

QUESTIONS AND ANSWERS

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Does this mean that (a) ARPA-E is excluding any and all lateral GaN HEMT structures from consideration; or that (b) ARPA-E is excluding those lateral GaN HEMT structures that provide an only incremental advance to the current SOA? 6

In other words, if a proposer were to offer a lateral GaN HEMT structure that offers a transformational advance over the current SOA (e.g., a "pseudo-lateral" device that is capable of meeting the program requirements, particularly the cost), would such a proposal immediately be deemed nonresponsive? 6

Q25. I am working on a submission to DE-FOA-0000942, and wanted to confirm that the attached form is the correct environmental impact questionnaire to be submitted with the proposal. The form was posted on the ARPA-E website, and I wanted to be sure this is the correct form for both the prime application and any subcontractors to submit. 6

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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: JUNE 14, 2013

Q9. Are small business concerns eligible to participate as team members under this FOA, if the lead organization is a large business, a FFRDC or University?

ANSWER: Yes, small business concerns are eligible to participate as team members under this FOA if the lead organization is a large business, a FFRDC, or University.

III. Questions for week ending: JUNE 21, 2013

Q10. We understand that the focus of the ARPA-E switches program is on wide-bandgap semiconductor power devices. Our question is: would this program be interested in techniques which extend the capabilities of Si devices to mimic wide-bandgap semiconductors?

ANSWER: Silicon power semiconductor devices have several important limitations, as outlined in the FOA. However, ARPA-E will consider all proposals that show strong evidence of being able to meet or exceed all of the FOA targets, including those focused on fundamentally new approaches to silicon-based devices. Applications will not be excluded solely based on the selected semiconductor material.

IV. Questions for week ending: JUNE 28, 2013

Q11. In row 1.7 (“Dynamic Performance”) of “Table 2: Primary Technical Targets” on page 18 of the FOA, does IMAX represent the output current or is it the maximum inductor current? In other words, if it is the output current, should the hard switched PFC boost converter be designed for 40000W output power?

ANSWER: IMAX is the maximum device current.

Q12. We are considered a private institution of higher education and, per subject program guidelines, would be defined as a 'domestic educational institution'. We are considering a proposal option where one of our business partners performs as lead submitting agency and we, the domestic educational institution, perform as a sub performing less than 80% of total project work. Using this scenario, what is our cost share requirement?

ANSWER: Per Section III.B.3 of the FOA, "Project Teams where domestic educational institutions, domestic nonprofits, and/or FFRDCs perform greater than or equal to 80%, but less than 100%, of the total work under the funding agreement (as measured by the Total Project Cost) are required to provide at least 10% of the Total Project Cost as cost share." Under the scenario presented in this question, the domestic educational institution would not be performing greater than or equal to 80% of the total work. Therefore, this Project Team would have a cost share requirement of 20%, as outlined in Section III.B.1 of the FOA.

V. Questions for week ending: JULY 5, 2013

Q13. Can a group of Co-PIs submit LOI's and full proposals to both the proof-of-concept seedling project and technology development project competitions if the concepts are technologically distinct?

ANSWER: Yes. Per Section III.C.3 of the FOA, "Applicants may submit more than one application to this FOA, provided that each application is scientifically distinct."

VI. Final Questions for funding opportunity: JULY 12, 2013

Q14. We are working on a low-cost method for []. The method will improve material utilization by about [], and our focus is on proving feasibility of the method, then using it to take advantage of its inherent uniformity to scale up to very large format - perhaps large enough to yield []-mm wafers. We won't have access device data in the first year, only bulk [] data such as defect density and stress. Is this effort appropriate to this funding program?

ANSWER: As outlined in the FOA, a low cost substrate fabrication is included in the Technical Areas of Interest. Device data are not required in the first year. ARPA-E will consider all proposals that show strong evidence of being able to meet or exceed Primary and Secondary Technical FOA targets.

Q15. Cost sharing: we are a bootstrap organization where all development to date in terms of modeling, research and prototyping have been funded by the principles - so our contribution would have to be in kind. Would any of the development efforts prior to the award be allowable as part of in kind cost share?

ANSWER: Determinations of allowable in-kind cost share are fact-dependent and made by the Contracting Officer based on consideration of all relevant information.

Q16. Are the costs in applying for patents in the subject area prior to award allowable as part of in kind contribution?

ANSWER: Determinations of allowable in-kind cost share are fact-dependent and made by the Contracting Officer based on consideration of all relevant information. On the basis of the information provided, however, it is unlikely that the costs of applying for patents in the subject area of an award would be deemed allowable in-kind cost share contributions. All cost share contributions must be allocable to the ARPA-E award, and similar to the scenario in Question 15 above, patent costs associated with inventions developed prior to the ARPA-E award would not, in most circumstances, be considered allocable to a prospective award.

Q17. Are "Government Rights in Subject Inventions" applied to IP that has been filed and/or granted prior to the award in the subject area?

ANSWER: Determinations as to whether the Government may retain rights in a subject invention are fact-dependent and made based on consideration of all relevant information. DOE defines a "subject invention" as any invention that a Recipient conceives or first actually reduces to practice in the course of performance under an award. To the extent that an invention for which a patent application has been filed is first actually reduced to practice under the ARPA-E award, the Government may retain some rights in that subject invention.

The Government retains no rights in inventions for which patents have previously been issued.

Q18. I have read the FOA carefully, but still want to confirm that if the prime recipient is a university in the US, then the minimum cost share percentage is 5%, not 20%. Am I right?

ANSWER: Per Section III.B.3 of the FOA, domestic universities submitting applications as Standalone Applicants are subject to a minimum 5% cost share requirement. Domestic universities that lead Project Teams composed exclusively of domestic universities, domestic nonprofits, and/or Federally Funded Research and Development Centers (FFRDCs) are also subject to a 5% minimum cost share requirement. The minimum cost share applicable to domestic universities leading Project Teams that include entities other than domestic universities, domestic nonprofits, and/or FFRDCs will be either 10% or 20%, depending on whether the domestic universities,

domestic nonprofits, and/or FFRDCs collectively perform at least 80% of the work, as measured by the Total Project Cost.

Q19. The percentage of minimum cost share is not subject to the type of subrecipient, correct?

ANSWER: No. The types of subrecipients (members of a Project Team) helps determine the cost share requirement. For additional information on cost share reductions that take type of subrecipient into account, please see Section III.B.3 of the FOA.

Q20. The type of cost share. Can the university pay the cost share by giving the professors involved in the project some releasing time equivalent to the amount of money required by the cost share? If so, would the type of the cost share be personnel costs or other?

ANSWER: Determinations of allowable in-kind cost share are fact-dependent and made by the Contracting Officer based on consideration of all relevant information. On the basis of the information provided, however, it is possible that professors' time may be considered an allowable in-kind cost share contribution. Such cost share would be considered an in-kind contribution of personnel time.

Q21. Can the university contribute the cost share by giving back part of the overhead (or indirect cost) to the prime recipient? For example. If the minimum cost share is \$200,000. The indirect cost of the project is \$500,000. The university will keep only \$300,000 instead. Can this work? And can the prime recipient use this \$200,000 on research?

ANSWER: Determinations of allowable in-kind cost share are fact-dependent and made by the Contracting Officer based on consideration of all relevant information. On the basis of the information provided, however, it is possible that reduction in indirect costs awarded to the university may be counted as allowable cost share.

Q22. Can the cost share be paid through both ways identified in questions 20 and 21 above?

ANSWER: Determinations of allowable in-kind cost share are fact-dependent and made by the Contracting Officer based on consideration of all relevant information. On the basis of the information provided in Questions 20 and 21, however, it is possible that both forms of cost share contributions would be deemed allowable.

Q23. When calculating the 5% requirement for TT&O, can we include the indirect cost for the calculation? For example: if we include travel as our TT&O for \$5000 and IDC cost of 52 % (\$2,600) = total TT&O is \$7,600?

ANSWER: Determinations of allowable TT&O costs are fact-dependent and made by the based on consideration of all relevant information. On the basis of the information provided, however, it is unlikely that indirect costs would be deemed allowable TT&O costs.

Q24. In section I.G of the subject FOA (page 19), it is mentioned that ARPA-E is specifically not interested in “incremental advances to existing GaN and SIC fabrication processes and/or existing device architectures including lateral GaN HEMT structures. “

Does this mean that (a) ARPA-E is excluding any and all lateral GaN HEMT structures from consideration; or that (b) ARPA-E is excluding those lateral GaN HEMT structures that provide an only incremental advance to the current SOA?

In other words, if a proposer were to offer a lateral GaN HEMT structure that offers a transformational advance over the current SOA (e.g., a “pseudo-lateral” device that is capable of meeting the program requirements, particularly the cost), would such a proposal immediately be deemed nonresponsive?

ANSWER: No structures are excluded. ARPA-E will consider all proposals that show strong evidence of being able to meet or exceed Primary and Secondary Technical FOA targets.

Q25. I am working on a submission to DE-FOA-0000942, and wanted to confirm that the attached form is the correct environmental impact questionnaire to be submitted with the proposal. The form was posted on the ARPA-E website, and I wanted to be sure this is the correct form for both the prime application and any subcontractors to submit.

ANSWER: The Environmental Impact Questionnaire is not a component of the Full Application. If the Applicant is selected for award negotiations after submission of its Full Application, then the Prime Recipient must submit a completed Environmental Impact Questionnaire to ARPA-E. Applicants should not submit an Environmental Impact Questionnaire with their Full Applications.

Q26. Where to upload the Environmental Impact Questionnaire for both the prime application and our subcontractors. On the ARPA-E exchange upload site, there is not a specific location for uploading the questionnaire. May it be combined with any other documents uploaded, or is there a specific way to submit the form? Thank you for any information you can provide.

ANSWER: Please see the response to Q26 above. The Environmental Impact Questionnaire is not a component of the Full Application and therefore the ARPA-E eXCHANGE website does not include a location for uploading the Questionnaire.