Q&A Clarifications – 12/21/01

COMBINED HEAT AND POWER

The following questions were submitted prior to and subsequent to the bidder's conference and convey clarifications and Q&A discussed at the bidder's conference of Dec. 3, 2001. Questions are in black followed by responses in red. These should be reviewed in addition to the red amended changes in the RFB bid document also issued 12/21/01.

Under section 2.2 CAPACITY, PRICING AND TURN-KEY GUIDELINES, you require: Pricing Information. offering firm prices for project-specific RFP's: To include minimum one-year parts and labor warranties on commercially reasonable terms, standard or better for the industry and equal to or exceeding the standards in Section 2.4 below. Section 2.4 WARRANTIES AND SERVICE CONTRACT reads: Respondents seeking eligibility are expected to offer, directly or through an affiliate, contractor, energy service provider or other business arrangement:

- Five-year parts and labor warranty
- Following the warranty period, an annual service contract on commercially reasonable terms
- Comprehensive onsite training in operation, safety, and maintenance consistent with warranty
- provisions.

The question is, is the Authority seeking minimum 1-year parts and labor warranty to be included in all pricing submittals or is a 5-year part and labor warranty the minimum to be included? Warranty and service agreement questions addressed and amended. See Section 2.2, 2.4, and 3.3.7 of RFB Version 12/21/01.

Re: 2.2 Pricing Information - Does the Authority intend to provide further guidance on a "generic installation" that will allow for effective bid comparison?

The values stated above are purely arbitrary. However if these perimeters remain undefined it will be difficult to equalize the submitted proposals. 2) Re: 5.5 One Proposal Per Respondent - Is it acceptable to submit one proposal with multiple equipment sizes? For example one schedule A for 30 kW units and one schedule A for 60 kW units. Further generic criteria have been established for a "generic installation". See Section 2.2, page 5 of RFB version 12/21/01. Yes, it is acceptable to submit one proposal with multiple equipment sizes.

On page 2 - "The Authority reserves the right to reopen the eligibility list periodically and to place additional companies on the list." What is meant by "reopen the eligibility list. Does this mean re-bid? Will the pricing submitted by the original selected companies be held confidential so that future bidders will not have an unfair advantage? The viability and usefulness of the lists as determined by the users predicates need to re-open, but generally this speaks to a new technology, unit capacity size not seen before, or if we find we need to evaluate some project-related expertise not currently represented in the bid lists. Clearly there may/will be technological advantages that the State and other users would want to avail themselves of. With respect to confidentiality, privately-owned company financial records and legally recognized trade secrets are used for evaluation and either destroyed or returned at the bidder's request and expense. All other information is considered public, including prices.

Page 15 - Exhibit B states "Operational requirements for CHP systems to qualify for credit consideration are" What does credit mean? Emissions credits? YES.

3. Page 15 - Exhibit B Are the systems that we bid limited to 30 to 400 kw? 1000 kw seems to be the cut off for most other state programs. No, we would be interested in seeing sizes in comparison up to 1mw. This is clarified in Exhibit B of the RFB version 12/21/01.

4. Page 15 - Exhibit B The RFB states that "Systems should be required to meet the standards of and be listed by UL 2200 and UL 1741." What is meant by "should"? Is UL listing of the system a requirement? Clarified as amended. See Exhibit B, RFB version 12/21/01.

5. Is it possible to get an estimation of the quantities of units in the various size ranges anticipated to be purchased by the State? No, ongoing efforts to assess potential host-sites in State and local public buildings to support purchase goals are underway and will dictate size needs. This is why we have asked for a range of sizes.

1. Training: Who are the people we are training? May we establish minimum criteria for trainees? If not, what is the remedy? If service contracts are required during the warranty period and/or a service contract is purchased following the warranty period, would training be for operation and safety only?

Training is for host-site operation and safety staff of host-site agency or facility, but should be proposed consistent with Section 2.4. Warranty and service agreement questions have been addressed and amended. See Sections 2.2, 2.4, and 3.3.7 of RFB Version 12/21/01.

2. Assuming a 5-year warranty, what does the state envision for a post-warranty service period? See above reference.

3. Can an applicant bid solely electric-only systems? YES.

4. Will there be a qualification process to include additional subcontractors after the bid is awarded?

It is preferred that subcontractors, as part of team qualifications, be submitted now for evaluation and eligibility. Eligible bidders will have the flexibility to replace or offer new subcontractors in response to RFPs that are different than reviewed subcontractors in the eligible bid pool. However, the bidder would need to justify the replacement and the replacements or new subcontractors would need to be evaluated under the original requirements of this RFB; moreover, we/the State/other local entities reserve the right to approve or disapprove.

5. Do meters need to qualify as utility grade or can internal metering systems qualify? Will metering be done per individual unit or per system? Meters are required to be utility grade.

6. Will emissions/emissions degradation be monitored? Bid respondents will have to comply with any and all air permit for operations rules and regulations as adopted by the CARB and as enforced by the local air quality management districts (AQMDs). This includes emissions levels, monitoring requirements, and managing emissions degradation issues. Since the intent of the RFB is to install and operate the cleanest available generating technologies for application as distributed generation CHP systems, bid respondents should ensure that their equipment complies with and will comply with currently adopted and future emissions standards and requirements, including emissions levels, monitoring, and emissions degradation issues.

COMBINED HEAT AND POWER

Exhibit B to the CHP RFB cites an example with a 35 MWe CHP, yet 400 kW is indicated as the maximum unit size. Would the CPA consider larger unit sizes if warranted by project size? Could you comment on the range of project size/capacity? For purposes of evaluation and for this RFB stage, we clarify the size issue for per unit capacity up to 1MW to avoid factoring in additional complexities frequently associated with larger projects. You may price a range of sizes up to 1MW.

Certain prices in Exhibit A will be highly dependent on project specific details (e.g., balance of plant equipment, installation, construction, etc.) and difficult to pinpoint several years out. That being said, to what extent is the CPA looking for firm versus indicative pricing for Exhibit A? We expect indicative pricing for costs other than system equipment components and parts. Firm pricing on system equipment components and parts will come in at the RFP stage and should reflect prices at or below that expressed in the RFB. You should project prices over various production capacity and unit sizes that you can deliver and over what time. Specify assumptions underlying your projections.

…The initial direction of the program was to support "emerging technologies". The RFB has evolved into an open RFB for combined heat and power systems. Given this scope, and the removal of unit size restrictions, this presents the possibility of some rather substantial projects (1 mega-watt or greater) resulting in fewer small-scale projects. The larger the scale of projects, the less likely it will be that emerging technologies will have the opportunity to participate. (We) propose that a minimum of 50% of the CHP capacity in each year be reserved for microturbine (30kW to 400kW individual unit) based technologies. This allocation would represent the amount in the original microturbine RFB draft document. Importantly, at least four microturbine companies have demonstrated an interest in this RFB by attending the bidder's conference. A specific microturbine allocation would provide DGS with the ability to site some of the older, developed technologies while at the same time provide some degree of competitiveness and market stabilization for the emerging microturbine industry. It is not feasible to make a firm commitment to set aside a percentage of procurement for a specific type of technology without knowing detailed host-site specifications and capacity needs, which are underway as this is being written, but will be ongoing over the next few years. Conversely, it would not be reasonable to ask a vendor to make a policy commitment to manufacture only microturbine based technologies as described above without having firm, reliable, and secure knowledge that there is a market for their systems.

This allocation of capacity to the microturbine project is merited similarly to that of the fuel cell project. Microturbines are a new technology at the early stages of commercialization. Current microturbine technology is already cleaner than established technologies; in addition, microturbines offer the potential to be much cleaner in the near future (as clean as a combined cycle central power plant). Moreover, microturbines have a natural fit with fuel cells because the waste heat of a high temperature fuel cell can be used to drive a microturbine. This hybrid system offers the potential for ultra-high efficiency and negligible emissions. Established technologies, including reciprocating engines, do not fit within this clean and highly efficient energy future. The primary purpose of this RFB is to evaluate the very issues these comments raise, in parallel with host-site evaluation. We have stated and affirm here it is our intent through the RFB to evaluate price, technology, capacity, and experience from which we hope to develop RFPs which would then further define criteria to guide the selection of specific technology.

Is there a place for system integrators on the bidder's list? Also, the high-level objectives of CPA may in many cases be best satisfied by a hybrid solution, e.g. CHP combined with solar. What approach do you recommend in order to be considered as provider of this type of solutions? The RFB process (all three types) is intended to solicit responses from a variety of entities (vendors and manufacturers and turn-key/integration companies) that may deliver all or part of installed capacity needs of the State or other local public entities. We ask that you submit minimum required information, but also offer as much information about integrated technologies (complete relevant RFB document Exhibits for separate or combined technology types for information

purposes) or capacity that you can deliver beyond the minimum information required in the bid. However such information will not be evaluated criteria for the RFB stage. Like all other approaches, integrated combined technology applications and third-party O&M arrangements will be part of what the State, the Authority, and local entities evaluate for cost-effective, viable approaches to deploying these technologies.
Is the State asking specifically about requiring generators to be UL 2200 listed, and whether or not "…bidders have to site-list each facility if you're not 2200 certified?" We have modified the language in Exhibit B (RFB version 12/21/01) to the extent that it provides the bid respondents with options to demonstrate that their power generating equipment meets and/or complies with existing stationary generator assembly safety standards as recognized, approved, and/or codified by national and/or international agencies, associations, and committees. If testing information is submitted, the test results must clearly indicate compliance with these standards, and demonstrate that these tests have been performed in accordance with standard testing procedures at Nationally Recognized Testing Laboratories or comparable accredited testing facilities. The intent of this technical requirement is to have the highest level of assurance that the power generating equipment can be operated with no risk of fire, electrical shock, or injury to persons, and the burden of proof for meeting this technical requirement is on the bid respondent and/or equipment manufacturer. Any requirements for "site listing" of generation equipment will be in accordance with any and all applicable tariffs, rules, regulations, and jurisdictional authorities as deemed appropriate and necessary, and not specifically a requirement of this RFB nor subsequent RFPs.
Please define CHP efficiency. Is that electric plus half of thermal divided by fuel?" The definition for CHP system efficiency has been noted in Exhibit B (RFB version 12/21/01) in the discussion section of CHP Emissions Credit. The definition of CHP system efficiency is electrical output plus useful process heat output divided by total fuel input. This efficiency is defined in the CARB document "Guidance for the Permitting of Electrical Generation Technologies" dated September 28, 2001 and relates specifically to the calculation for determining CHP credits when compared to the air emissions standards being slated for adoption starting in 2003. This definition of efficiency is different from the PURPA Section 292.205 QF definition of cogeneration system efficiency, which is defined as electrical output plus one half of useful process heat output divided by total fuel input.