

QUESTIONS AND ANSWERS

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I. FREQUENTLY ASKED QUESTIONS:

Q1. IF I HAVE QUESTIONS ABOUT THIS FUNDING ANNOUNCEMENT, WHO DO I CONTACT?

ANSWER: Please see the FOA guidance on submitting FOA content questions and response publication. Applicants may submit questions regarding this ARPA-E's Funding Opportunity Announcement (FOA) to ARPA-E-CO@hq.doe.gov. All emails must include the FOA name and number in the subject line. The cover page and Executive Summary of the Funding Opportunity Announcement state the deadlines for submitting questions to ARPA-E-CO@hq.doe.gov.

Q2. HOW WILL I RECEIVE A RESPONSE TO QUESTIONS SUBMITTED TO ARPA-E-CO@HQ.DOE.GOV ABOUT THIS FOA?

ANSWER: Responses are posted in the "Frequently Asked Questions" section of ARPA-E's website. There are general FAQs and a FAQ page for each FOA.

ARPA-E will post responses on a weekly basis to any questions that are received.

ARPA-E will cease to accept questions approximately 5 business days in advance of each submission deadline. Responses to questions received before the cutoff will be posted approximately one business day in advance of the submission deadline. ARPA-E may re-phrase questions or consolidate similar questions for administrative purposes.

Q3. WILL ARPA-E POST A RESPONSE TO EVERY QUESTION SUBMITTED TO ARPA-E-CO@HQ.DOE.GOV?

ANSWER: No. ARPA-E will only post responses to questions that have not already been addressed by a published FAQ. Also, ARPA-E may consolidate similar questions for administrative purposes.

Q4. IF I HAVE QUESTIONS ABOUT ARPA-E EXCHANGE, WHO DO I CONTACT?

ANSWER: Applicants may submit questions regarding ARPA-E's online application portal, ARPA-E eXCHANGE, to ExchangeHelp@hq.doe.gov. All emails must include the name and number of the Funding Opportunity Announcement in the subject line.

Q5. CAN I SPEAK OR MEET WITH THE ARPA-E PROGRAM DIRECTOR OR OTHER ARPA-E PERSONNEL ABOUT THIS FUNDING OPPORTUNITY ANNOUNCEMENT?

ANSWER: No. Upon the issuance of this Funding Opportunity Announcement (FOA), ARPA-E Programs and other ARPA-E personnel are prohibited from communicating (in writing or otherwise) with Applicants, or potential Applicants, regarding the FOA. This "quiet period" remains in effect until ARPA-E's public announcement of its project selections. During the "quiet period," Applicants may submit questions regarding the FOA to ARPA-E-CO@hq.doe.gov with the FOA name and number in the subject line. Applicants may also submit questions regarding ARPA-E's online application portal, ARPA-E eXCHANGE, to ExchangeHelp@hq.doe.gov with the FOA name and number in the subject line. ARPA-E will not accept or respond to communications received by other means (e.g., fax, telephone, mail, hand delivery). Emails sent to other email addresses will be disregarded.

Q6. CAN A PERSON BE PI ON ONE PROPOSAL AND A CO-PI ON A SECOND SEPARATE PROPOSAL?

ANSWER: Yes, but the applications must be scientifically distinct from one another.

Q7. MAY APPLICANTS SUBMIT MORE THAN ONE CONCEPT PAPER TO THIS FUNDING OPPORTUNITY?

ANSWER: Yes, but each Concept Paper submission must be scientifically distinct.

Q8. I HAVE DEVELOPED A TECHNOLOGY THAT MAY BE A GOOD FIT FOR THIS FUNDING OPPORTUNITY. WILL ARPA-E PLEASE REVIEW THE ATTACHED PROJECT INFORMATION AND LET ME KNOW IF I SHOULD MAKE A SUBMISSION TO THIS FUNDING OPPORTUNITY.

ANSWER: No. Applicants must review the Technical Requirements of this funding opportunity to determine if their technology warrants a submission to ARPA-E.

II. Questions for week ending: MARCH 22, 2013

Q9.A Would a novel non-biological process to convert methane to a species that can be fed to organisms to create a fuel fit into the REMOTE program?

Q9.A. ANSWER: Please see Section I.E.3 of the FOA. ARPA-E will evaluate hybrid approaches that are capable of meeting all primary technical target metrics described in Section I.E.3 of the FOA (“Category 3”).

Q9.B. Would ARPA-E be interested in a self-standing project that converts the methane to a carbon source that microbes can metabolize but does not include a biological component. This project would conceivably enable several of the other performers in the program to succeed.

Q9.B. ANSWER: Please see the answer for Question 8.

Q10.A. Under Category 3 of the FOA, can a project propose to produce a fuel intermediate that is converted to fuel at a separate facility?

10.A. ANSWER: Please see the answer for Question 9.A.

Q10.B. How should we calculate our primary technical targets in this case?

10.B. ANSWER: Please see Section 1.E of the FOA.

Q11. Would a project using MMO would qualify for a category 1 proposal?

ANSWER: Please see Section I.E.1 of the FOA. ARPA-E will evaluate approaches that are capable of meeting all primary technical target metrics described in Section I.E.1 of the FOA (“Category 1”).

Q12.A. Would ARPA-E consider a hybrid approach that uses a non-biological methane oxidation with downstream biological conversion to liquid fuels?

12.A. ANSWER: Please see the answer for Question 9.A.

Q12.B. There is a stated desire for fuel targets at least as energy dense as butanol (26.8 MJ/L) but that do not require accumulation of biomass on the road to fuel production. Does this eliminate fuel molecules unless they are able to be excreted in some way?

12.B. ANSWER: Please see Section I.F of the FOA, Calculation 2. ARPA-E will evaluate approaches that are capable of meeting all primary technical target metrics described in Section I.E of the FOA.

III. Questions for week ending: MARCH 29, 2013

Q13.A. Can methanol be used as a starting molecule for a proposal that targets category 2?

13.A. ANSWER: Please see Section I.E.2 of the FOA, Metric Description 2.1. ARPA-E will evaluate approaches that are capable of meeting all primary technical target metrics described in Section I.E.2 of the FOA.

Q13.B. If technical target 2.3, as detailed in the FOA, is an unreasonable target for my proposed technology, how should I address the specification for this metric in my concept paper?

13.B. ANSWER: Please see Section I.E.2 of the FOA, Metric Description 2.3.

Q13.C. Page 13 of the FOA, does the "larger than or equal sign, \geq 26.8 MJ/L " imply that n-Butanol or other Butanols are not acceptable or are they an acceptable choice of a liquid fuel?

13.C ANSWER: Yes. Fuels with an energy density greater than or equal to that of n-butanol are responsive to this FOA.

Q14.A. Referring to figure 4b (page 10 of FOA): can we propose biological process for C-C bond formation (production of fuel precursor) and chemical (non-biological) conversion of fuel precursor to fuel as long as we are > 85% of energy efficiency of these two processes combined?

14.A. ANSWER: Please see Section I.E of the FOA. ARPA-E will evaluate approaches that are capable of meeting all primary technical target metrics described in Section I.E of the FOA.

Q14.B. Can the proposal focus on category 2 by hypothesizing that category 1 requirements will be met elsewhere by producing a compound x (e.g. Methanol) that quantitatively meets the energy efficiency, turnover frequency and specific activity targets. Can our proposal begin with this compound X and going to a fuel?

14.B. ANSWER: Please see the answer for Question 13.A.

Q15. Would the restriction in Section 1.g apply to an integrated fuel-generation system wherein methanotrophic material is grown and then thermochemically converted into a liquid fuel output?

ANSWER: Please see the answer for Question 12.B.

Q16. Is a non-native Methanotroph responsive to this FOA; and can methanol be considered as a final fuel product?

ANSWER: Any organism that is engineered to use methane as a feedstock should be considered methanotrophic. Final fuel products with an energy density greater than or equal to that of n-butanol are responsive to this FOA.

Q17. Does the total anticipated funding amount of \$20 million refer to year 1 only, or is this the total available for all years (up to 3)? Is it likely that substantially more than \$20 million will be awarded over the course of 3 years?

ANSWER: Please see Section II.A (Award Overview) of the FOA. The total anticipated funding amount for the REMOTE FOA is \$20 million for 3 years. At this time, ARPA-E has no plans to award additional funding for projects funded under the REMOTE FOA.