

## QUESTIONS AND ANSWERS

PLEASE REFER TO THE GENERAL FAQs SECTION OF ARPA-E'S WEBSITE ([HTTP://ARPA-E.ENERGY.GOV/?Q=FAQ/GENERAL-QUESTIONS](http://arpa-e.energy.gov/?Q=FAQ/GENERAL-QUESTIONS)) FOR ANSWERS TO MANY GENERAL QUESTIONS ABOUT ARPA-E AND ARPA-E'S FUNDING OPPORTUNITY ANNOUNCEMENTS. ADDITIONAL QUESTIONS SPECIFIC TO THIS FOA ONLY ARE INCLUDED BELOW. PLEASE REVIEW ALL EXISTING GENERAL FAQs AND FOA-SPECIFIC QUESTIONS BEFORE SUBMITTING NEW QUESTIONS TO ARPA-E.

### I. Full Application Questions:

#### Q1. WE'VE REVIEWED THE CONCEPT PAPER FOA AND HAVE A FEW QUESTIONS.

A. WITH REGARDS TO III.A.3 "FOREIGN ENTITIES", WE ARE CONSIDERING WHETHER TO INCLUDE A FOREIGN ENTITY WITH A COMPELLING AND UNIQUE TECHNICAL COMPETENCY AT THE CONCEPT PAPER STAGE, WHICH WOULD LATER REQUIRE SUBMISSION OF THE MENTIONED "WAIVER REQUEST" AT THE LATER FULL APPLICATION STAGE. WE ARE TRYING TO GAUGE THE APPLICATION ACCEPTANCE RISK ASSOCIATED WITH THIS.

- DOES THE LIKELIHOOD OF ACCEPTANCE OF THIS WAIVER REQUEST FACTOR INTO THE EVALUATION CRITERIA OF THE CONCEPT PAPER?
- DOES ARPA-E ACCOMMODATE ANY MECHANISM TO "HEDGE OUR BETS" WITH RESPECT TO THE ACCEPTANCE OF THE CONCEPT PAPER OR FULL APPLICATIONS, INSOFAR AS IT HINGES UPON THE INCLUSION OF WORK DONE OUTSIDE THE US?

B. COMPARING I.F.1 "T2M CONSIDERATIONS FOR TECHNICAL AREA 1: SENSORS" WITH I.H "TEAM EXPECTATIONS", PLEASE CLARIFY THE DISTINCTION (IF ANY) BETWEEN "TEAM MEMBERS" AS REFERRED TO IN I.H, AND "PARTNERS" IN I.F AND THE SUBSECTION I.F.1. ARE PARTNERSHIPS ASSOCIATED WITH "STRONG SUBMISSIONS" (FOR INSTANCE, "CARBON MARKET ENTITIES", "OCEAN OBSERVING ORGANIZATIONS", "NGOS AND/OR OTHER RESEARCH GROUPS [INVOLVED IN MCDR TRIALS]") EXPECTED TO TAKE THE FORM OF TEAM MEMBERS INCLUDED IN THE CONCEPT PAPER AND SUBSEQUENT FULL APPLICATION STAGES? OR CAN "PARTNERSHIPS" BE PROPOSED/DISCUSSED DURING THE APPLICATION STAGES AND THEN MATERIALIZED DURING THE ACTUAL PROJECT PERIOD?

**ANSWER:**

- A. The evaluation criteria for Concept Papers are provided in Section V.A.1 of the FOA.

No such accommodations are provided. It is also important to note that foreign entities are typically eligible to apply for funding under ARPA-E FOAs, ARPA-E will only make an award of funding to a U.S. affiliate or subsidiary entity (i.e. incorporated in the United States or a U.S. territory). Rarely, a “foreign work waiver” may be provided by ARPA-E in order to allow performance of part of the work outside of the United States. ARPA-E’s provision of a foreign work waiver is a fact dependent, case-by-case determination that is made only in exceptional circumstances and only for discrete parts of an award that necessitate foreign work. Applicants that anticipate the need for a foreign work waiver to perform some work outside of the U.S. should review the Business Assurances & Disclosures Form.

- B. ARPA-E cannot comment on the particular circumstances of an applicant's proposed project team. Each applicant is responsible for proposing a project team that meets the requirements of the FOA.

**Q2. DOES ABOVE-SURFACE GAS FLUX MEASUREMENT TO BETTER UNDERSTAND THE AIR/SEA INTERFACE BE CONSIDERED RESPONSIVE TO THE SEA CO2 FOA OR DO THE SENSOR MEASUREMENTS NEED TO BE STRICTLY UNDERWATER MEASUREMENT?**

**ANSWER:** Strictly underseaQ4. ARPA-E Marine Carbon Sensing Contracting Question. I was wondering if I could please get a response to the question below?

**Q3. WE ARE NOT COST AND ACCOUNTING CERTIFIED (CAS), BUT I ALSO KNOW THAT IS NOT REQUIRED FOR THIS EFFORT. HOWEVER, I AM NOT SURE IF WE ARE COMPLIANT WITH FAR 31 AS WE USE ---REDACTED--- FOR TIME ENTRY AND COST ACCOUNTING. WE WOULD LIKE TO PROPOSE A SIMPLE BILL RATE FOR EACH RESOURCE ON THE PROJECT MULTIPLIED BY THE TOTAL HOURS FOR THAT RESOURCE. A TIME AND MATERIALS APPROACH. A T&M APPROACH WOULD NOT WARRANT ALL THE DETAILS IN THE SF-424 AND 424A (INDIRECT COST RATE, FRINGE BENEFITS, SALARIES, ETC). BEFORE WE GO TOO FAR DOWN THE TECHNICAL SOLUTION CREATION, WE NEED TO KNOW IF WE HAVE THE REQUIRED INFRASTRUCTURE SET UP TO BID. FOR EXAMPLE, A PROJECT COST WOULD BE:**

- **PROJECT MANAGER: 100 HOURS AT ---REDACTED---**
- **ENGINEER A: 1,000 AT ---REDACTED---**
- **TOTAL COST: \$---REDACTED--- THAT WOULD BE BILLED AS ACTUALS ON A MONTHLY INVOICING CYCLE.**

**WE COULD JUSTIFY THE REASONABLENESS OF THE RATES COMPARED TO THE RATES ON OTHER GOV'T T&M PROJECTS.**

**ANSWER:** ARPA-E will not pre-asses an applicant's budget proposal. The applicant must follow the instructions presented in the SF-424 and SF-424A. But the SF-424 is not required at the Concept Paper stage.

**Q4. I DIDN'T SEE A SPECIFIC ANSWER TO THIS QUESTION IN THE FOA SO I'M HOPING YOU CAN ASSIST US. ARE FINAL BUDGETS/COST SHARE COMMITMENTS REQUIRED AT THE CONCEPT PAPER STAGE (I.E., NO CHANGES TO THE BUDGET CAN BE MADE AFTER SUBMISSION OF THE CONCEPT PAPER)? OR ARE THE PROVIDED BUDGET AND COST SHARE AMOUNT SIMPLY AN ESTIMATE AND CAN BE CHANGED PRIOR TO SUBMITTING A FULL APPLICATION?**

**ANSWER:** Applicants can update their Funding and Cost projections in the Full Application phase of the submission process.

**Q5. WE HAVE A PI WHO IS INTERESTED IN APPLYING FOR THE FUNDING BUT LOOKING FOR SOME FURTHER INFORMATION TO BE ABLE TO ASSIST WITH COSTING.**

**PLEASE CAN YOU CONFIRM WHAT OVERHEADS WE ARE ABLE TO CLAIM? IF POSSIBLE CAN YOU ALSO PROVIDE A COPY OF THE T&CS RELATING TO THE FUNDING TOO PLEASE.**

**ANSWER:** ARPA-E will not pre-assess an applicant's budget proposal. T&Cs for each award will be made available after full application period and prior to award. However, ARPA-E's model cooperative agreement is available for review on the ARPA-E website -- <https://arpa-e.energy.gov/technologies/project-guidance/pre-award-guidance/funding-agreements>.

**Q6. I WORK AT A UNIVERSITY AFFILIATED RESEARCH CENTER (UARC). WE TYPICALLY RECEIVE FUNDING THROUGH OUR NAVSEA CONTRACT, INCLUDING FUNDING FOR DARPA PROJECTS. IS THIS OPTION AVAILABLE FOR THE ARPA-E SEA CO2 PROGRAM?**

**ANSWER:** Please see Section II.C.2 (Funding Agreements with FFRDCS/DOE Labs, GOGOs, and Federal Instrumentalities) for applicable information.

**Q7. WILL A SBIR/STTR VERSION OF THE SEA CO2 FOA BE RELEASED?**

**ANSWER:** No. However, small businesses are eligible to apply to this FOA. See Section III.A (Eligible Applicants) of the FOA for additional information.

**Q8. WE HAVE TWO QUESTIONS REGARDING THE COST SHARING AND BUDGETING REQUIREMENTS FOR THIS FOA.**

- 1. IS THE FFRDC BUDGET CONSIDERED PART OF THE TOTAL PROJECT COSTS AND THEREFORE HAS A REQUISITE PORTION OF COST SHARING REQUIRED? IF SO, ARE THE OTHER PARTNER INSTITUTIONS EXPECTED TO COVER THE FFRDC PORTION OF THE COST SHARING?**
- 2. CAN YOU PLEASE CLARIFY THE DIFFERENCE IN TEAM MAKE UP BETWEEN THE PROJECT TEAMS ELIGIBLE FOR THE 5% COST SHARE VS. THE 10% COST SHARE? WE THINK IT IS THE INCLUSION OF A SMALL OR LARGE BUSINESS TO THE TEAM, BUT WE'D APPRECIATE THE CLARITY.**

**ANSWER:** 1. See Section III.B.7. Cost Share Contributions by FFRDCs and GOGOs of the FOA.

2. See Section III.B.3. Reduced Cost Share Requirement of the FOA.

**Q9. I HAVE TWO QUESTIONS ABOUT THE CONCEPT PAPER FOR THE SEA CO2 PROGRAM:**

- A. THE FOA (PAGE 48) STATES THAT THE PROPOSED WORK SECTION OF THE CONCEPT PAPER SHOULD INCLUDE "ESTIMATED FEDERAL FUNDS REQUESTED; TOTAL PROJECT COST INCLUDING COST SHARING." HOWEVER, THIS IS NOT INCLUDED IN THE PROPOSED WORK SECTION OF THE CONCEPT PAPER TEMPLATE PROVIDED. SHOULD A PROPOSED BUDGET BE INCLUDED IN THIS SECTION, AND IF SO, HOW MUCH DETAIL SHOULD BE GIVEN?**
- B. ARE CITATIONS TO SCIENTIFIC AND TECHNICAL LITERATURE INCLUDED IN THE 4-PAGE LIMIT?**

**ANSWER:** A. Only the federal funds requested and total project cost including cost sharing should be provided in this section.

B. Yes.

**Q10. I HAVE A QUESTION REGARDING THE DEFINITION OF RMSE IN TABLE 4, IT LISTED THAT  $RMSE < 0.25$ , DOES THIS REFERS TO PH VALUE OR DOES THIS REFER TO THE ERROR (OF AN IMPORTANT VARIABLE) SHOULD BE SMALLER THAN 25% OF THE OBSERVED VALUE?**

**ANSWER:** The Root Mean Square Error of a predicted value for any parameter listed in Table 2 should not exceed 0.25 when compared with the equivalent observed parameter from holdout data. The "mean" refers to temporal averaging.

**Q11. WHAT IS THE DEFINITION OF DISPOSABILITY FOR THIS CALL WITH RESPECT TO THE STABILITY OF THE MATERIAL THE SENSORS AND THE COMPONENTS ARE MADE OF, THE POTENTIAL FOR LEAKING INTO THE ENVIRONMENT OF HARMFUL CHEMICALS, PLASTICS, HEAVY METALS AND/OR ANY OTHER CONTAMINANTS, AND THE ESTIMATED PERCENTAGE OF THE SENSORS THAT CAN/WILL BE RETRIEVED (AND OVER WHAT TIME PERIOD)? ARE CONSIDERATIONS OF DISPOSABILITY SPECIFICALLY TARGETED TO AUTONOMOUS OPERATIONS?**

**ANSWER:** "Disposable" in this case refers to "Components of a sensor or sensor system intended to be left in the ocean and not retrieved after use". The one exception includes sensors designed and developed for existing and near-term planned ARGO systems as an interim solution to a non-disposable profiling platform.

**Q12. I AM CONTACTING YOU FROM A FEDERAL LAB (DEPARTMENT OF NAVY; NAVSEA; NAVAL UNDERSEA WARFARE CENTER DIVISION NEWPORT) WITH INTEREST IN PARTICIPATING AS A TEAM MEMBER (NOT LEAD PI) OF A CONCEPT PAPER FOR THE FOA SEA CO2. I AM UNDER THE IMPRESSION (1) THAT THE COST SHARING REQUIREMENT FOR THIS FOA REQUIRES A 5% COST CONTRIBUTION FROM THE PROPOSING TEAM FOR WORK PERFORMED BY FEDERAL LABS (OTHER TYPES LABS AND BUSINESS CAN HAVE DIFFERENT PERCENTAGE REQUIREMENTS). I AM ALSO UNDER THE IMPRESSION (2) THAT THIS 5% CONTRIBUTION CANNOT BE PROVIDED BY THE FEDERAL ORGANIZATION. THIS WOULD MEAN THAT ANOTHER COLLABORATOR ON THE TEAM WOULD HAVE TO PAY THIS 5% CONTRIBUTION. AM I UNDERSTATING THESE TWO REQUIREMENTS CORRECTLY?**

**ANSWER:** Cost share requirements are based on the prime recipient and the composition of the project team. The cost share contribution percentages differ based on the requirements under Section III.B. Cost Sharing of the FOA.

**Q13. I AM PUTTING TOGETHER A CONCEPT PAPER IN RESPONSE TO THE SEA CO2 FOA AND HAVE A QUESTION ON THE COST SHARING REQUIREMENTS. THIS IS THE FIRST TIME I HAVE SEEN THIS REQUIREMENT, AND I AM HAVING TROUBLE FIGURING OUT WHAT CATEGORY OF COST SHARE OUR PROJECT TEAM WILL FALL UNDER. OUR PROJECT TEAM WILL BE COMPOSED OF A SMALL US BASED BUSINESS, A US ACADEMIC INSTITUTION, AND A US FEDERAL AGENCY (NOAA LAB, NOT AN FFRDC OR DOE LAB). DOES THIS MEAN WE ARE AT THE 10% OR 20% COST SHARE REQUIREMENT LEVEL?**

**ANSWER:** ARPA-E will not pre-assess an applicants proposed project team or cost share requirements. Applicants must refer to the Funding Opportunity Announcement Section III: Eligibility Information and make their own determination.