

QUESTIONS AND ANSWERS

TABLE OF QUESTIONS

I. Frequently Asked Questions:	1
A. If I have questions about this funding announcement, who do I contact?	1
B. How will I receive a response to questions submitted to arpa-e-co@hq.doe.gov about this FOA?	1
C. Will ARPA-E post a response to every question submitted to arpa-e-co@hq.doe.gov?	1
D. If I have questions about ARPA-E exchange, who do I contact?	1
E. Can I speak or meet with the ARPA-E program director or other ARPA-E personnel about this funding opportunity announcement?.....	1
F. Can a person be PI on one proposal and a Co-PI on a second separate proposal?.....	1
G. May applicants submit more than one concept paper to this funding opportunity?.....	2
H. I have developed a technology that may be a good fit for this funding opportunity. Will ARPA-E please review my idea and let me know if it is responsive to this FOA?	2
I. Are foreign entities eligible to apply to this FOA?	2
J. Are individuals eligible to apply to this FOA?	2
K. Are we required to register for the Teaming List for this FOA?	2
L. I missed the last Concept Paper deadline. Can I still submit a Full Application?.....	2
M. Our project team includes several team members. Does each team member need to contribute cost share equally?.....	2
N. Can you tell me whether my project team qualifies for reduced cost share?	3
O. Will in-kind contributions count towards meeting our cost share requirements?.....	3
P. We have a question concerning the impact of a large business seeking patent rights under a class waiver if our team qualifies for reduced cost share of 10%. Does this mean the entire team project is subject to 20% cost share or only the large business' portion of the project will be subject to 20% cost share?.....	3
Q. Can you tell us whether our project team qualifies for reduced cost share based on the following scenario: []?.....	3
R. How should we include references in our Full Application? Do they count towards the overall page limitation for the Technical Volume?	3
S. Our team originally submitted a Concept Paper that listed [organization name 1] as the Prime Recipient. For our Full Application, can we change the lead organization to **** [organization name 2] instead?	4
T. Can I include new Co-PIs and/or subrecipients in my Full Application?	4
U. My Concept Paper was encouraged. What are my chances of being selected for award negotiations by ARPA-E?.....	4
V. Do subrecipients also need to fill out the Business Assurances & Disclosures Form or is this filled out only by the Prime Recipient?	4
II. Questions for week ending: October 17, 2014	4
Q9. [A potential applicant] looking for funding to prove out, develop and commercialize a new electrical power generation concept that could be applied either as part of a CHP system or as part of a low-cost solar	

QUESTIONS AND ANSWERS

TABLE OF QUESTIONS

power generation system. If [a potential applicant] has previously applied for funds for related development, but outside of the FOA scope, are they still eligible to apply for [the GENSETS] FOAs?	4
III. Questions for week ending: October 31, 2014	5
Q10. We are currently developing a ****. I am wondering on whether you would accept proposals for DE-FOA-0001198 on the development of ****. Once we have developed the technology further, we would partner with ****	5
Q11.A. Does the proposal need to have both a prime mover and an electric generator or an innovative design of the electric generator will be sufficient?	5
Q11.B Is fault tolerance an important objective in the criteria as well?	5
Q12.A. I just received the announcement of this FOA for 1KW Genset innovation. Has concept paper deadline has passed and can I still submit a Concept Paper?.....	5
Q12.B May I present a concept for a GENSET that ****?	5
Q12.C May I discuss anything with the FOA examiner or point person?	5
IV. Questions for week ending: November 7, 2014	6
Q13. What are the restrictions on the Principal Investigator? Can there be more than 1?	6
Q14. Regarding the opportunity for a device to provide both heating and cooling, in addition to electricity out, how should that cooling option be address in a concept paper response? In our opinion a cooling capability would broaden the market appeal due to the large number of homes that are currently air conditioned.....	6
Assuming the device provides 1kW of electricity:	6
• Should the response just focus on heating only?	6
• Is a response stronger with an added cooling capability?	6
• Would cooling capability be viewed negatively?	6
What value does the addition of cooling add to the target cost of \$3,000?.....	6
V. Questions for week ending: November 14, 2014	7
Q15. The main questions we have are regarding the stringent rules:.....	7
A. Why must the CHP system be 1kWe of continuous output and not higher?	7
B. Why to supply a continuous output when demand is lower during the night?	7
C. Do electric/hydraulic/heat storage concepts responsive under the FOA (sticking within the \$3k envelope)?	7
D. What are the metrics for carbon-related pollutants that must be taken into account in the Concept Paper?.....	7
VI. Questions for week ending: November 21, 2014	7
Q16. Section B3 (page 216) states that “any entity (such as a large business) receiving patent rights under a class waiver, or other patent waiver, that is part of a project team receiving this reduction must continue to meet the statutory minimum cost share requirement (20%) for its portion of the Total Project Cost.”	7

QUESTIONS AND ANSWERS

TABLE OF QUESTIONS

Please clarify if the increased cost share to 20% as stated above applies just to the large business (the non-profits and small businesses would stay at 10%) or does the 20% apply across the total project team.....7

VII. Questions for first deadline: November 24, 20148

Q17. It is not clear whether the 1 kWe electrical output is meant to be provided at line-voltage (120vac/60hz). For some configurations this would imply the use of an inverter. Could you please clarify?..8

I. FREQUENTLY ASKED QUESTIONS:

A. 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.

B. 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 "Current Funding Opportunities FAQs" section of ARPA-E's website available at <http://arpa-e.energy.gov/?q=faq/current-funding-opportunities>. In addition, general questions about ARPA-E can be found at <http://arpa-e.energy.gov/?q=faq/general-questions>.

ARPA-E will post responses on a weekly basis to 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.

C. 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.

D. 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.

E. 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 Program Directors 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.

F. Can a person be PI on one proposal and a Co-PI on a second separate proposal?

ANSWER: Yes, an individual may be on more than one submission – either as a lead or member of a Project Team.

G. May applicants submit more than one concept paper to this funding opportunity?

ANSWER: Yes, but each Concept Paper must be “scientifically distinct”. This term is used in Section III.C.3 (Limitation on Number of Applications) of the FOA. In this context, the term “scientifically distinct” is used to emphasize that, in the event an Applicant intends to submit multiple concept papers/application, the applicant should propose distinct technical approaches in each application. This prohibition on duplicative applications involves a fact-based determination by ARPA-E to ensure a focused review of each technical concept, and appropriate use of ARPA-E's limited time/resources.

H. I have developed a technology that may be a good fit for this funding opportunity. Will ARPA-E please review my idea and let me know if it is responsive to this FOA?

ANSWER: ARPA-E will consider concepts that propose to meet or exceed the technical performance targets set forth in Section I.E (Technical Performance Targets) of the FOA and do not fall under Section I.F (Applications Specifically Not of Interest) of the FOA. Applicants must review the technical requirements of the FOA and independently determine whether their proposed concept warrants a submission.

I. Are foreign entities eligible to apply to this FOA?

ANSWER: Foreign entities are eligible to apply for funding. See Section III.A.3 (Eligibility Information- Foreign Entities) of the FOA. However, if the project is selected for award negotiations and an award is made, all work must be performed in the United States by subsidiaries or affiliates incorporated in the United States or U.S. territories, unless ARPA-E grants a foreign work waiver to allow performance of part of the work outside of the United States. ARPA-E's grant 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 Section 5 of the Business Assurances & Disclosures Form.

J. Are individuals eligible to apply to this FOA?

ANSWER: Yes. Individuals are eligible to apply for funding. See Section III.A (Eligibility Information) of the FOA. However, any ARPA-E award funding would need to be made to a business entity formed by the Applicant, if selected for award negotiations.

K. Are we required to register for the Teaming List for this FOA?

ANSWER: No. ARPA-E set up the Teaming Partner List for this FOA to facilitate formation of new project teams. There is no requirement for applicants or any team member to sign up/register for the Teaming Partner List. In addition, ARPA-E does not endorse or otherwise evaluate the qualifications of the entities that self-identify themselves for placement on the Teaming Partner List.

L. I missed the last Concept Paper deadline. Can I still submit a Full Application?

ANSWER: No. Only applicants who have successfully submitted a Concept Paper in eXCHANGE by the published deadline are eligible to submit a Full Application to the FOA.

M. Our project team includes several team members. Does each team member need to contribute cost share equally?

ANSWER: Although the cost share requirement applies to the Project Team as a whole, the funding agreement makes the Prime Recipient legally responsible for paying the entire cost share.

See Section III.B.4 for more information on cost sharing. Each Project Team is free to determine how much each team member will contribute towards the cost share requirement. The amount contributed by individual Project Team members may vary, so long as the cost share requirement for the project as a whole is met.

N. Can you tell me whether my project team qualifies for reduced cost share?

ANSWER: ARPA-E may not provide pre-submission assessments on a project team's specific cost sharing requirement.

O. Will in-kind contributions count towards meeting our cost share requirements?

ANSWER: Yes, if the in-kind contribution is determined to be allowable, allocable and reasonable by the ARPA-E Contracting Officer. Since this is necessarily fact determinative inquiry, these types of questions are answered based on a review of all relevant information by the Contracting Officer during award negotiations. For general guidance on acceptable cost share contributions and corresponding cost principles used by the ARPA-E Contracting Officer to make these determinations, see 10 C.F.R § 600.313 and § 600.317 (Cost Matching/Sharing and Cost Principles for For-Profit Organizations), 2 C.F.R. § 200.306 and 2 C.F.R. Part 200, Subpart E (Cost Matching/Sharing and Cost Principles for Institutes of Higher Education, Hospitals, Other Nonprofit Organizations, State and Local Governments).

P. We have a question concerning the impact of a large business seeking patent rights under a class waiver if our team qualifies for reduced cost share of 10%. Does this mean the entire team project is subject to 20% cost share or only the large business' portion of the project will be subject to 20% cost share?

ANSWER: Per Section II.B.3 (Reduced Cost Share Requirement) of the FOA, under this scenario, only the large business' portion of the work under this scenario is subject to the 20% minimum cost share requirement. Please see Section III.B.3 (Reduced Cost Share Requirement), Section III.B.4 (Legal Responsibility), and Section III.B.5 (Cost Share Allocation) of the FOA for more details on the cost sharing requirements. NOTE: If the large business' portion of Total Project Costs is greater than 20%, then the project team's total cost share minimum is 20% since the team as a whole would no longer qualify for the 80/20 labor distribution for reduced cost share, per Section III.B.3 of the FOA.

Q. Can you tell us whether our project team qualifies for reduced cost share based on the following scenario: []?

ANSWER: ARPA-E may not provide pre-submission assessments on a project team's specific cost sharing requirement.

R. How should we include references in our Full Application? Do they count towards the overall page limitation for the Technical Volume?

ANSWER: Applicants may provide a list of references in a separate bibliography. Only bibliographic information may be contained in the references, and no additional text or commentary should be included. There is no page limit for the bibliographic references section of the Full Application.

S. Our team originally submitted a Concept Paper that listed [organization name 1] as the Prime Recipient. For our Full Application, can we change the lead organization to ** [organization name 2] instead?**

ANSWER: Yes, the ARPA-E eXCHANGE system will allow applicants to expand or otherwise modify the Project Team for their Full Applications.

T. Can I include new Co-PIs and/or subrecipients in my Full Application?

ANSWER: Yes. Applicants may expand or otherwise modify the Project Team for their Full Applications.

U. My Concept Paper was encouraged. What are my chances of being selected for award negotiations by ARPA-E?

ANSWER: ARPA-E does not provide pre-submission assessments of Applicants' likelihood to receive funding.

V. Do subrecipients also need to fill out the Business Assurances & Disclosures Form or is this filled out only by the Prime Recipient?

ANSWER: The Business Assurances & Disclosures Form requests information regarding the legal entity submitting the application as the Prime Recipient, the legal entities and/or individuals that are proposed to be Subrecipients, and the PI/Co-PIs in their individual capacity. The Prime Recipient may submit one Business Assurances & Disclosures Form covering all of the Project Team members if it has authorization and information to answer on their behalf. Alternatively, the Prime Recipient may request Subrecipients to complete and sign individual Business Assurances & Disclosures Forms that the Prime Recipient will append to its form.

II. Questions for week ending: OCTOBER 17, 2014

Q9. [A potential applicant] looking for funding to prove out, develop and commercialize a new electrical power generation concept that could be applied either as part of a CHP system or as part of a low-cost solar power generation system. If [a potential applicant] has previously applied for funds for related development, but outside of the FOA scope, are they still eligible to apply for [the GENSETS] FOAs?

ANSWER: The answer to your question depends on the specific facts. Please see Section I.F. "Applications Specifically Not of Interest" of the FOA, in particular the 2nd and 11th bullets. Also of potential relevance: ARPA-E's mission is to accelerate transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty, and to prepare those technologies for commercialization in the marketplace. Therefore, ARPA-E may not fund projects that overlap with prior or current efforts funded by public or private sources.

III. Questions for week ending: OCTOBER 31, 2014

Q10. We are currently developing a **. I am wondering on whether you would accept proposals for DE-FOA-0001198 on the development of ****. Once we have developed the technology further, we would partner with ****.**

ANSWER: ARPA-E will consider concepts that propose to meet or exceed the technical performance targets set forth in Section I.E (Technical Performance Targets) of the FOA and do not fall under Section I.F (Applications Specifically Not of Interest) of the FOA. Applicants must review the technical requirements of the FOA and independently determine whether their proposed concept warrants a submission.

Q11.A. Does the proposal need to have both a prime mover and an electric generator or an innovative design of the electric generator will be sufficient?

ANSWER: The GENSETS FOA is seeking concepts for Combined Heat and Power (CHP) systems that are capable of using natural gas as fuel while producing electricity and heat as outputs with a fuel to electrical efficiency target of 40% (based on lower heating value of natural gas). Applications that fall outside the technical parameters specified in Section I.E of the FOA will be deemed nonresponsive and will not be reviewed or considered. Please see Section I.F (Applications Specifically not of Interest) of the FOA. In addition, please see Section I.E (Technical Performance Targets), Supplementary Explanation of Targets – Explanation No. 1.2 of the FOA.

Q11.B Is fault tolerance an important objective in the criteria as well?

ANSWER: Please see Section I.E (Technical Performance Targets) of the FOA.

Q12.A. I just received the announcement of this FOA for 1KW Genset innovation. Has concept paper deadline has passed and can I still submit a Concept Paper?

ANSWER: The deadline to submit Concept Papers is December 1, 2014. Please see the GENSETS Funding Opportunity Announcement on the ARPA-E Funding opportunity Exchange website [HTTP://ARPA-E-FOA.energy.gov](http://arpa-e-foa.energy.gov).

Q12.B May I present a concept for a GENSET that **?**

ANSWER: ARPA-E will consider concepts that propose to meet or exceed the technical performance targets set forth in Section I.E (Technical Performance Targets) of the FOA and do not fall under Section I.F (Applications Specifically Not of Interest) of the FOA. Applicants must review the technical requirements of the FOA and independently determine whether their proposed concept warrants a submission.

Q12.C May I discuss anything with the FOA examiner or point person?

ANSWER: Please see the response to Question 5 above.

IV. Questions for week ending: NOVEMBER 7, 2014

Q13. What are the restrictions on the Principal Investigator? Can there be more than 1?

ANSWER: A project may have a Principal Investigator and Co-Principal Investigators.

Q14. Regarding the opportunity for a device to provide both heating and cooling, in addition to electricity out, how should that cooling option be address in a concept paper response? In our opinion a cooling capability would broaden the market appeal due to the large number of homes that are currently air conditioned.

Assuming the device provides 1kW of electricty:

- **Should the response just focus on heating only?**
- **Is a response stronger with an added cooling capability?**
- **Would cooling capability be viewed negatively?**

What value does the addition of cooling add to the target cost of \$3,000?

ANSWER: The GENSETS FOA is seeking concepts for Combined Heat and Power (CHP) systems that are capable of using natural gas as fuel while producing electricity and heat as outputs with a fuel to electrical efficiency target of 40% (based on lower heating value of natural gas). Please refer Section I.E (Technical Performance Targets) of the FOA for the specific technical targets of the program. Compliant applications that meet or exceed the technical parameters specified in Section I.E of the FOA will be reviewed or considered.

Cooling capability of the CHP system and its cost analysis are not sought under this FOA, however, if included in a Concept Paper will not be viewed negatively as long as the proposed concept for the CHP system meets or exceeds the technical targets in Section I.E. of the FOA.

V. Questions for week ending: NOVEMBER 14, 2014

Q15. The main questions we have are regarding the stringent rules:

- A. Why must the CHP system be 1kWe of continuous output and not higher?**
- B. Why to supply a continuous output when demand is lower during the night?**
- C. Do electric/hydraulic/heat storage concepts responsive under the FOA (sticking within the \$3k envelope)?**
- D. What are the metrics for carbon-related pollutants that must be taken into account in the Concept Paper?**

ANSWER:

- A. Please refer to Section I.B.2.2 (The Optimal CHP System) of the FOA where the rationale behind focusing on a 1 kWe CHP system is provided.
- B. Please refer to Section I.B. 2.2 (The Optimal CHP System) of the FOA where the rationale behind requiring a reduced load is provided. In particular, please refer to the discussion provided on page 7 of the FOA under the subheading “Optimal Size and Efficiency”.
- C. Electric/Hydraulic/Heat Storage for the CHP system and its cost analysis are not sought under this FOA. Please see the answer provided for Question H above.
- D. Please refer to Section I.E (Technical Performance Targets) of the FOA for the primary targets for carbon monoxide and carbon dioxide equivalent (CO₂eq) emissions. In addition, please see the “Supplementary Explanation of Targets” Nos.: 1.5, 1.7-1.9, and 1.10 provided in Section I.E of the FOA.

VI. Questions for week ending: NOVEMBER 21, 2014

Q16. The reduced cost share section of the FOA states that “any entity (such as a large business) receiving patent rights under a class waiver, or other patent waiver, that is part of a project team receiving this reduction must continue to meet the statutory minimum cost share requirement (20%) for its portion of the Total Project Cost.”

Please clarify if the increased cost share to 20% as stated above applies just to the large business (the non-profits and small businesses would stay at 10%) or does the 20% apply across the total project team.

ANSWER: Please see the response to FAQ P above.

VII. Questions for first deadline: NOVEMBER 24, 2014

Q17. Please clarify whether the 1 kWe electrical output from the CHP system is meant to be provided at line-voltage (120vac/60hz)? For some configurations this would imply the use of an inverter.

ANSWER: Per Section I.D (Technical Categories of Interest) of the FOA, "...systems should accept natural gas at standard residential delivery pressures as their only fuel input and produce 60 Hz ac electrical output at 110 V." In addition, please see Footnote No. 44 in the FOA for additional guidance on this requirement.