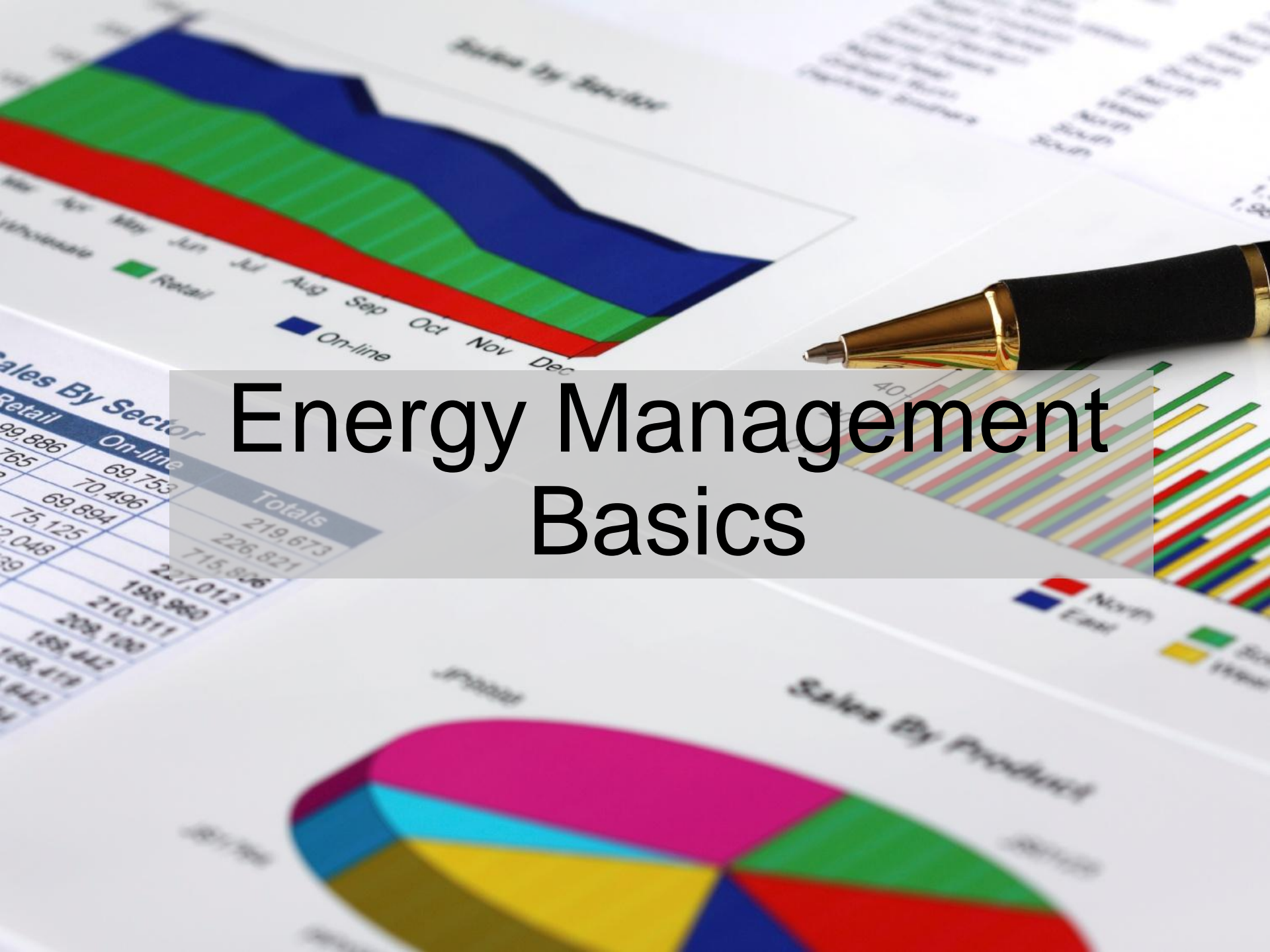
Buildings



ARCADIS US and International Services Overview

- Leading International Engineering, Planning and Consulting Firm
- Our Services: Infrastructure, Environment, Buildings, Water
- Our Markets: United States, Europe, Latin America, Asia
- Global Presence: 15,000 employees worldwide
- National Presence: 6,000 employees in 200 offices
- Financially Stable: \$2.8 billion revenue

Energy Management Basics



Why Energy Efficiency?

Benefits

- Cost Savings
- Reduced GHG Emissions
- Offset Increasing Rates
- Manage a Large, Uncontrolled Expense
- Directly Impacts the Bottom Line
- Improve Infrastructure Reliability
- Efficient Use of Renewable Energy
- Improve Corporate Marketability
- Community Outreach / Good Corporate Citizen

Common Pitfalls

Focusing Solely on Audits

- Only 35% of findings are typically implemented

Focusing on Quick Payback Projects

- Not a sustainable strategy

No Plan, No Action

- Disbelief that sustainable, effective change is possible

Key Program Elements

Management Practices

- Management Commitment
- Energy Team
- Goal Setting
- Track & Analyze Data
- Benchmarking

Actions

- Projects
- Best Practices Replication
- Low-Cost / No-Cost Actions
- Pilot Projects
- Assessments

Communication

- Performance Reporting
- Employee Awareness
- Reward & Recognition
- Community Outreach

Building the Energy Management Team



Energy Management Business Models

Self-Perform

Corp Lead
w/Outsourced
Team

Turn-Key
Outsource

Hybrid

Business Model: Self-Performing

Benefits

- Aligned Priorities
- Full Integration with Corporate Culture
- Leverage Corporate Knowledge & Experience

Challenges

- High Overhead Costs
- May Limit Creativity

Trend

- Declining use due to headcount restrictions and other resource constraints

Business Model: Corporate Leader with Outsourced Team

Benefits

- Dedicated resource maintains vision and assists to overcome corporate inertia
- Opportunity to integrate team
- Lower corporate headcount

Challenges

- Cost justification
- Full integration risks dampened creativity

Trend

- A common model that enables funding from various expense sources

Business Model: Turn-Key Outsourcing

Benefits

- Eliminates corporate headcount
- Moves fixed costs to variable
- Long term contract with defined metrics enables consistency and performance monitoring

Challenges

- Cost justification
- Alignment with corporate culture

Trend

- Common model in commercial buildings & real estate sector
- Rarely seen in industry due to technical subject matter & production risks

Business Model: Hybrid

Selecting best of each to meet organization-specific needs. Use of consultants to provide guidance.

Benefits

- Tailored to organization
- Use of services as needed
- Extension of plant engineering organization
- Right-sizing of onsite staff

Challenges

- May disconnect organization from peers, making benchmarking difficult

Trend

- New model gaining in popularity since “Great Recession” as production increases, but headcount does not



Resources & Tools

Energy Management Process



Agency Programs

Benefits

- Typically no-cost or cost-sharing opportunity
- Access to grants and incentives

Challenges

- Programs vary between States, Municipalities, Utilities
- Federal programs may vary yearly or with Administrations

Trend

- Increased awareness and use of Gov Agency programs due to Recovery Act incentives

EPA EnergyStar



Overview

- Taxpayer funded program to improve air quality through superior energy efficiency
- Supports all sectors of energy use and generation

Benefits:

- Industry Focused Best Practices Sharing
- Monthly Partner Webcasts
- Focus Groups
- Commercial Building Label
- Benchmarking Tools
- Energy Star Partner Award
- Communication Templates
- Supports Implementation of Existing & New Standards

U.S. Dept of Energy



Buildings Technology Program

- Improving Building Components
- Energy Modeling Tools
- Building Energy Codes
- Energy Alliances by Sector
 - Retail, Commercial Real Estate, Hospitals

Industrial Technologies Program

- Process Technology Improvements
- Save Energy Now Program

Utility Rebate Programs

Benefits

- Offset capital budget to improve project ROI
- Recover fees collected by utilities
- Drive innovation and management awareness

Challenges

- Programs vary between utilities/states
- Some locations lack any program

Trend

- The number of regions with programs continue to increase
- The generosity of programs typically decline after first initial years

Imagine the result

