

# The Energy Manager's Role in an Organization

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September 18, 2013



# Background

- Consulting/Subject Matter Expert
- Utility Education
- Project Management
- Maintenance Coordination



# Background

- Ongoing Savings Opportunities
- Energy Purchasing
- Expenditure Reporting
- State Mandated Reporting



# Consulting/Subject Matter Expert

- Field questions on all topics related to utilities and mechanical systems
- Review legislation each biennium
- Review contracts



# Utility Education

- Employee awareness
- ESPC Webinars for new/existing personnel
- Information brochure for new employees
- Agency newsletter and website
- PowerPoint course



# Project Management

- Energy Savings Performance Contract
  - \$72 million project
- LoanSTAR Projects
  - One recently approved



# Maintenance Coordination

- Work with maintenance teams to ensure efficient operation
- Review energy savings of the performance contract



# Ongoing Savings Opportunities

- LoanSTAR projects to supplement bond funds
- Lighting occupancy sensor study
- Building commissioning
- Demand response program
- Computer sleep mode programming



# Energy Purchasing

- Electricity contract in deregulated markets
- General Land Office gas forecasting
- Miscellaneous electric contracts



# Expenditure Reporting

- Energy Savings Performance Contract annual reconciliation
- Consolidated laundry operations costs
- Utility costs
  - Electric
  - Natural Gas
  - Water/wastewater



# State Mandated Reporting

- Energy management plan
- Executive Order RP-49
- SECO mandated reports



# Challenges

- Funding
  - Ongoing statewide budget cut
  - Efficiency mandates
  - Funding for repair/replacement projects regularly reduced
- Liabilities
  - Deferred repairs/replacement: >\$250 million
- Organizational
  - Geographic – HHSC covers Texas
  - O&M Staffing
  - Utilities - regulated/unregulated
    - 7 electricity
    - 7 natural gas



# Energy Savings Performance Contract

- 10 year straight line payback
- Includes Measurement & Verification
- Lighting
- Mechanical
  - Chillers
  - Boilers
  - Variable speed drives
- Energy management control systems
- Water flow reduction



# Implementation

	# of sites	Completion	Cost (\$M)	Savings (\$M/yr)
Phase I	5	Construction -100%	\$13.9	\$1.5
Phase II	5	Construction - 100%	\$11.5	\$1.2
Phase III	5	Construction - 100%	\$13.1	\$1.4
Phase IV	3	Construction - 100%	\$11.4	\$1.2
Phase V	3	Construction - 100%	\$12.1	\$1.3
Phase VI	4	Construction -100%	\$5.2	\$0.6
Phase VII	3	Construction - 100%	\$7.4	\$0.8



# All Phases: Savings To-Date

Phase	Cumulative Measured Savings	Cumulative Guarantee	Savings Began
1	\$11.25 million	\$10.13 million	June-04
2	\$7.99 million	\$7.44 million	August-05
3	\$8.89 million	\$7.81 million	April-06
4	\$6.59 million	\$5.56 million	November-06
5	\$7.03 million	\$5.54 million	June-07
6	\$3.52 million	\$3.48 million	July-05
7	\$4.41 million	\$3.52 million	June-07
<b>Total</b>	\$49.68 million	\$43.48 million	



# Lessons and Challenges

- Some plant personnel need more attention
- New personnel – need to be informed
- Some believe that ESPC is a fix all
- Agency issues with some boilers failing



# Lessons and Challenges

- Issues with third party energy management systems
- Savings and guarantee are very close when including M&V costs – may erode further
- State audit
- Billing for PASS - complicated process within HHSC



# Program Enhancements

- Webinars for new administration and plant personnel
  - Discuss what performance contracting is and isn't
  - Share roles and responsibilities
- Partnering
  - Prior to construction
  - Prior to performance period
- Local Energy Manager on-site
  - Share ideas and information
  - Employee awareness program



# Going Forward

- In-house utility project development
- Seek out utility rebates
- Demand response program
- Employee utility education



# Questions

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