Federal Utility Partnership Working Group Meeting

May 22-23, 2013

Hosted by PG&E

San Francisco, CA

Meeting Record

The Federal Utility Partnership Working Group (FUPWG) is a joint effort between the Federal Energy Management Program (FEMP) and the utility industry to stimulate the exchange of information among participants and foster energy efficiency projects in Federal facilities nationwide.

The FUPWG meeting was held in San Francisco, CA on May 22-23 and was attended by 203 professionals:

52 Federal agency/lab representatives
62 utility officials
89 representatives from energy-related organizations

An additional 45 professionals participated in the Wednesday morning session via webinar. This was the first time a webinar option was offered. Feedback from the participants was very positive, especially from Federal contacts unable to receive approval to attend the meeting due to sequestration-related travel restrictions.

The complete meeting participant list can be found in Appendix A, and the agenda is provided in Appendix B. The meeting presentations can be found at http://www2.eere.energy.gov/femp/financing/uescs_spring13_agenda.html .

Welcome Remarks from the Host Utility
Steve Malnight, Vice President of Customer Energy Solutions, Pacific Gas & Electric Company

Mr. Malnight welcomed attendees to the FUPWG seminar and discussed his role in working on programs that help customers save energy. PG&E serves 15 million Californians with both gas and electric services. PG&E has 22,000 employees in its service territory of 70,000 square miles. PG&E has the largest privately owned hydro system, which helps them focus on their ability to offer clean energy to their customers. PG&E's focus on energy efficiency has kept the usage per person flat over the past 30 years.

Mr. Malnight talked about the extraordinary role the Federal government must play in shaping the energy industry and the importance of leading by example. Every major Federal agency is represented in California, and the Federal government is PG&E's second largest customer second only to the state government. The Federal government has a huge footprint in California, with 200 million sq ft in 35,000 buildings. The Federal government consumes 830 million kilowatt hours and 35 million therms and provides 135 million dollars a year in revenue. PG&E's incentives are aligned to help Federal government meet its aggressive energy goals.

Mr. Malnight highlighted some key Utility Energy Service Contract (UESC) projects in California and stressed that UESC programs are a phenomenal opportunity to bring together PG&E and the Federal government to help deliver on mutual goals.

- NASA Ames - $1,648,331 annual cost savings.
- Internal Revenue Service Fresno Office - $982,846 annual cost savings.
- Veterans Affairs San Francisco VA Hospital (5 medical centers) - $1,076,702 annual cost savings.

Mr. Malnight hopes that the future brings much more of the same with continued partnering on setting policies and objectives. PG&E will be focusing on the Department of Defense Electric Vehicle Pilot Program and the expansion of the UESC program.

To view Mr. Malnight's presentation, visit
http://www2.eere.energy.gov/femp/pdfs/fupwg_spring13_malnight.pdf

Chairman's Corner
David McAndrew, Chair of the Federal Utility Partnership Working Group, FEMP, U.S. Department of Energy

David McAndrew, FEMP's Project Lead for UESCs and state energy efficiency incentive programs, welcomed the attendees to the meeting, delivered logistics related announcements, and thanked Chris Gillis, Matt Bergh, and the rest of the PG&E team for hosting the meeting. Mr. McAndrew announced that there were approximately fifty attendees joining the meeting via webinar and welcomed these participants. Members of the Steering Committee were recognized for their efforts in planning the FUPWG event. Mr. McAndrew announced that continuing education units were being offered for the first time to FUPWG attendees.

Mr. McAndrew provided an update on some of FEMP's key FY 2013 projects including the UESC Guidebook. The UESC Guidebook is now complete and will be posted on the website soon. He encouraged all attendees to pick up a CD of the guide at the registration desk. Future training dates were reviewed. The next Advanced UESC Workshop is scheduled for July 17-18 in Atlanta, GA, and webinars are scheduled for June 20 and July 17. Participants were encouraged to contact FEMP if they are interested in hosting a FUPWG Seminar and reminded them that agency-specific UESC training is available.

Mr. McAndrew discussed the new Targeted Utility Rebate and Incentive Outreach Program. Federal participation in utility rebate and incentive programs has been low mainly due to the fact that agencies are not aware of these programs or they don't realize that they can accept these rebates and incentives. This program will assist utilities in reaching out to their Federal customers to help them become more aware of these incentives and understand how they can take advantage of them.

Mr. McAndrew reminded the attendees about the importance of providing UESC data and encouraged everyone to submit this information to Evan Fuka.

The 2013 Fall FUPWG Seminar will be hosted by Xcel Energy in Denver, CO in November – dates to be announced.

To view Mr. McAndrew's presentation, visit
http://www2.eere.energy.gov/femp/pdfs/fupwg_spring13_mcandrew.pdf .

Washington Update
Dr. Timothy Unruh, Program Director, FEMP, U.S. Department of Energy

Dr. Unruh began his presentation by sharing FEMP's new mission statement:
FEMP works with key individuals to accomplish energy change within organizations by bringing expertise from all levels of project and policy implementation to enable Federal Agencies to meet energy related goals and to provide energy leadership to the country.

Dr. Unruh feels that UESCs are hidden gems and have a lot more value than given credit for. FEMP is working on ways provide institutions with a better understanding of this program. An update on the Presidential Performance Contracting Challenge was provided. UESCs do count and are contributing 10-15% towards reaching the goal. There is currently $560 million in awarded projects. There are 242

projects in the development pipeline, and agencies are reporting that they still have 2.3 billion in projects that they plan to do as part of this challenge.

Dr. Unruh then discussed the ongoing efforts within the Federal Government to improve the approach to performance-based contracting so it becomes business as usual. These efforts include:

- Council on Environmental Quality (CEQ)/ Office of Management and Budget (OMB) – Standardized contract
- WIPO – State government competitive grants towards innovation
- FEMP – ENABLE, standardized energy conservation measure (ECM) calculations and measurement & verification (M&V)

eProject Developer is a new effort that focuses on the consolidation of scattered data on performance-based contracts. More thorough project data will be collected to facilitate benchmarking, and standardization will be emphasized in order to drive common terms and meanings throughout all performance-based contracting.

Dr. Unruh discussed ENABLE, which is a new performance contracting vehicle intended for Federal facilities with buildings under 200,000 square feet (traditionally underserved market). Key features of ENABLE include:

- Standardized and streamlined procurement process using GSA Schedule 84, SIN 246-53.
- Targets straightforward ECMs including lighting, water fixtures, and basic HVAC controls.
- Tools and templates available for all procurement activities throughout project life cycle including prescribed basic M&V.

Dr. Unruh provided updates on some of FEMP's current programs.

- Customer Service – Dan Gore, formerly with the Coast Guard, will head up the technical services program starting with FEMP in May, while Brad Gustafson focuses on customer service. FEMP feels that being more in touch with agencies at the project level will allow them to develop better solutions to meet agency needs.
- Large Renewable Energy Playbook – Provides a step-by-step process to help with larger renewable energy installations.
- Technology Deployment – Technology portal system where private companies will post information about the products they want to sell to the Federal government, which will allow for uniform comparison.
- Federal Clean Energy Grants – This new grant program should help seed new energy savings performance contract (ESPC) and UESC Combined Heat and Power projects.
- Compliance Tracking System – Results from audits required by the Energy Independence and Security Act 2007.

Dr. Unruh discussed the Executive Order on Industrial Energy Efficiency, including combined heat and power (CHP), which was signed on August 30, 2012. This Executive Order sets a national goal of 40 GW of new CHP installation over the next decade and directs agencies to foster a national dialogue through ongoing regional workshops to encourage the adoption of best practice policies and investment models. It also directs the departments of Energy, Commerce, and Agriculture, and the EPA, to coordinate actions at the Federal level while providing policy and technical assistance to states.

Dr. Unruh then discussed the White House Green Button Initiative. Major utilities and electricity suppliers have committed to providing more than 15 million households access to data about their own energy use with a simple click of an online "Green Button." The White House Green Button Initiative will help consumers reduce waste and shrink bills by providing secure, easy to understand information about how they are using energy in their households. Many FUPWG utilities, including our hosts for this meeting, PG&E, have joined this initiative.

Dr. Unruh reported that there will not be a government energy conference in 2014. Different avenues have been explored, and FEMP will continue to look at future opportunities.

Dr. Unruh reported that the guidance regarding the OMB memo discussed at the last meeting was not released due to concerns that publishing the guidance could possibly do more harm than good, since it is not normal for agencies to publish guidance on OMB guidance.

Dr. Unruh concluded his presentation by discussing the importance of reporting data so FEMP can more accurately track projects.

To view Dr. Unruh's presentation, visit
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_unruh.pdf .

Energy Market Outlook
Aaron Johnson, Senior Director, Customer Programs, Pacific Gas & Electric Company

Mr. Johnson began his presentation with an overview of. PG&E, which has been recognized for being a very green utility:

- Named by *Newsweek* as the "Greenest Utility in America" in 2009 and 2010
- Serves 5% of the U.S. population; emits < 1% of the total CO_2 emitted by the utility sector
- Connected more solar customers than any other utility in the country with 45,000 PV systems installed (30% of the installations throughout the entire U.S.)

Mr. Johnson discussed PG&E's Pricing Programs.

- Time-Varying Pricing – Part of state-wide plan to reduce demand peaks. Customers who move usage out of 12 – 6 p.m. block can receive a 30-50% discount.
- Peak Day Pricing is a new program that offers discounts to customers who can shift energy usage for four hour time slots on the 9-15 designated Event Days.

Federal facilities can select the Demand Response Program that best suits their preferences. Programs offered by PG&E include:

- Aggregator Administer
  - Dispatched in response to high temperatures or electricity prices
  - 30-minute or day-ahead advanced notification of events
  - Monthly capacity payments
  - Aggregators often shield participants from penalties

- Demand Bidding Program
  - Dispatched in response to high temperatures or electricity prices
  - Day-ahead notification of events
  - Voluntary, "best efforts" payment for energy reduced

- Peak Day Pricing
  - Dispatched in response to high temperatures throughout PG&E territory
  - Day-ahead notification of events
  - Discounted rate during most hours, elevated pricing during peak period on event days

- Base Interruptible Program
  - Dispatched to preserve grid stability
  - 30-minute minimum response time
  - Monthly capacity payment with high penalties for non-performance

Mr. Johnson discussed three of PG&E's key Distributed Generation Programs including the California Solar Initiative, CSI Thermal, and Self Generation Incentive Program.

Lastly, Mr. Johnson shared information on PG&E's Electric Vehicle Program, which was begun over the past year. Current focus is trying to figure out the right way to partner with those who want to adopt electric vehicles.

To view Mr. Johnson's presentation, visit
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_johnson.pdf .

Sustainability in GSA Buildings
Ruth Cox, Region 9 Regional Administrator, U.S. General Services Administration

GSA Region 9 includes CA, NV, AZ, and Hawaii. The region includes 173 owned buildings and 955 leased buildings and housing 100,000 Federal workers. Region 9's capital construction budget in FY 12 was 1.4 billion.

There are two sides to GSA's business. In addition to the public building service, GSA provides procurement leadership which provides the goods and services that people use to do their jobs every day in the Federal government. Ms. Cox reported $1.24 billion in total GSA schedule sales in FY12 – $468 million of that to small businesses. Region 9 has 5 owned buildings and 37 leased buildings that are LEED certified and 24 owned and 94 leased Energy Star buildings.

Ms. Cox discussed Region 9's Sustainability Plan, which focuses on building transformational change. The three main goals of the plan are the following.

- Operationalize a sustainability strategy that was put together at the central office with very aggressive goals.
- Institutionalizing sustainability in the way we do our jobs. Sustainability needs to be a consideration right from the beginning.
- Develop a roadmap with measurable goals.

Phase 1 of the plan focused on assessing the current state and developing a baseline. Phase 2 included setting the target for the future through national metrics, and Phase 3 focused on developing business cases and the roadmap to action.

Ms. Cox reported that the process was just as important as the outcome. Everyone who had a piece of the project sat at the table from the beginning, which allowed them to engineer for the best performance while meeting everyone's needs.

The Green Proving Ground Program has allowed GSA to determine how best to invest dollars in the future. A key focus is on the need to educate and incentivize tenant behavior in order to lower energy consumption in leased buildings. GSA's Sustainable Facilities Tool provides an interactive walkthrough comparison of green options for construction projects.

Ms. Cox talked about GSA's Building Assessment Taskforce. This multi-disciplinary team conducts holistic portfolio analysis based on financial, technical, and geographic considerations.

Ms. Cox shared information on some of GSA Region 9's current projects. The Los Angeles Federal Courthouse will be opening in 2016 and is showcasing GSA's High Performance Building Program. The target for the building is to be LEED Platinum.

Ms. Cox then discussed the five focus areas included in the Sustainability Plan including buildings, transportation, supply chain, workplace transformation, and sustainable community.

To review Ms. Cox's presentation, visit
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_cox.pdf .

EEI Update
Steve Kiesner, Director, National Customer Markets, Edison Electric Institute

Mr. Kiesner began his presentation by recognizing David Dykes from Southern Company for his dedicated service to the industry. Mr. Dykes will be retiring in the next few months.

Mr. Kiesner talked about the current state of the industry. He reported that the need for infrastructure investment is great due to the threat of cyber attacks, storms like Hurricane Sandy, and efforts involved with digitizing the grid, energy efficiency, and meeting environmental requirements. From 2009 to 2030 we are expected to spend approximately $1.8 trillion in infrastructure investment.

The impact of natural gas has been significant. That coupled with the environmental requirements are changing the way we do business. This has eased the pain of coal retirements. Three years ago coal comprised 51% of the portfolio mix nationwide. The use of coal fell to 37% in 2012.

The future looks bright for natural gas but customers need to watch the following closely:

- With the electricity industry's increasing move to gas, what does that mean to supply/demand/prices? Can the electric industry get long-term supply contracts? Dedicated pipelines? What about a cold winter scenario – how firm is the supply?
- Will the transportation sectors go toward gas? What does that do to supply and price?
- What about LNG exports?
- What about the renewables at your facilities?
- Real and perceived environmental issues?

Mr. Kiesner then discussed the transformation from the old (deregulation) to the new retail environment. The first wave of retail competition during the late 1990s was driven by a coalition of legislators, regulators, and large commercial and industrial (C&I) customers. The new retail "competition" is technology driven with new customer supply options. This new retail competition represents a fundamental challenge to existing utility business models.

Mr. Kiesner highlighted some of the public policies that are accelerating the transition:

- 29 states plus D.C. have renewable portfolio standard (RPS) programs, 17 with mandates for solar and other distributed generation.
- 43 states have net metering policies.
- Feed-in tariffs have been adopted or are proposed in 14 states.
- Virtual net metering is present in 14 states.
- Subsidies, rebates, tax incentives, financing incentives. CA is providing $1.9 billion over 10 years.
- Zero-net-energy goals and targets, microgrids.

Some of the additional factors that are contributing to the transition include:

- Department of Defense, the largest energy user in the United States, is actively seeking to implement renewables, "islanding" policies, and virtual net metering;
- Higher retail electric rates;
- Declining cost of PV; and
- Evolution of "smart" infrastructure technologies (power electronics, storage, sensing and measurement, controls, high speed communications).

Some challenges that lie ahead for utilities in the smart grid world:

- Constant pressure to reassess smart grid technologies
- A blizzard of mandates

- Electric companies will have to prosper in the face of changing requirements while retaining all of their "traditional" responsibilities. Must also cope with legacy costs for a system ill-equipped for new trends.

Mr. Kiesner concluded the presentation with his outlook for the future.

- The grid will be distributed, diverse, and much more complex.
- Generation expansion will run the gamut (centralized to co-gen, distributed renewables).
- Customers will be grid-connected and grid-involved.
- Transmission & distribution infrastructure will have to be transformed to accommodate this diversity.
- Distribution must be upgraded to handle variable renewable energy.
- Managing the grid will become more complex and costly as we move closer to RPS targets.
- Energy storage and electric vehicles will be game changers.
- New utility business models will emerge but no single model will dominate the market.

To review Mr. Kiesner's presentation, visit
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_kiesner.pdf .

Top Ten Energy Conservation Solutions
Siva Sethuraman, Manager, Industrial, Ag and Water Programs, PG&E

Mr. Sethuraman provided an overview of PG&E's top ten energy conservation solutions.

1. Whole Building – A comprehensive, performance-based approach to achieving 15+% energy savings in existing commercial buildings - quantification of energy use baselines and estimation of savings at the whole-building level, leveraging the power of interval meter data.

2. Small Commercial Energy Management Systems (EMS) – EMS products that offer integrated controls capabilities across multiple building systems (HVAC, lighting, etc.) and are specially designed for small, existing commercial buildings. Targeting a deemed rebate.

3. Analytics Enabled RCx – Software analytic tools can disaggregate whole-building smart-meter interval data into discrete end uses like lighting, HVAC, hot water, and plug loads. This in addition to analysis of weather-normalized load data allows for remote identification of operational energy efficiency opportunities.

4. Steam Traps – Offer therms savings and improved reliability, low customer implementation cost, and customer diversity [large C&I and small and medium businesses (SMBs)]. Steam traps have a structured audit process to identify failures; Use audit info to prioritize replacements.

5. LED Ambient Lighting – LED recessed fixtures and retrofit kits are the next generation of office lighting solutions. Lighting performance and energy efficiency have both improved dramatically, and the dimmable nature of LEDs will allow for full control capability. Solid state technology allows for longer product lifetimes, decreasing long-term maintenance costs.

6. Advanced Lighting Controls – Combining basic lighting controls into a comprehensive solution. Benefits are increased savings, improved controls for end users, and increased overall productivity. Controls along with LED maximizes LED energy performance.

7. Ductless HVAC – Well positioned for HVAC retrofits in SMB market with motivated manufacturers and excited distributors. This is a proven technology which provides 30% energy efficiency over packaged AC.

8. HVAC Quality Management Program – System maintenance to ASHRAE specifications is key to obtaining maximum energy efficiency.

9. Data Centers – Data centers including small server rooms in offices are a significant and growing electricity end use. Optimized IT equipment, cooling approaches, and controls systems offer high potential to manage energy usage.

10. Mr. Sethuraman asked the audience for their input on what they feel number ten should be. Electronically commuted motors were mentioned.

To view Mr. Sethuraman's presentation, visit
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_sethuraman.pdf

VA/PG&E Case Study
Chris Gillis, Principal Account Manager, Pacific Gas and Electric Company
Kevin Maxson, Chief of Engineer & Facility Management Sacramento, U.S. Department of Veterans Affairs

Mr. Maxson began the presentation by reviewing the UESC project profile. Three VA Medical Centers and two clinics within VISN 21 were included in this project, and this was the first UESC for Mr. Maxson and PG&E. The project size was $9.9 million. The five locations included the San Francisco VAMC, Fresno VAMC, Mather VAMC, Martinez Outpatient Clinic and Community Living Center, and the McClellan Outpatient Clinic. Business development began in May 2009 after an initial discussion at the FUPWG meeting. The project was awarded in October 2011 and construction was completed in July 2013.

Mr. Maxson and Mr. Gillis discussed some of the main challenges and solutions related to the project.

- Five Locations and Three Budgets – Coordinating payments from 3 different facilities through a process unknown to team.
  Solutions:
  - Signature of commitment to the program
  - Reminders
  - Early start to obligate funds
  - Bi-weekly project status updates

- Limited Financial Resources – Achieving energy conservation goals with limited capital.
  Solutions:
  - ECMs vs. life cycle payback
  - Third party financing

- Hospital Environment – Constructing ECMs in a 24/7 hospital environment.
  Solutions:
  - Coordination with medical staff, maintenance staff, and leadership
  - Flexibility and adaptability

- Identifying Conservation Measures – Identifying conservation measures which achieve energy goals and can be interpreted as both aggressive and conservative.
  Solutions:
  - Numerous meeting and calls that drove revisions to the ECM list
  - Brainstorming sessions

- Implementing Conservation Measures – Implementing ECMs and working with unique personalities.
  Solutions:
  - Extensive communication, signatures, and meetings.

- Recognizing you can only do what you can do.

Mr. Maxson shared statistics comparing energy usage in all facilities in 1st quarter FY12 and 1st quarter FY13, which showed that there were significant energy benefits resulting from this project.

Mr. Gillis shared the project results for this UESC.

- Implementation Costs – $9.9 Million
- Annual Cost Savings – $ 1.06 Million
- Simple Payback – 10 Years
- Project Size – 2,000,000 sq ft
- Financed Term – 10 Years
- Performance Assurance – ECM Commissioning

Mr. Maxson concluded the presentation by reporting that through the implementation of multiple energy conservation measures, this UESC will save the VA over 6,000,000 kWh and 20 million gallons of water annually. The project was funded through the energy savings.

To view Mr. Maxson and Mr. Gillis' presentation, visit
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_gillis.pdf

FEMP's Large-Scale Renewable Energy Guide
Brad Gustafson, Supervisor FEMP Customer Service, FEMP, Department of Energy

FEMP's Renewable Energy program works to increase the proportion of renewable energy in the Federal government's energy mix by providing:

- Web-based knowledge and tools
- Direct project technical assistance
- Interagency coordination
- Renewable energy guidance and reporting requirements

Mr. Gustafson reported that FEMP's Large-Scale Renewable Energy Guide was developed to establish standards for large scale renewable projects. The Guide shows a common process for large RE projects, in spite of different terms, from three key perspectives: developer, federal agency, and financier. The Guide was developed to help agencies meet the following renewable energy goals:

- DOD goal: produce 3 GW of renewables by 2025
- Federal goals: 7.5% of total electricity must come from renewable electricity by 2013 and beyond, and a 28% reduction in greenhouse gas emissions by 2020

Mr. Gustafson reported that a key strategic issue relates to the importance of having competitive projects. Attracting private capital investment to the Federal sector is essential to accomplish RE project goals. Federal project opportunities must compete within competitive capital markets for project development investment and project execution capital investment.

The Guide provides a general resource that develops Federal employee and private sector awareness and understanding of each other's operating environment, goals, language, and process. It also creates a methodology to build strong business cases, define and mitigate risks, and establish good project characteristics so that the private sector will respond to the Federal competitive process and invest in and develop the projects.

Mr. Gustafson shared information on the project development framework and Guide's structure:

Section I: Language and terms

Section II: A Reliable, Repeatable Development Process

- The Commercial process
- Project Fundamentals
- Project Development Framework

Section III: Application of Project Development by a Federal Agency
- The Federal Process

Mr. Gustafson concluded his presentation by stressing some key points and providing the link for the Guide: http://www1.eere.energy.gov/femp/technologies/large-scalereguide.html .

Federal Agency Key Points:
- Federal agencies need private capital for large-scale renewable projects.
- Risk is critical for capital.
- Agencies can reduce project risk by using the process and frameworks in the Guide:
  - Do early investment in market analysis and predevelopment.
  - Use a consistent approach.
  - The Guide helps agencies understand the private sector process.

Private Developer Key Points:
- There is a large Federal market for large-scale renewable projects.
- The Guide helps Agencies follow key methodical steps that developers understand, reduce project risk, and make projects attractive to private investors.
- The Guide helps the private sector understand the Federal agency process.

Utility Key Points:
- Federal agencies are committed to hosting large-scale renewable energy projects.
- Utilities will play a key role as potential sole or partial off-takers.
- Agencies need good relationships with their utilities to facilitate interconnection and avoid curtailment.

To view Mr. Gustafson's presentation, visit
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_gustafson2.pdf

Combined Heat and Power
Bob Slattery, Research and Development, Oak Ridge National Laboratory

Mr. Slattery defined combined heat and power (CHP) as the on-site simultaneous generation of two forms of energy (heat and electricity) from a single fuel/energy source. CHP is an integrated energy system that
- is located at or near a facility,
- generates electrical and/or mechanical power,
- recovers waste heat for heating, cooling, and dehumidification,
- can utilize a variety of technologies and fuels, and
- is also referred to as cogeneration.

Mr. Slattery described the two basic types of CHP:
- Conventional CHP, which is also referred to as topping-cycled CHP or direct-fired CHP and
- Waste heat to power CHP, also referred to as bottoming-cycle CHP or indirect-fired CHP.

Mr. Slattery discussed the benefits of CHP.

Benefits to Federal Facilities
- Reduced energy costs
- Reduced risk of electric grid disruptions and greater grid security
- Stability related to uncertain electricity prices

- Immediate path to increased energy efficiency and reduced GHG emissions

National Benefits
- Low-cost approach to new electricity generation capacity
- Lessens need for new transmission & distribution infrastructure
- Enhances U.S. manufacturing competitiveness
- Uses abundant domestic energy sources
- Uses highly skilled local labor and U.S. technology

Mr. Slattery reviewed the regulatory drivers for CHP which include EISA 2007, EPAct2005, E.O. 13424 and 13514, and E.O. of August 2012 – Accelerating Investment in Industrial Energy Efficiency.

Mr. Slattery reported that over two-thirds of the fuel used to generate power in the United States is lost as heat. CHP recaptures much of that heat, increasing efficiency and energy services. CHP is already an important natural resource and is used at the point of demand. There is 82 GW of installed CHP at almost 4,000 U.S. industrial and commercial facilities.

Mr. Slattery discussed CHP technologies and reported that natural gas is the dominant fuel for existing CHP. Eighty-five Federal facilities have CHP with a total operational capacity of 1,112 MW (855 MW at military bases).

Mr. Slattery discussed CHP project implementation and the steps of the CHP project process:
1. Screening and Preliminary Analysis
2. Feasibility Analysis
3. Investment Grade Analysis
4. Procurement, Operations and Maintenance

Mr. Slattery concluded his presentation by discussing the financing vehicles utilized for CHP projects, which include UESCs, ESPCs, and enhanced use lease (EUL).

To view Mr. Slattery's presentation, visit
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_slattery.pdf .

How to Use ENABLE Tools for UESCs
David McAndrew, Chair of the Federal Utility Partnership Working Group, FEMP, U.S. Department of Energy

Mr. McAndrew began his presentation with an overview of the ESPC ENABLE program. ENABLE is FEMP's new project-funding offering intended to fill existing program gaps. It is specifically designed to support the needs of small Federal sites through a reduced ECM scope and streamlined process. ENABLE is intended for facilities with buildings under 200,000 sq ft, which has traditionally been an underserved market. The program was officially launched in June 2012. Pilot projects are underway with a growing pipeline. FEMP is offering technical and contracting resources for all projects free of charge through FY13.

Mr. McAndrew outlined the key program components:
- Guaranteed savings (option A); no up-front costs for Federal agencies
- Standardized and streamlined process to quickly award projects and realize savings using GSA Schedule 84, SIN 246-53
- Targets straightforward ECMs including lighting upgrades, water conservation, and basic HVAC controls
- FEMP-provided tools and templates assist agencies and ESCOs with project development and contracting
- Prescribed basic M&V for each ECM

Mr. McAndrew reviewed the process for ENABLE and reported that ENABLE projects can be awarded in as little as 8 weeks from release of the Notice of Opportunity and can achieve energy/cost savings in less than 6 months.

The basic concept of an ENABLE UESC includes the following:

- No need for special authority or a new program
- Utilize streamlined selection procedures if there is more than one serving utility
- Utilize ENABLE investment-grade audit (IGA) Tool to identify ECMs' energy and cost savings
- Use outputs from ENABLE IGA Tool and utility's Technical Proposal as attachments to an Authorization for Energy Management Services under an existing GSA Areawide Contract to form UESC Task Order

Bob Slattery of ORNL assisted with the presentation by covering details on the FEMP IGA Software Tool. Mr. McAndrew then discussed a proposed UESC/ENABLE process and asked FUPWG members to provide comment and input.

1. IGA/Kickoff Meeting Call – Once the utility is selected, the agency should schedule an IGA Kickoff Meeting/Call (preferred). The agency should provide a draft Scope of Work (SOW) document defining the areas to be audited prior to the meeting/call. ENABLE IGA is more like a Preliminary Assessment under a normal UESC, and because the process is so simple it is likely that the utility would be willing to complete it at no risk or obligation to the agency.

2. IGA/Award: Site Visit – The agency and utility hold brief site visit coordination meeting to finalize any logistical issues. The utility performs the site audit to collect data and assess savings potential for the three ECMs. The agency and utility hold site visit wrap-up meeting and discuss any follow-up or action items required.

3. IGA/Award: IGA Software Tool – Once the utility has conducted the site visit, the utility enters data into the FEMP IGA Tool. The tool will be used to identify pre- and post-retrofit conditions and estimate energy and cost savings for the project. The IGA Tool has a separate module for each ECM category and auto-generates summary data tables and audit findings. Tool outputs can form the basis for contract documents.

4. Final Proposal – Once the final scope of the project has been determined the agency will ask the utility to prepare the FP which would include:

- Utility Technical Proposal (derived from the SOW) which includes ECM descriptions, M&V plan, and management approach
- Price Proposal (TO Schedules) with financing if applicable

5. IGA/Award: Award – Upon receipt and review of an acceptable Final Proposal the agency can make the Task Order Award for Design and Installation. The elements of the Award would be an Executed Exhibit "C" Authorization for Energy Management Services with the following attached:

- Agency Scope of Work / Statement of Work
- Technical Proposal
- Price Proposal (TO Schedules)

6. Installation/Performance Assurance and Acceptance –

- Hold post-award conference call/meeting*
- ECMs installed according to Final Proposal plans and installation schedule
- ECMs commissioned per Cx & M&V plan* in Final Proposal
- ECMs are inspected by utility and agency COR/COTR
- 30 day Performance Assurance Test Period
- Utility submits Post-Installation Cx & M&V Reports*
- Project Acceptance Checklist*

* Denotes FEMP template available

Mr. McAndrew concluded the presentation by encouraging attendees to share their thoughts and input to further develop this concept.

To view Mr. McAndrew's presentation, visit
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_mcandrew2.pdf .

Utility Infrastructure Improvements Using GSA Areawide
Richard Butterworth, General Counsel, and Linda Collins, Contracting Officer, General Services Administration

Linda Collins began the presentation by reporting that there are currently 101 GSA areawide contracts. She then reviewed the GSA Authority for Utility Services - the Federal Property Administrative Services Act of 1949, as amended – 40 U.S.C. 501. This legislation gave GSA ten-year contracting authority for utilities and gave GSA the authority to prescribe policies and methods regarding utilities.

Services that can be procured under the Areawide include the following:

- Bundled utility service
- Transportation/transmission services
- Connections
- Line Extensions
- Transformers
- Meters
- Substations
- Ancillary services for the provision of utility services

Ms. Collins and Mr. Butterworth talked about the new Exhibit D. Exhibit D was developed to address interconnect agreements and all future areawides will include Exhibit D. Exhibit D provides even more transparency that GSA's intentions are to have these interconnect agreements fit under the areawide contracts. These agreements are approved by the Utility Commission, the term length is the same as other services, and the Government takes the utility service in accordance with State Law.

There was a lengthy discussion regarding interconnection agreements. Mr. Butterworth recommended that agencies who are concerned about signing interconnection agreements take early steps to check on their utility's terms and conditions prior to committing to projects and spending the Government's money.

Ms. Collins talked about the Green Button Initiative. Green Button is an industry-led effort that provides easy access to usage data. The data is provided as a text file and the format is standard across utilities. Twenty-seven utility companies have committed to this initiative. Information on the initiative and how to implement it can be found at http://www.greenbuttondata.org .

To view Mr. Butterworth's and Ms. Collins' presentation, visit
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_collins.pdf .

Labs 21 Update
Dale Sartor, High Tech and Industrial Systems Group, Lawrence Berkeley National Laboratory

Mr. Sartor began his presentation by providing some background information on Labs 21 and the International Institute for Sustainable Laboratories (I^2SL). Labs 21, which is now I^2SL, is dedicated to improving the environmental performance of U.S. laboratories. It was established in 1999 and now includes more than 5,000 members. A few years ago it was decided that Labs 21 would spin out to the private sector and the name was changed to I^2SL. I^2SL is a member-driven organization and holds an

annual conference and workshops. The mission is that of Labs21, to teach, share, and promote the development of sustainable high-performance facilities worldwide. The 2013 I^{2}SL Annual Conference is scheduled for September 23-26 in Minneapolis, MN. New initiatives include the following:

- I^{2}SL Chapter Development
- BIM for Operations and Management
- Training and Certification for High Tech O&M
- A Continuous Performance Improvement Program (CPIP)
- Third-Party Financing for Labs and Related High-Tech Facilities

Mr. Sartor talked about third-party financing and utility incentive programs as they relate to labs. Large labs, including Federal labs, use huge quantities of energy for heating, cooling, lighting, and process uses to support their research activities. The average lab facility uses three to ten times as much energy (per sq ft) as a comparable office building. Labs and other high-tech facilities have unique characteristics that must be addressed when doing energy efficiency projects. As with other Federal facilities, agencies do not have the funds to retrofits labs and must rely on third-party financing and utility incentive programs.

Mr. Sartor then discussed some of the technical opportunities that are available in labs. Lab energy use is dominated by HVAC. Time and effort should be focused on the following "big hits:"

- Scrutinize the air changes: Optimize ventilation rates
- Tame the hoods: Compare options
- Drop the pressure drop: Use lower pressure-drop HVAC designs
- Get real with plug loads: Right-size HVAC systems
- Just say no to re-heat: Minimize simultaneous heating and cooling

Mr. Sartor shared information on the I^{2}SL–FEMP & ESCO Working Group. This working group is tasked with defining challenges and solutions. A proposed laboratory site visit is being discussed to collectively identify the possible opportunities, hurdles, and value propositions for both the client and the program partners.

Mr. Sartor concluded the presentation by presenting information on the Labs21 Toolkit. This resource includes a design guide, case studies, technical bulletins, information on energy benchmarking, and design process tools.

David McAndrew encouraged utilities to get involved in I^{2}SL.

To view Mr. Sartor's presentation, visit
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_sartor.pdf .

How to Work with your Utility to Meet Metering Requirements
David Dykes, Federal Segment Manager, Southern Company
Mike Ellis, Director, AGL Energy Services
Brad Gustafson, Supervisor FEMP Customer Service, DOE FEMP
Matt McCann, Deputy Director for Facilities Energy, Office of the Secretary of Defense

Brad Gustafson introduced the panel and provided some background information on metering including the laws and requirements relating to this topic. Federal metering needs include installation of proper meters, data collection, site/enterprise-level data analysis, and actionable outcomes that reduce energy use and/or reduce energy expenses.

Mr. Gustafson provided information on the work that FEMP has done relating to metering. Current outreach includes webinars and workshops. Mr. Gustafson then discussed the status of Federal building metering and reported that agencies reported near full compliance for electric metering in 2010. Agencies can use help to expand application of advanced meters and with data analysis.

David Dykes addressed the group next to cover the utility perspective. Mr. Dykes reviewed the government requirements regarding metering including Section 103, EPAct 2005 and DoD 16 April Directive.

Mr. Dykes discussed what is available from your serving utility. Metering is a CORE competency of your serving utility. They handle installation, repair, and maintenance of meters, they have proper test equipment and certified personnel, and the infrastructure already exists. They use the Sensus "Flexnet" System. Procuring Metering Services is within the Scope of GSA Areawide Utilities Contracts.

Mr. Dykes then discussed the levels of metering.

- Interval Data – Minimum (Revenue Meter)
  - *May* require installation of a pulse initiator to interfaced with customer EMCS
  - Information provided at end of billing period
  - Nominal fee
- Next Level – More Information (Revenue Meter)
  - Online data from Utility web portal
  - Data current through previous midnight
  - Data displayed in a number of formats – digital and graphic
  - User selectable parameters
  - Normally includes more detail billing info
  - Normally at a cost
- Next Level – Near Real Time (Revenue Meter)
  - Graphic and digital data through the last interval
  - Normally at a cost

Custom metering services are offered by some utilities but availability is limited. These are metering services beyond the revenue meter. Data is collected through Utility's AMI system, hosted on the web and owned by customer. The drawback is it that it is likely that there is no compatibility between metering technologies used by different utilities.

Mr. Dykes covered some issues to consider related to metering.

- Advanced meter systems provide more information than expected
  - AMI system components are very different from old electro-mechanical meters
  - AMI meters contain built-in alarms – overheating
- Does data need to be uploaded into a Gov't system for every premise?
- Does the Gov't really need real time data?
- Is there really a need for personnel outside the facility to be able to see data at will?

Mr. Dykes concluded his presentation by telling the audience that the utility industry is ready, willing, and able to meet agency metering needs.

Mike Ellis provided the gas utility perspective on metering. AGL Resources metering includes multiple LDCs with legacy metering equipment. Several use Itron 100G technology which offers mobile, once-a-month data collection. Technology for capturing internal data is installed on a case-by-case basis. Interruptible-rate customers have an electronic corrector installed on the meter. Typically data is retrieved once a day and internal data is stored on the utility server. Large users have Remote Terminal Units (RTU) installed for real time data transmission. These units have a hard-wired connection with a dedicated phone line and electricity is provided by the utility or a solar PV. Data can be collected on a 15-minute interval and is stored at the utility server.

Mr. Ellis concluded his presentation by sharing how AGL Resources can help agencies meet Federal metering goals:

- Provide interval data for efficient operations
- Metering solution can be customized to facility needs

- Provide cost effective, flexible solutions

Matt McCann participated in the panel remotely to talk about DoD's metering policy. This new policy was published on April 16, 2013.

This policy requires advanced meters on individual DoD-owned facilities**:**

- To capture minimum of 60% of electricity and natural gas use
- To capture all steam use for facilities connected to district steam systems
- To capture all water use at water-intensive facilities
- All meters must be connected to an Advanced Metering System
- All DoD Components must develop a Meter Data Management Plan (MDMP) which describes how the policy will be implemented and how the data will be used to better manage energy and water use.

Commander McCann discussed cost considerations relating to metering which include:

- Meters should provide only the necessary capabilities for the application
- Leverage virtual meters and existing analog meters
- Implement large metering contracts for bulk pricing
- Consider wireless configurations
- Incorporate metering with large capital improvement projects
- Identify other means to reduce the cost of metering

Security considerations were discussed. Meters must comply with DoD's Information Assurance/Cyber Security 8500 series of directives and instructions

Commander McCann concluded his presentation by stressing the importance of partnering with utilities to share existing meter data, negotiate acceptable terms for new meter installation, and take advantage of cost sharing opportunities. More robust partnerships could benefit both parties.

To view the presentations for this session, visit the following:
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_dykes.pdf
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_ellis.pdf
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_gustafson.pdf
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_mccann.pdf

ENERGY LAWYERS AND CONTRACTING OFFICERS WORKING GROUP

Facilitators: Linda Collins, GSA, and Julia Kelley, Oak Ridge National Laboratory

Exploring Ways to Standardize Federal Energy Contracts

Chandra Shah, NREL

Chandra Shaw began the presentation by providing some background on FEMP's initiative to standardize Federal energy contracts. The vision is currently focused on ESPCs but UESCs could be looked at in the future. The vision relates to the standardization of cross-sector and cross-project terms, conditions, reporting methodologies, financial calculations, and contract structure to improve transparency and replicability of performance contracts. Adoption of the Federal Uniform Performance Contract will increase transparency and reduce transaction costs. Another key benefit is that technical and financial data and specifications will be presented in a clear, predictable manner in all contracts.

Ms. Shaw shared some initial findings relating to savings calculations, assurances and guarantees, equipment performance standards, and pricing.

Ms. Shaw reviewed a chart that outlines the due dates for milestones and deliverables. The current focus is on collecting, reviewing, and mapping out common components of energy performance contracts.

Efforts will then shift to summarizing and identifying categories of similarities and differences. A draft uniform Federal Energy Performance Contract will be completed in July and stakeholder feedback will be solicited. March 2014 is the due date to publish the Uniform Federal Energy Performance Contract.

To view Ms. Shaw's presentation, visit
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_shah.pdf .

Discussion of UESC Contracting Officers' Issues, Part II
Alice Oberhausen, FEMP Utility Team

Alice Oberhausen presented questions that continue to arise from the acquisition community as newcomers explore meeting energy goals through UESC methods. These questions were the basis for group discussion relating to these topics.

Question 1: With so much legislation surrounding the requirement for the reduction of energy in Federal facilities, and the authorization for entering into contracts with servicing utility companies, why is there still confusion about the details in the acquisition processes?

Question 2: Should the Service Contract Act apply to the post-award requirement to provide performance assurance analysis and reports?

Ms. Oberhausen reported that she doesn't believe that the Service Contract Act would apply to this situation. Performance assurance should just be a deliverable under your task order. In addition the Service Contract Act does not apply to Part 41 of the FAR anyway.

Question 3: Why is a Justification for Other Than Full and Open Competition required when legislation authorizes the direct award to a serving Utility?

Question 4: At what point does a Design need to be paid for to avoid violation of the Anti-Deficiency Act?

Question 5: If the cost of the Design provided in FY12 is planned to be rolled into the cost of the project, but the project is cancelled in FY 13, what year's appropriation should be used for payment? Has there been a violation of the Anti-Deficiency Act?

If you are reasonably sure that you are going to be able to get your contract awarded in the same fiscal year that you are asking for the design, then you might feel comfortable rolling that cost into the project. If you haven't paid for the design and the project falls through the agency is responsible to cover this cost. Funds for the design should be set aside in advance. If the project goes through, then the cost for design can be rolled into the project and the funds set aside can be de-obligated.

Ms. Oberhausen discussed the Buy American Act as it relates to UESCs. There is no indication in FAR Part 41 for the acquisition of utility services that the Buy American Act applies. Yet, it is commonly recognized that the installation of equipment to produce the energy savings required is accomplished by companies and tradesmen who perform construction activities as described in FAR Part 36. The conclusion has been to include the Buy American Act and corresponding clauses in the Task Order. Should the Contracting Officer require the utility to identify non-compliant equipment with its submission of the Investment Grade Audit? If foreign equipment is identified at this stage, the Contracting Officer can begin the process to obtain a waiver due to non-availability or unreasonable cost before award of the Task Order. This will mitigate delays to the schedule and anticipated start of payment to the lender.

Ms. Oberhausen discussed some of the challenges to the utility companies relating to this issue. Many utility companies use ESCOs who are large business concerns. Ms. Oberhausen feels that utilities should try to utilize small businesses that are qualified to perform these services more often. Small businesses typically have lower overhead rates, are committed to the local community, and have a stake in providing exceptional service.

FEMP now has Advanced UESC Workshops and a new Contracting Officer Guidebook that provides more in-depth information and practical exercises developed from actual situations encountered during the UESC solicitation and award processes. These are both great resources for contracting officers.

Question 6: If you are a utility working on a UESC for a Federal customer and have purchased some equipment that they are going to install at that Federal site and have paid sales tax and maybe property tax - do those taxes get passed on to the Federal customer?

Ms. Collins reported that a contracting officer can issue a letter to the utility with the tax exempt information. Ms Oberhausen has found that the IRS and the state government where the work is being done often have differing opinions regarding non-exempt actions. Her view is that state regulations determine whether the agency is responsible for these taxes.

To view Ms. Oberhausen's presentation, visit
https://www1.eere.energy.gov/femp/pdfs/fupwg_spring13_oberhausen.pdf .

Appendix A
2013 Spring FUPWG Seminar – Final Attendee List

Christopher	Abbuehl	Constellation
Steve	Allenby	Allenby Associates
Ed	Anderson	FPL
Carld	Auguste	NStar
John	Avina	Abraxas Energy Consulting
David	Base	Chevron
Andy	Bayowski	kW Engineering
Deanna	Bebb	P & E Automation
John	Beck	Eaton Energy Solutions
Gene	Beck	FPL
Matt	Bergh	Pacific Gas & Electric Company
Hubbert	Booze	Bureau of Reclamation
Sterling	Bowen	PowerSecure
Diane	Breithaupt	United States Coast Guard
Charlie	Brewer	McLean Engineering Co., Inc.
Brian	Brown	US Air Force
Jess	Brown	PG&E
Dennis	Burke	Dominion Federal Corporation
Nathan	Butler	SunEdison
Karen	Butterfield	SunPower
Richard	Butterworth	General Services Adminstration
Stephen	Butterworth	Pacific Northwest National Laboratory
Blaine	Cacho	Hawaiian Electric Company
Maryanne	Campbell	Philadelphia Gas Works
Penny	Casey	Western Area Power Administration
Toby	Chandler	AGL Resources
Bud	Clark	American Electric Power
Linda	Collins	General Services Administration
Phillip	Consiglio	Southern California Edison
Chris	Cook	CCI Alliance
Susan	Courtney	Energetics Incorporated
Kathleen	Cruise	US GSA
Allison	Cryns	National Park Service
Scott	Dever	Philadelphia Gas Works
Doug	Dixon	Pacific Northwest National Laboratory
Pamela	Dodd	Department of Energy
E. W.	Dovel	Harris Lighting
John	Dukes	Constellation

Ken	Durham	Energy Systems Group
David	Dykes	Georgia Power/Southern Company
Michael	Ellis	AGL Energy Services
Lisa	Estlow	Chevron Energy Solutions Company
Amanda	Fernandez	Department of Energy
Marilyn	Fine	Noresco
Peter	Flynn	Bostonia Partners
Scott	Foster	Hannon Armstrong
Evan	Fuka	Energetics Incorporated
Alison	Gangl	Schneider Electric
Steve	Ganzer	SEE Solutions
Patricia	Gardner Young	NRG Solutions
John	Garnett	PG&E
Mike	Gartland	JCI
Lara	Gast	Department of Veterans Affairs
Peter	Giannotti	Southern California Edison
Karen	Gierhart	Banc of America Public Capital Corp
Chris	Gillis	PG&E
Bathsheba	Gilmore-Turnage	Johnson Controls, Inc.
ERIC	GOELZER	AGEISS, Inc.
Nichelle	Grant	Siemens
vicenta	guerin	con edison
Brad	Gustafson	DOE FEMP
Ryan	Hamilton	NRG Energy Inc.
Scott	Harbers	Trane - Federal Solutions Group
John	Hargrove	NV Energy
Ahmed	Hassan	Vetren Adminstration
Vincent	Heuser	Nolin RECC
Mark	Hillman	Florida Power and Light
Anthony	Hills	Southwest Gas Corporation
Donald	Hladun	Lockheed Martin
JP	Hoffman	Siemens
Michael	Holda	LBNL
Jim	Holton	Georgia Power
Joe	Holton	Canoochee E.M.C
Blair	Horst	Lawrence Berkeley National Laboratory
William	Howing	Lawrence Livermore National Laboratory
George	Imel	PowerSecure
Ronald	Ishii	AESC
M. Renee	Jewell	USDA Forest Service
Rickey	Johns	Chenega

Jay	Johnson	Chevron
Kevin	Johnson	Vectren - ESG
Aaron	Johnson	PG&E
William	Johnston	Schneider Electric
Thomas	Jones	MasTec North America, INc.
Ray	Kackley	American Electric Power
Burke	Kascha-Hare	REC SOLAR
Grant	Keath	Ameresco
Julia	Kelley	Oak Ridge National Laboratory
Steve	Kiesner	Edison Electric Institute
Karin	King	National Nuclear Security Administration
Hays	Kinslow	63d Regional Support Command
Rob	Kittel	Self Employed
Stan	Knobbe	Southern California Gas Company
Pamela	Komer	Veterans Affairs
Higgins	Kristan	Department of Veterans Affairs
Dennis	Kunkel	Pacific Gas & Electric
Rich	LaMont	Hussmann Corporation
Robert	Laurence	NStar
Greg	Lee	Nolin RECC
Mark	Levi	General Services Administration
Jon	Lewis	Honeywell
Eric	Llewellyn	San Diego Gas & Electric
Tracy	Logan	DOE FEMP
Carl	Lundstrom	Eaton Energy Solutions, Inc.
Allie	Mace	Bonneville Power Administration
Randy	Manion	Western Area Power Administration
PETER	MASLO	CEU
Kevin	Maxson	Department of Veterans Affairs
David	Mayfield	VCSG, LLC
david	mcandrew	FEMP
Mike	McClure	Energy Systems Group
Jason	McCulloch	Philips Lighting
Holly	Merrihew	Southern California Edison
Josh	Mersfelder	Hannon Armstrong
Christopher	Mills	Energy Systems Group
Bill	Mooney	Jefferson National Laboratory
Kim	Mueller	Dominion
Patricia	Nardone	Georgia Power Company
Eric	Nyenhuis	AECOM
ALICE	OBERHAUSEN	Alice Oberhausen Consulting

David	Olson	ICF Internatinoal Inc.
Ken	Ormsbee	Chevron
BARBARA	OSTERKAMP	US ARMY CORPS OF ENGINEERS
William Ellis	Oswald	Gulf Power Company
Jane	Parks Marshall	AGL Energy Services
Brent	Patera	PG&E
Griselda	Perez	Southern California Edison
Joe	Pierzina	SDG&E
Chris	Pimentel	Powersmiths
Florence	Pinigis	SCE
Lara	Polansky	US Forest Service
Veronica	Porter	Powersmiths International Corp
Joseph	Price	Ameresco
Ray	Prosise	Spirax Sarco
Scott	Provinse	SunEdison
Anthony	Raimondo	Southwest Gas Corporation
Teri	Rainville-Scott	Baltimore Gas & Electric
Greg	Reardon	Alabama Power Co
Alan	Riefenberg	United Financial of Illinois, Inc.
David	Roberts	Cypress Envirosystems
Gerald	Robinson	Lawrence Berkeley National Laboratory
Anthony	Roner	AECOM
Matthew	Rush	Chevron Energy Solutions
Dan	Sakamoto	Hawaiian Electric Company
Andrew	Saleh	Gulf Power Company
Anneliese	Schmidt	ANTARES Group Inc.
ted	schnipper	Stanford University, SLAC National Accelerator Lab
Rudd	Schultze	Alabama Power
Roderick	Schwass	Jacobs Engineering Group
Siva	Sethuraman	PG&E
Jeffrey	Seto	AESC
Natasha	Shah	Southland Energy Solutions dba Southland Industries
Chandra	Shah	National Renewable Energy Lab
Bradford	Sharp	REC Solar
Shafaq	Sheikh	Pacific Gas and Electric Company
Jeff	Sherman	Schneider Electric
Stephen	Sherman	Alabama Power Company
Matthew	Short	Southland Industries
David	Shutler	Utility Systems Solutions, Inc.
Mark	Shvartzman	Southern California Edison
Bob	Slattery	Oak Ridge National Laboartory

Brant	Small	Lutron
Randall	Smidt	US Army
Phillip	Smith	Honeywell Building Solutions
Samuel	Smith	Department of Veterans Affairs
Aleida	Socarras	Florida Public Utilities
Robert	Somers II	2rw Consultants, Inc.
Kathryn	Sommerkamp	Army Corps of Engineers, Huntsville Center
Steve	Spanbauer	Johnson Controls
Allison	Spector	Cascade Natural Gas Corporation
Anthony	Spera	Con Edison Solutions
Nicole	Stanbra	AGL Energy Services
Chuck	Strand	Climatec Advanced Solutions
David	Struck	USCG
Henry	Summers	Enovity, Inc.
David	Swanson	AGEISS Inc.
Ralph	Terrell	TECO Energy/ Peoples Gas
Karen	Thomas	National Renewable Energy Lab
Aniello	Tortora	Southland Industries
Deanna	Toy	PGE
Oanh	Tran	Washington Gas Light Company
Bill	Treadway	FPL Energy Services
Jay	Tulley	Army - Presidio of Monterey
Dawn	Turner	Abraxas Energy Consulting
Johan	Ulloa	Constellation
Timothy	Unruh	DOE / Federal Energy Management Program
Deb	Vasquez	National Renewable Energy Lab
Monica	Vigil	United States Coast Guard
Andrew	Wakefield	Lutron Electronics
Colton	Walter	VA Palo Alto HCS
Richard (Ric)	Washburn	NV Energy
Laura	Wetmore	PG&E
Rebecca	Wetzstein	AECOM
francis	wheeler	Water Savers, LLC
reginald	williams	Department of Veterans Affairs
Charles	Williams	Lawrence Berkeley Lab
Kelsey	Williams	Westar Energy
keith	williams-goldman	KWG Consulting LLC
Brigitte	Wilson	Chenron Energy Solutions
Scott	Wolf	DOE FEMP/Contractor
Carl	Wouden	Johnson Controls Inc.
Randy	Wynn	Alabama Power

Kathrine	Yates	CPS Energy

Appendix B
2013 Fall FUPWG Agenda

Federal Utility Partnership Working Group Seminar
May 22-23, 2013
San Francisco, CA

FEMP Federal Energy Management Program

Hosted by: PG&E

PG&E Pacific Gas and Electric Company®

Monday, May 20

9:00 am – 4:30 pm	**UESC Advanced Workshop**

Tuesday, May 21

9:00 am – 4:00 pm	**UESC Advanced Workshop**
5:00 pm – 6:30 pm	**FUPWG Steering Committee Meeting**
7:50pm	**Informal FUPWG Networking – 750 in Hilton Hotel**

Wednesday, May 22

7:45 am	**Registration and Continental Breakfast**
8:30 am	**Welcome** - Steve Malnight, Vice President of Customer Energy Solutions, Pacific Gas and Electric Company
8:45 am	**Chairman's Corner** – David McAndrew, DOE FEMP
9:00 am	**Washington Update** – Tim Unruh, DOE FEMP Program Manager
9:30 am	**Energy Market Outlook** – Aaron Johnson, Pacific Gas and Electric Company
10:15 am	**Networking Break**
10:45 am	**Sustainability in GSA Buildings** – Ruth Cox, General Services Administration
11:45 am	**EEI Update** – Steve Kiesner, Edison Electric Institute
12:15 pm	**Lunch – Top Ten Energy Conservation Solutions** – Siva Sethuraman, Pacific Gas and Electric Company
1:30 pm	**VA/PG&E Case Study** ▪ Chris Gillis, Pacific Gas and Electric Company ▪ Kevin Maxson, U.S. Department of Veterans Affairs
2:15 pm	**FEMP's Large-Scale Renewable Energy Guide** – Brad Gustafson, DOE FEMP
3:00 pm	**Networking Break**
3:30 pm	**Combined Heat and Power –** Bob Slattery, Oak Ridge National Laboratory
4:20 pm	**Wrap-up** – David McAndrew, DOE FEMP
6:00 – 7:30pm	**Networking Event at Hilton Hotel**

Thursday, May 23

7:45 am	**Continental Breakfast**
8:30 am	**Announcements** – David McAndrew, DOE FEMP
8:35 am	**How to Use ENABLE Tools for UESCs** – David McAndrew, DOE FEMP
9:00 am	**Utility Infrastructure Improvements Using GSA Areawide** ▪ Richard Butterworth, General Services Administration ▪ Linda Collins, General Services Administration

9:45 am	**Networking Break**
10:15 am	**Labs 21 Update** – Dale Sartor, Lawrence Berkeley National Laboratory
11:00 am	**How to Work with your Utility to Meet Metering Requirements** ▪ David Dykes, Southern Company ▪ Mike Ellis, AGL Energy Services ▪ Brad Gustafson, DOE FEMP Brad Gustafson, DOE FEMP ▪ Matt McCann, Office of the Secretary of Defense
11:50 am	**Evaluations and Wrap-up** – David McAndrew, DOE FEMP
Noon	**Lunch On Your Own**

Special Session: Thursday, May 23
Energy Lawyers and Contracting Officers Working Group

Facilitators: Linda Collins, GSA and Julia Kelley, ORNL

1:00 pm	**Announcements and Introductions -** Linda Collins (GSA) and Julia Kelley (ORNL), FEMP Utility Team
1:05 – 1:30pm	**Exploring Ways to Standardize Federal Energy Contracts –** Chandra Shah, NREL for Tracy Logan, DOE-FEMP Program
1:30 - 2:30pm	**Discussion of UESC Contracting Officers Issues, Part II –** Alice Oberhausen, FEMP Utility Team, Richard Butterworth, GSA, and Linda Collins, GSA
2:30 pm	**Adjourn**

2013 Fall FUPWG Seminar

November 2013 (Dates TBD)
Denver, CO

Hosted by:

Xcel Energy℠

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Federal Utility Partnership Working Group
Code of Conduct

All delegates are required to honor the Federal Utility Partnership Working Group guidelines developed by the Working Group Steering Committee. Hospitality/social functions (on and off site) are strictly prohibited from conflicting with the timing of official Working Group activities listed in the "Schedule of Events". Aggressive sales techniques are to be avoided while attending Working Group meetings. Signs and flyers may not be displayed or distributed in the meeting or guestroom areas of the hotel reserved for Working Group participants.