

**AMENDMENT NUMBER 0003**  
**BAA 11-002 ENTITLED**  
**“RENEWABLE SUSTAINABLE EXPEDITONARY POWER”**

The purpose of Amendment 0003 is to provide answers to following questions:

**Question 1:** Will a copy of the presentation be made available?

**Answer 1:** Yes, a copy of the webinar presentation has been posted to the site specified in the webinar notification email.

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**Question 2:** Are proposals expected to be complete systems or would modifications/addons to existing designs be considered?

**Answer 2:** A complete system is required for the Phase II Full-Scale Demonstration.

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**Question 3:** Can you give more detail on what would be considered "affordable?" Is there a target cost?

**Answer 3:** A production per unit cost not to exceed \$22,000 (excluding trailer) is targeted. The affordability study required by the BAA should include both production costs and operational costs as a minimum.

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**Question 4:** Does the complete/final production team need to be assembled at the time of submitting the whitepaper?

**Answer 4:** This will not be a production contract.

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**Question 5:** Will more than one white paper be accepted from one organization?

**Answer 5:** Yes.

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**Question 6:** It was stated that optimal affordable fuel economy is primary objective, what are the other objectives listed by level of importance?

**Answer 6:** Key performance requirements are not prioritized.

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**Question 7:** Are questions previously submitted via e-mail going to be addressed or do I need to resubmit?

**Answer 7:** Previously submitted questions need not be resubmitted.

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**Question 8:** If a company can move faster than this timeline will funding be made available accordingly?

**Answer 8:** FNC funding is programmed in advance and made available on an annual basis. Acceleration of the funding in advance of the phasing schedule in the BAA is not possible.

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**Question 9:** What were the dollar values again?

**Answer 9:** Please refer to the BAA for these figures.

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**Question 10:** Did I hear correctly \$25K for the first 4 awards?

**Answer 10:** Each basic IDIQ awarded will have a contract minimum of \$25k, however this is not the same as the maximum task order values. These values are referenced in Section 2 of the BAA.

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**Question 11:** What was the detailed budget available by Phases?

**Answer 11:** Section 2 of the BAA contains this information.

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**Question 12:** Is there any SB set aside associated with this effort?

**Answer 12:** No. See section 3 of the BAA.

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**Question 13:** Where are the funding levels outlined for each of the Phases of the program?

**Answer 13:** Section 2 of the BAA.

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**Question 14:** Is there an advantage to being compatible with legacy generators? If so, which ones?

**Answer 14:** Evaluation criteria is outlined in section V of the BAA. Being compatible with legacy generators is not a Key Performance Requirement as specified in Section I of the BAA.

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**Question 15:** What were the FOB system item #'s noted after the discussion of ANMJQ-43?

**Answer 15:** MEP-831A (3kW TQG)

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**Question 16:** Please write-out the model numbers of the current power plants you mentioned (I got ANMJQ-43, but not the rest of MEP8\*\*\*).

**Answer 16:** The power plant includes two MEP-831A 3kW TQGs.

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**Question 17:** What is the noise rating of the MEP-831A?

**Answer 17:** PM-MEP's Mobile Electric Power Handbook specifies the noise rating of the MEP-831A to be 70dBA @ 7 meters (23 ft.).

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**Question 18:** What are the average kWh per day or per month levels?

**Answer 18:** 3 kW continuous output power to support a 15-day mission.

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**Question 19:** How much fuel is currently consumed in a 15 day period by the ANMJQ-43 power plant with two MEP-831A (3kW TQG)?

**Answer 19:** One MEP 831A consumes 0.33 gph JP-8 at rated load.

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**Question 20:** Is the 24% eff of the system you just described at peak power rating?

**Answer 20:** The 24% efficiency is at rated power (3 kW).

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**Question 21:** Is the stated 40% fuel savings a hard requirement or an objective or an example?

**Answer 21:** 40% is not a requirement. The primary objective of this BAA is determining the optimal, affordable solution for achieving dramatic reduction in expeditionary fuel usage.

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**Question 22:** What is the desired service lifetime (both running time and calendar time) at rated temperatures?

**Answer 22:** Requirements have not been formulated at this time.

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**Question 23:** I would suggest a link be posted on FedBiz for teaming opportunities.

**Answer 23:** There are no plans for this.

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**Question 24:** Any incumbents such as IRIS in San Diego?

**Answer 24:** This is a new FNC program, therefore there are no incumbents.

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**Question 25:** Will integrated team efforts proposing a complete LTT solution be more or less attractive than individual component development efforts?

**Answer 25:** More, the ultimate goal is demonstration of a complete system in year 5.

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**Question 26:** Any other power level besides 3kW that is relevant?

**Answer 26:** The BAA does make reference to a 5 kW surge capability, and to a "no load to rated load" operation.

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**Question 27:** Could you provide an example of the typical electrical load profile for the intended application?

**Answer 27:** The BAA specifies a continuous output of 3kW to support a 15-day mission, without fuel resupply.

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**Question 28:** 6.3 Par 3 "Power Output -3 kW nominal net electrical power" is that 3kW continuous load over 24 hr and 15 day cycle?

**Answer 28:** Yes

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**Question 29:** The BAA mentions that previous attempts using off-the-shelf components have been unsatisfactory (section 6.1, paragraph 2). Is there somewhere we could learn more about the history of these previous attempts?

**Answer 29:** Previous results have shown potential for fuel savings, but the deployability, cost, size/weight, and detectability of such approaches demonstrate a strong need for S&T to achieve practical solutions for the Marine Corps. No additional information is available at this time.

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**Question 30:** Would a fuel cell based approach be responsive to the topic or are you only considering technology that makes use of military logistics fuels and biofuel blends as a fuel source?

**Answer 30:** All approaches and technologies (including fuel cells) meeting requirements of the BAA will be considered. If the proposed technology involves the use of a liquid fuel, operability on JP-8 is required. Operability on the other fuels listed in 6.3 is a desired capability.

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**Question 31:** Does the 24V output need to be rated for the full 3 kW continuous?

**Answer 31:** The 3kW power rating applies to AC output only. The unit is not required to output AC and DC power simultaneously. A minimum DC output of 1.5 kW is acceptable.

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**Question 32:** The time history of the power profile is critical to modeling the fuel savings of a given system. Can you provide a power time profile in 0.1 hour increments?

**Answer 32:** The power profile is 3 kW continuous load for 15 days.

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**Question 33:** Please define "renewables". Are any forms of renewable energy more preferred?

**Answer 33:** "Renewables" is defined in the BAA. No renewable preferences.

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**Question 34:** What should we assume about availability of renewable energy sources?

**Answer 34:** We expect you to make assumptions regarding renewable source availability, and state why you think they are reasonable.

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**Question 35:** Would having multiple renewable technologies integrated in a single platform be reviewed favorably?

**Answer 35:** No.

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**Question 36:** For solar power what kind of assumptions can we make about the average solar irradiance? This can be in the form of a typical location.

**Answer 36:** We expect you to make assumptions regarding renewable source availability, and state why you think they are reasonable.

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**Question 37:** Please prioritize the renewable energy sources listed in the FOA.

**Answer 37:** We expect you to make assumptions regarding renewable source availability, and state why you think they are reasonable.

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**Question 38:** TRL 6 demonstration of a system at year 5 implies TRL 7 – 9 for system components and software. A proposal for a component should aim for what TRL?

**Answer 38:** The purpose of the BAA is to conduct the applied research and technology development necessary for transition from roughly TRL 3 to TRL 6 during the course of the 5-yr FNC effort. At the end of year 5, all technologies shall be developed to the TRL 6 level or higher. Offerors shall describe how TRL targets will be met within the planned budget and period of performance.

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**Question 39:** What is ONR's appetite for novel and promising TRL3 technologies that have clear paths to TRL6 on paper, but unknown risk to successful fielding. (For example: Novel engine designs, new battery chemistry, novel thermo electric and alternator approaches?)

**Answer 39:** The proposal should provide justification that the target TRL levels can be achieved within the planned budget and period of performance.

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**Question 40:** Is a novel fuel cell APU running on JP8 of significant interest to the ONR under this BAA?

**Answer 40:** The primary objective of this BAA is determining the optimal, affordable solution for achieving dramatic reductions in expeditionary fuel usage. Accordingly, any technology, including fuel cell technology, having potential for meeting this primary BAA objective and the BAA key performance requirements will be considered under this BAA.

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**Question 41:** To be responsive to the requirements of the BAA, is it necessary that the proposed solutions include one or more renewable energy SOURCES, or is it permissible that the proposal address a solution capable of achieving the desired fuel efficiency goals using a combination of renewable liquid fuels and advanced CONVERSION technologies without incorporating one of the renewable energy SOURCES?

**Answer 41:** As stated in section 6 of the BAA, "The primary objective of this BAA is determining the optimal, affordable solution for achieving dramatic reductions in expeditionary fuel usage." The use of renewable energy is not required if this objective and the BAA key performance requirements can be met through alternative approaches.

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**Question 42:** Are foreign organizations prohibited from applying for funding under BAA 11-002?

**Answer 42:** Proposals from foreign organizations are permitted under BAA 11-002.

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