

**FEMP FIRST THURSDAY**  
**SEMIN@RS 2.0**

What you need to know... live, online, and anytime.

## Learner's Guide

# Utility Energy Service Contracts (UESCs) & Energy Project Incentive Funds

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**(FEMP) Live Broadcast Date**  
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## Seminar: Energy Savings Performance Contracts

### Background on the FEMP First Thursday Seminars

The **First Thursday Seminars** are designed for Federal Energy Managers but are open to anyone whose scope of responsibility involves influencing decisions to increase energy efficiency, conserve water resources, and meet other Federal sustainability goals.

There are three ways to participate in the seminars.

1. Live streaming video available on the day of the event over the internet to a desktop computer or via a projection system in a conference room;
2. Digital and Analog Satellite downlink technology for group showings; and,
3. Archived streaming video available after the event over the Internet on a desktop computer or via a projection system in a conference room.

To learn more about accessing specific seminars, access <http://www.femp.energy.gov/firstthursday>.

### Introduction

The seminar “Utility Energy Service Contracts and Energy Project Incentive Funds” is being offered live on Thursday, April 7, 2011 at 1:30 pm Eastern Time. For access and other course information, visit [the seminar’s landing page](#).

The seminar is designed to give you up-to-date information on the value of and how one might consider the use of these types of contracts for facility improvements and energy and water efficiency measures. The seminar will last 90 minutes.

### Learner Objectives

After completing this seminar, the learner will be able to:

#### UESCs

1. Explain the purpose and benefits of a UESC.
2. Explain the purpose and use of an AWC (Area Wide Contract).
3. Discuss UESC contracting options.
4. Discuss a three-step process for implementing a UESC project.
5. List some FEMP resources available to support you.
6. Explore how a UESC might be helpful to address your site-specific needs.

#### Energy Project Incentive Funds

7. Explain the term “Energy Project Incentive Funds”.
8. Explain how Federal agencies can take advantage of Energy Project Incentive funds.
9. Discuss 2 different types of state programs offered.
10. Explain how you can locate different types of programs offered using FEMP resources.

### Asking Questions

At the end of the instructional segments, there will be an opportunity for you to ask questions. You will be able to email, fax, or ask questions by phone. You may email or fax your questions anytime during the broadcast. You will be able to speak “live” with the instructor at the end of the presentation. The phone, fax, and email information will be posted on the screen during the seminar.

During the live broadcast, ask questions by either:

- Dialing the toll free number 800-775-3728
- Faxing questions to 865-381-0554
- Or by sending an email to [FTS@energyworkshops.org](mailto:FTS@energyworkshops.org).

## Upon Seminar Completion

Each participant who registers for the training via FEMP Central or who signs a Roster (at a satellite broadcast location) will be sent an email with a link to the seminar evaluation and the open book quiz. If you do not have a Roster, they are [available here](#). Please sign the Roster and scan/ email to [ruleb@tds.net](mailto:ruleb@tds.net) or Fax to 865-381-0554. Upon completion of the evaluation and the open book quiz, you will be able to print a course completion certificate for your records.

## Additional Materials

The materials in this section support the learning in the presentation.

**Prior to attending this course, please spend 20 minutes reviewing the Department of Energy, Federal Energy Management Program (FEMP) website materials related to UESCs and Energy Incentive Programs on the FEMP website at <http://www1.eere.energy.gov/femp/financing/mechanisms.html>.**

## Glossary of Terms

**Combined heating and power (CHP)** - Areawide contracts (AWCs) are blanket contracts, which are essentially indefinite-delivery, indefinite-quantity (IDIQ) contracts for public utility services

**Combined heating and power (CHP)** - Also referred to as cogeneration. In power systems, use of steam for both power generation and heating. High-temperature, high-pressure steam from a boiler and superheater first passes through a turbine to produce power. It is exhausted at a temperature and pressure suitable for heating purposes, instead of being expanded in the turbine to the lowest possible pressure and then discharged to the condenser, which would waste the remaining energy in the steam. The steam at the higher pressure can provide large amounts of lower-temperature energy for heating buildings or evaporating brine in a chemical plant. Considerable overall energy savings can be obtained by cogeneration.

**Competition in Contracting Act (CICA)** - The Competition in Contracting Act of 1984 (CICA), 41 U.S.C. 253, revised the FAR to encourage competition for the award of all types of government contracts. The purpose was to increase the number of competitors and to increase savings through lower, more competitive pricing.

**Contracting Officer (CO)** - An individual who can bind the United States Government to a contract that is greater than the Micro-Purchase threshold.

**Contracting Officer's Representative (COR)** - Contracting officers may designate qualified personnel as their authorized representatives to assist in the technical monitoring or administration of a contract. This individual is referred to as a contracting officer's representative

**Contract Officer's Technical Representative (COTR)** - A Federal employee to whom a Contracting Officer has delegated authority in writing to act as his or her representative in monitoring specified aspects of contractor performance. These aspects may include ensuring that the contractor's performance meets the standards set forth in the contract, ensuring the contractor meets the technical requirements under the contract by the delivery date(s) and/or within the period of performance, and ensuring that the contractor performs within the price or estimated cost stated in the contract.

**Demand Response/Load Management Programs** - Programs that provide incentives to curtail demand during peak energy usage periods in response to system reliability or market conditions.

**Distributed generation** - Electricity generated from many small energy sources.

**Energy audit** - An inspection, survey and analysis of energy flows for energy conservation in a building, process or system to reduce the amount of energy input into the system without negatively affecting the output(s).

**Energy-conservation measure (ECM)** - A building material or component whose use will affect the energy consumed for space heating, space cooling, domestic hot water or refrigeration.

**Energy Escalation Rate Calculator (EERC)** - Computes an average annual escalation rate for fuel prices from the annual energy price forecasts of the DOE Energy Information Administration. This rate can be used to escalate contract payments in Energy Savings Performance Contracts and Utility Energy Services Contracts when the payments are based on projected annual energy cost savings.

**Energy management control system (EMCS)** - The Energy Management Control System (EMCS) is a computer-based means for controlling and monitoring heating, ventilation, air-conditioning (HVAC), energy use, and lighting systems.

**Energy Management Services Authorization (EMSA)** - is part of the GSA Areawide Contract, a contract between GSA and a utility for a range of services. Federal Agencies use the Areawide Contract by signing an Authorization that details the service to be provided to the Ordering Agency. The Areawide Contract sets up the general agreement for ordering utility services, while the EMSA is the vehicle to specify energy management projects.

**Emerging technologies (ET)** – These are contemporary advances and innovation in various fields of technology. Various converging technologies have emerged in the technological convergence of different systems evolving towards similar goals.

**Energy Project Incentive Funds** - Most states have energy incentive programs that help offset energy costs while promoting energy efficiency and renewable energy technologies. FEMP researches these programs on a state-by-state basis to help Federal agencies meet their energy management goals.

**Federal Acquisition Streamlining Act (FASA) of 1994** - The Federal Acquisition Streamlining Act of 1994 (FASA) made a number of changes in the way goods and services at, or below, \$100,000 are acquired. The Act replaces the \$25,000 threshold with a new “Simplified Acquisition Threshold” (SAT) of \$100,000 once an agency (or procuring activity within the agency) has achieved certain electronic commerce (FACNET) capabilities, is using them, and certifies that they have met the criteria. Until that time, the threshold is only increased to \$50,000.

**Geothermal heat pump (GHP)** - A geothermal heat pump, ground source heat pump (GSHP), or ground heat pump is a central heating and/or cooling system that pumps heat to or from the ground. It uses the earth as a heat source (in the winter) or a heat sink (in the summer). This design takes advantage of the moderate temperatures in the ground to boost efficiency and reduce the operational costs of heating and cooling systems, and may be combined with solar heating to form a geo-solar system with even greater efficiency.

**Green building Incentives** - Green buildings are designed and constructed using practices and materials that minimize the impacts of the building on the environment and human health. Many cities and counties offer financial incentives to promote green building. The most common form of incentive is a reduction or waiver of a building permit fee. The U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) is a popular point-based certification program for green buildings. The LEED system awards points for site selection and development; material, energy and water efficiency; indoor air quality; innovation; and the application of renewable technologies.

**High-temperature hot water (HTHW)** – High-temperature hot-water systems have hot water pumped from the generator throughout the distribution system. The circulator pumps are large enough to deliver the water at sufficient pressure to overcome any drop in the distribution system and the heat-consuming equipment. The major advantages of the HTHW heating system are makeup requirements, minimum maintenance, high thermal efficiency, and safe, easy operation and control.

**Interagency agreement (IIA)** - An interagency agreement is a document, generally between government agencies and departments that defines cooperative work between the agencies. The agreement will define the parties involved, work performed and the transfer of technologies and funds.

**Indefinite-delivery, indefinite-quantity (IDIQ) contract** - This is a type of contract that provides for an indefinite quantity of supplies or services during a fixed period of time. The legal origin of IDIQ contracts is the Federal Acquisition Regulation (FAR), section 16.501(a).

**Independent government estimate (IGE)** - An internal government document that tracks the government's appraisal and pricing of a task order.

**Life-cycle costs** - The sum of the present values of investment costs, capital costs, installation costs, energy costs, operating costs, maintenance costs, and disposal costs, over the lifetime of the project, product, or measure. Additional guidance on measuring life-cycle costs is specified in 10 C.F.R. 436.19.

**Measurement and verification (M&V)** - A process of using measurement to reliably determine actual savings created within an individual facility by an energy management, energy conservation or energy efficiency project or program. As savings cannot be directly measured, the savings can be determined by comparing measured use before and after implementation of a project, making appropriate adjustments for changes in conditions.

**Preliminary energy survey** - An inspection, survey and analysis of energy flows for energy conservation in a building, process, or system to reduce the amount of energy input into the system without negatively affecting the output(s).

**Photovoltaics (PV)** - A method of generating electrical power by converting solar radiation into direct current electricity using semiconductors that exhibit the photovoltaic effect. Photovoltaic power generation employs solar panels composed of a number of cells containing a photovoltaic material. Materials presently used for photovoltaics include monocrystalline silicon, polycrystalline silicon, amorphous silicon, cadmium telluride, and copper indium selenide/sulfide.

**Rebate Programs** - States, utilities and a few local governments offer rebates to promote the installation of renewables and energy efficiency projects. The majority of rebate programs that support renewables are administered by states, municipal utilities and electric cooperatives; these programs commonly provide funding for solar water heating and/or photovoltaic (PV) systems. Most rebate programs that support energy efficiency are administered by utilities. Rebate amounts vary widely by technology and program administrator.

**Source energy** - The energy that is used at a site and consumed in producing and in delivering energy to a site, including, but not limited to, power generation, transmission, and distribution losses, and that is used to perform a specific function, such as space conditioning, lighting or water heating.

**Utility** - The public agencies and privately owned companies that market, generate, and/or distribute energy or water, including electricity, natural gas, manufactured gas, steam, hot water, and chilled water as commodities for public use and that provide the service under Federal, State, or local regulated authority to all authorized customers. Utilities include Federally owned nonprofit producers, municipal organizations, and investor or privately owned producers regulated by a State and/or the Federal Government; cooperatives owned by members and providing services mostly to their members; and other nonprofit State and local government agencies serving in this capacity.

**Utility energy-efficiency service** - The demand-side management services provided by a utility to improve the efficiency of use of the commodity (electricity, gas, etc.) being distributed. Services can include, but are not limited to, energy efficiency and renewable energy project auditing, financing, design, installation, operation, maintenance, and monitoring.

**Utility energy services contract (UESC)** - A vehicle that a Federal agency and its utility can use to implement energy efficiency, water conservation, and renewable energy projects.