





Benefits & Accomplishments Utilizing Utility Energy Services Contracts

An In-depth Look at Utility Energy Service Contracts (UESCs)



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For More Information

- Would you like to know more about this session?
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Don't forget to fill out and drop off your session evaluations!



Government–Utility Partnership

Governmental Agencies need to achieve E pact goals and internal teams need to understand and address energy issues

- Energy efficiency/conservation
 - require on-going and constant improvements

- Energy expertise
 - A continuous process always requiring information on new products and energy system improvements



Government–Utility Partnership

The quick “Put-Out the Fire” reaction is not productive in addressing energy conservation

- Spike in energy prices and /or new energy legislation most often result in a quick fix reaction
- Restructuring the energy footprint of a million square foot facility will NOT happen with quick fixes
- This quick reaction most often creates unrealistic and/or ill-informed goals that are demanded from internal teams



Government–Utility Partnership

The long term energy strategy along with an integrated approach and an investment plan will yield positive results.

- This strategy is most effective as a collaboration effort between the local utility and a governmental agency
- Energy expertise is required and is augmented on a collaborative effort between the local utility and the governmental agency



Government–Utility Partnership

Government and Utilities most often have similar goals

- Reduce fuel consumption and dependence on foreign oil
- Increase or maintain economic competitiveness within the city and local region
- Decrease greenhouse gas emissions and improve environment
- Reduce the need for investments in energy infrastructure and maintain grid reliability
- Efficiency is a great energy resource



UESC – Key Benefits

A proven & streamlined process to & achieve energy conservation goals

- Take advantage of existing relationship with utility – “At the end of the day..... the utility will not leave town”
- Application of Utility incentive programs and/or other incentive programs
- Utility has similar energy goals and stand ready to help
- Share information regarding energy issues and conservation
- Utilities understand customer operation and have access to energy usage information



UESC Projects-Development Process

1) Preliminary Assessment-

- Identify potential energy conservation measures

2) Energy Audit-

- Energy Audit Agreement, Preliminary analysis and proposal

3) Detailed Engineering Analysis-

- Detailed Technical and financial Solutions

4) Implementation-

- Design/Build Agreement-Turn-key services



UESC Project Team

Energy conservation projects involve several departments and utility reps to achieve the desired goal

- Energy Manager –
 - Understand the energy goals, Executive Order and generally initiates the project
- Property Managers –
 - Understand the operational requirements, shortcomings, equipment issues, etc
- Engineering –
 - Review and approve detailed energy analysis, engineering & design documents etc. Are the Projects COR
- Contracting officers –
 - Include early on in the process to ensure smooth transition into contract documents
- Utility's Rep –
 - Understands the energy issues, and manages the process



Incentives/Rebates

Take advantage of all available incentives and or rebates

- Incentives from the state and/or utilities are used to offset the capital cost of energy projects
- Are vital to ensure that taxpayer dollars are not needlessly wasted (some rebates used \$ already paid agency as part of utility bill)
- Prior to funding energy projects, the agency knows in advance the amount of incentives for each project



Partnership Accomplishments

ConEdison *Solutions* has implemented many energy conservation projects in numerous Federal facilities.

- Example: VA Medical Centers (4) projects resulting in:
 - Energy savings of over 21 million kWh
 - Demand reduction of over 2,600 kW
 - Annual cost savings of \$1.5 million
 - Environmental benefit - Saved 18.7 million lbs of CO₂/yr
 - Equivalent to planting 220,226 trees



Partnership Accomplishments

Another Example: GSA Facilities

- In total we have implemented energy conservation projects in over 10 different GSA facilities
 - Annual Energy Savings of 22,400,259 kWh
 - Demand reduction 3,000 kW
 - Annual Energy Costs Savings of \$4,108,811
 - Annual Carbon Dioxide Reduction of 19,264,000 lbs/yr
 - Equivalent to planting 226,460 trees



Partnership Accomplishments

Utilities continually research and evaluate new energy efficiency technologies

- Light Emitting Diodes (LED) Lamps and all-in fixtures
- Lighting control systems
- Renewable technology – i.e. Solar energy systems (PV, thermal - hot water and air pre-heat)



Example-Energy Efficient Lighting project

Sample of a new technology - Stairwell Lighting Fixture

- Built –in Ultrasonic motion sensor
- Built – in 90 minute battery back –up
- Utilizes energy efficient lamps



Example-Energy Efficient Lighting project

- Stairwell lighting is on 24 hours a day seven days a week.
- This light fixture will operate ONLY when activated by occupancy.
- The “operate only” duration could be adjusted as required by property management
- Stairwells are hardly ever used in high-rise buildings, resulting in significant savings



Example-Energy Efficient Lighting project

- Reduces operating hours & kWh by as much as 98% (from 8760 to an average of 100 hours per year)
- Lamp life –20,000 hours
- Product life - 10 years
- Battery life – 7 years
- Maintenance is reduced to basically zero



Conclusion

Quotes Of The Day:

*When asked why he had a team of twenty-one assistants;
If I could solve all the problems myself, I would.*

By: Thomas Edison

*We must all hang together, or assuredly,
we shall all hang separately.*

By: Benjamin Franklin



Conclusion

Utility & Federal Government partnerships along with long term planning will provide beneficial energy efficiency results

Remember, energy efficiency improvements are the best way to reduce greenhouse gas emissions and address global warming

