Meeting Notes

How to Facilitate and Finance DG/CHP (Distributed Generation/Combined Heat and Power) to Meet Energy Security and Conservation Goals

Tech-Specific Assessment Results and Stakeholder Discussion
August 20, 2003
Orlando, Florida

Over 40 representatives from 12 federal agencies, along with representatives from private developers and financiers, met with Beth Shearer, Director of the U.S. Department of Energy's Federal Energy Management Program (FEMP), to discuss options to facilitate clean and efficient distributed generation and combined heat and power (DG/CHP) projects at federal facilities, using private financing.

Background
FEMP's mission includes fostering energy security and energy efficiency in federal facilities. These goals can be supported with the use of distributed generation and combined heat and power (DG/CHP) systems. A market study found significant potential for net savings from CHP in federal facilities. And many installations need large new infrastructure investments for energy security but do not have sufficient appropriations. In 2003, FEMP assessed options to facilitate the financing and development of federal DG/CHP projects that could increase security as well as help meet energy conservation goals. The assessment found that ESPC, UESC and enhanced use lease (EUL) are presently serving as financing vehicles for several DG/CHP projects.

There did not appear to be a need to develop a separate "Tech-specific ESPC" for DG/CHP because ESCOs are moving forward with projects under existing contracts where conditions are appropriate. However, there are opportunities to expand private investment in DG/CHP on federal sites through a tech-specific approach for EUL and similar property management authorities. With EUL, federal property is transferred to a private party that designs, builds, finances, owns, and operates the DG/CHP equipment. Although EUL and similar property management authorities are not "procurements" and are not governed by the FAR, they *can* complement ESPC and UESC as options for private financing. The military services and the Veteran's Administration currently have explicit EUL authorities and GSA is working to obtain congressional authorization for EUL on behalf of other civilian agencies.

Summary of Meeting
Key points and observations from this meeting include:

1. There is strong interest in EUL for DG/CHP and any financing vehicles that make could make DG/CHP projects easier to finance and implement (per comments from VA and BPA during meeting). There were over 80 specific expressions of interest to attend the

meeting. Many DG/CHP systems in state and private facilities proved to be effective during the recent blackout, raising interest level in new projects.

2. Although interest is high, many federal energy managers have received little information on what EUL is and how it works (e.g. it is difficult to break out of the standard concepts of a FAR-governed **procurement**, or leasing of equipment; EUL is neither).

3. Many ideas were offered by participants to facilitate and finance more federal DG/CHP; some are already being pursued by FEMP, while others could be considered by a proposed inter-agency task force. Suggestions from the group included:

-develop and disseminate improved site/source guidance (with CHP examples)
-provide examples and guidance on performance contracts and guarantees for CHP
-identify best practices to manage utility and gas price volatility risk
-look into FAR title XXII to add incentives for CHP
-further develop EUL—"do process to select developers and we'll use it, " said one agency rep
-confirm potential benefits of CHP investment tax credits (proposed in new Energy legislation and likely help EUL projects but not other financing mechanisms)
-update information to tap State and utility incentives (they are growing, changing)
-develop and make available an EUL "solicitation" model for different authorities
-develop models for EUL energy service agreement terms
-provide more EUL information on a web site
-investigate micro-grid opportunities at federal sites

4. FEMP's role will be to facilitate processes, convoke meetings, and assist to share best practices and lessons learned across agencies. FEMP cannot address all the suggestions made by the group. However, FEMP can invite other agencies to participate in an inter-agency task force to coordinate future efforts on this topic.

Detailed Meeting Minutes

Beth Shearer, Director, Federal Energy Management Program, welcomed the participants.

Keith Kline, ORNL gave a presentation which outlined the rationale for DG/CHP, various options to facilitate DG/CHP, and FEMP assessment findings (presentation is available at http://www.ornl.gov/femp/pdfs/030820_Energy2003_DGCHP_Shearer-Kline-Hughes_OrlandoFL.pdf). Presentation summary:

1. Why DG/CHP? - It is a key component of energy security solutions. The national market of federal projects with payback of less than 10 years has great potential. Energy cost savings; helps meet federal energy goals and reduce emissions.

2. Hurdles: Low electric rates, staff/budget limitations, concerns about O&M, R&R, fuel

costs, uncertainty of future mission, lack of funds for large investments...

3. Assessment: Looked at past and current projects. Should we have a tech-specific mechanism to facilitate access and get more projects done? An umbrella approach has worked in the ESPC arena. Tech- specific contracts helped GHP.

4. Recent CHP project financing has been through ESPC, UESC, Enhanced Use Lease (EUL) and appropriations (for small projects).

5. What should FEMP do? DG/CHP finance options considered: modify ESPC and incorporate EUL; create a new Super-ESPC; use DoD authorities, EUL and existing IDIQs. Advantages and disadvantages were evaluated for each option.

6. Issues: Legislation combining EUL with ESPC is a non-starter; property management and energy people live in different worlds; getting buy-in from agencies. Economics: does it make sense as a private deal? Are there other customers? Local issues, rates, permits, etc. OMB/GAO scoring issue--don't want it to be scored a capital project. The private sector is interested in making it easier to develop successful federal DG/CHP projects.

7. Conclusion: A tech-specific approach to EUL could help ease access, save time, reduce costs and enhance marketing. Process streamlining and multi-agency approach are critical components to make this an effective tool.

8. FEMP role: Limited funds but willing collaborator—continue support/improvement of ESPCs, UESCs and ongoing tech support; liaison with DOE/EERE technology advancements.

9. What else should be done to facilitate projects?

Discussion/Questions

These notes were taken informally during the meeting and reflect comments and views of the meeting participants, not those of FEMP. This is not an official transcript.

---GSA is now doing two CHP projects in NY. Encountered questions on site vs source savings and it was difficult to get "guaranteed savings" in the NY market. FEMP needs to support agencies to calculate source/site savings and how to apply Section 206. Examples of how savings are guaranteed in CHP projects, given gas price uncertainties, would also be useful.

---FEMP: Yes, we are reviewing the process for giving site vs source credit for CHP projects that use non-renewable resources, such as natural gas. FEMP project facilitators can access examples of how savings have been guaranteed in other CHP projects.

--Have developers looked at the proposal (in Energy bill) for an investment tax credit for CHP? The benefits will likely be limited to EUL or similar "private" approaches.

---VA: cycle time has been long for EUL; now looking into doing multiple projects at a time and ways to reduce finance charges for third party financing on each individual project. Perhaps select a regional special purpose entity (SPE) to specialize in these projects—and VA is interested in having other agencies participate.
Also, EUL may not work well in isolated areas; UESCs or ESPCs may work better. EUL works best where there is strong market demand for energy services in the area. At the VA, they do two-year power purchase agreements under EUL.
---Private industry would like longer term power purchase agreements.
---Up to ten years possible for utility agreements (needs research ref. EUL).

---Under current legislation, civilian agencies cannot sell back extra power from on-site generation. Would be good to change this.

---Bonneville Power Administration: There is great demand for this… BPA has more DG/CHP projects under discussion based on interest from other federal agencies for financial support, than any other kind of project. BPA financing is flexible to accommodate DG/CHP projects. BPA only enters as partner with federal agencies where local utilities and stakeholders are comfortable with it. Have not financed such a project yet, but expect to in FY 2004. If conventional options are not available or economic, BPA financing may be a viable option. Legislative authority? BPA does not get involved with scoring issues (that is left to site/agency).

---CHP technology is advancing. Micro-grids advancing. Good for more remote sites and for security. Which states are most friendly to this? [see http://www.nemw.org/uschpa/ and recent NEMW study http://www.nemw.org/output_emissions.pdf]

---Army may have potential micro-grid site. Where there is more than one tenant on a federal reservation, micro grids are useful, but how do you sub-meter? --Many military bases sub-meter out. Micro grids also can act as back-up to main grid if it goes down. Switch gear technology is really changing and allows sub metering, immediate switching.

---DG contributes to energy security and could help avoid blackouts like recent one in the Northeast, but still lacking federal incentives.

---Air Force: How is volatility in natural gas market going to affect CHP over the next few years? Many pipelines are running at capacity. ---Several options available including dual fuel capabilities, long term contracts, special hedges.

---FEMP: biomass is an alternative, and NETL has mapped biomass sources within five miles of all federal sites in the U.S.

---Issues are similar for gas and electric distribution. What is incentive to maintain transmission? How do you manage that? Incentive hasn't been there--it is an unknown risk. What is basis for exit fee or standby charges? Some states (NY, CA) reviewing this to support DG/CHP. Having options (alternative fuels, dual fuel systems, on-site power) is advantageous.

What can FEMP do better/differently?

---AF: We don't want to own/operate power plants. We want quality and reliability in Btus and kWhs that are delivered at the best possible price. If FEMP can help us get an RFP out that will achieve that, it would be helpful.

---Part 12 of the FAR: can we use that to highlight CHP? It allows for more commercial contracts. FEMP could help develop an RFP just for acquisition of kwhs and btus. Help minimize risk.

---More information sharing; more use of web site(?)

---Could modular units owned and operated by someone else be added to the GSA schedule?

---Could FEMP put out a request for expression of interest about how do we do this? That way we start the flow of ideas.

---Voltage support issue and CHP (CHP projects in some areas add value to grid--$100/kw mentioned). Micro-grid issues.

---VA expressed interest in EUL and possible federal project consolidation in regions. Are others interested? Shall we organize an interagency task force or working group? (several present indicated support).

---This could be timely—now looking at paying a high cost to get rid of several old central heating plants. If private sector would like to take some of those and redevelop them into new energy plants, and cover the costs at no risk…(?)—just give us an RFP.

---It's not an RFP; its property management approach--fundamentally different… VA looking at 40-50 sites nationwide as possible CHP projects.

FEMP: Thank you.
Meeting notes will be shared with participants.

Introductory power-point presentation for this meeting is available at:
http://www.ornl.gov/femp/pdfs/030820_Energy2003_DGCHP_Shearer-Kline-Hughes_OrlandoFL.pdf

Other presentations from E2003 track on Energy Security through DG/CHP can be found at:
http://www.energy2003.ee.doe.gov/topic-energysec.htm