

QUESTIONS AND ANSWERS

PLEASE REFER TO THE GENERAL FAQs SECTION OF ARPA-E'S WEBSITE (<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. Concept Paper Phase Questions:

Q1. Per the FLECCS FOA, and Amendment I to FOA 1953, "...if any entity receives a Financial Assistance Award from ARPA-E under [Amendment I of FOA 1953], that entity will be prohibited from participating on any FLECCS Project Team." How is entity defined? Would an entire organization ... be prohibited from participating in any FLECCS project if we [received an award under] Amendment I of FOA 1953?

ANSWER: In response to this and other similar questions, ARPA-E is amending DE-FOA-0001953, Topic I, DE-FOA-0002220, and DE-FOA-0002221 to limit individuals (as opposed to entities) from performing work under both: (i) DE-FOA-0001953, Topic I, and (ii) DE-FOA-0002220 (titled FLExible Carbon Capture and Storage (FLECCS)) and/or DE-FOA-0002221 (titled FLExible Carbon Capture and Storage SBIR/STTR (FLECCS SBIR/STTR)), collectively, the "FLECCS Program".

Accordingly, ARPA-E will amend DE-FOA-0001953, Appendix I, Section 4, DE-FOA-0002220, Section III.A, and DE-FOA-0002221, Section III.A, to read substantially as follows:

An entity may submit separate applications to the Solicitation on Topics Informing New Program Areas: Topic I, DE-FOA-0001953, and FLExible Carbon Capture and Storage (FLECCS) DEFOA-0002220 and/or FLExible Carbon Capture and Storage SBIR/STTR (FLECCS SBIR/STTR) DEFOA-0002221 (collectively, the 'FLECCS Program'). However, any individual participating on a Financial Assistance Award from ARPA-E under Solicitation on Topics Informing New Program Areas: Topic I, DE-FOA-0001953, will be prohibited from participating on any FLECCS Project Team.

Q2. Can we consider improving flexibility and carbon sequestration for an oxy-combustion based gas turbine cycle (methane (natural gas) is combusted with oxygen instead of air)? Their industrial implementation is at the beginning and we are not sure that 50 MW capacity is already achieved.

ANSWER: ARPA-E cannot comment on the content of potential submissions. Per Section 1.B.1 of the FOA, integrating the output of multiple generators is acceptable. Per Section 1.D of the FOA, applications may include a novel power generation technology that is not commercially available.

Q3. Can you please tell me what the difference is between DE-FOA-0002220 and DE-FOA-0002221

ANSWER: Prospective applicants are encouraged to read the funding opportunity announcements and independently assess if a submission is warranted under DE-FOA-0002220 or DE-FOA-0002221. DE-FOA-0002221 is targeted at small business concerns under the Small Business Innovative Research (SBIR) and Small Business Technology Transfer (STTR) programs, and reflects the unique rules and regulations applicable to those programs. Entities that qualify as "Small Business Concerns" are

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strongly encouraged to apply under DE-FOA-0002221. To determine eligibility as a “Small Business Concern” under DE-FOA-0002221, review the eligibility requirements in Sections III.A-III.D of the FOA.

Q4. The concept paper is due 12/23/2019. Given the holidays it is extremely difficult to arrange for resources due to personnel availability. I respectfully request that the concept paper be allowed more time for submittal. A due date in mid to late January would be very helpful to insure I can provide the most complete and accurate concept paper as possible.

ANSWER: ARPA-E is not considering a change to the deadline date for the submission of concept papers.

Q5. Regarding Phase 2, there appears to be an inconsistency between the description of Phase 2, and the focus of the FOA. For example, the FOA desires [a] study that determines the flexibility of technology in regard to grid load fluctuation related to renewables. For this, we assume it is desirable to offer commercially viable and proven technology that is capable of load following. Phase 2 cites “building components, unit operations, and small prototype systems to reduce the technical risk and cost”. Is it possible that Phase 2 could also focus on an actual project, where commercially viable technology can be built? This may also include technological enhancements to reduce the risk and cost.

ANSWER: Per Section I.A. of the FOA, ARPA-E funds research on and the development of high-potential, high-impact energy technologies that are too early for private-sector investment. Per Section I.B.3 of the FOA, ARPA-E will, subject to the availability of appropriated funds, select projects to continue to Phase 2 based primarily on the technical success of the individual projects (in Phase 1), the engineering design review, and the capacity expansion analysis. ARPA-E will not pre-assess an applicant’s proposal. Applicants must review the technical requirements of the FOA and independently determine whether their proposed concept warrants a submission.

Q6. ... On page 32, the FOA says that submissions are not of interest if “Solutions that rely on revenue from solids, liquids, or gases produced as a byproduct of the CCS plant.” What does the FOA mean by “rely on.” Does this mean that the solution should not include any byproduct revenue at all in order to be considered? Or that the byproduct revenue should be <50% of total revenue? Or is there some other meaning here?

ANSWER: Per Section I.C.1 of the FOA, the primary revenue for the net present value (NPV) calculation is electricity sales (page 15). Byproduct revenue will not be considered in the NPV calculation.

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Q7. Could you let us know whether the Pre-combustion CO₂ capture concept fits the scope of the call.

ANSWER: ARPA-E will not pre-assess an applicant's proposal. Applicants must review the technical requirements of the FOA and independently determine whether their proposed concept warrants a submission.

Q8. [We are] interested in applying for the Flexible Carbon Capture and Storage (FLECCS) funding opportunity. ... However, we are a [description omitted], and do not have experience with power plant economics, so we are unsure of how to figure out values like fixed and variable O&M costs and capital cost. [Description omitted.] Would ARPA-E still be interested in this sort of capture technology? If so, is there any advice for figuring out a rough estimate of these values for the concept paper? Thank you for your response.

ANSWER: Applicants are responsible for assembling the project team that can best accomplish the research program set forth in their application. The FLECCS Teaming Partner List, found at <https://arpa-e-foa.energy.gov/Default.aspx>, may be of assistance.

ARPA-E will not pre-assess an applicant's proposal. Applicants must review the technical requirements of the FOA and independently determine whether their proposed concept warrants a submission.

Q9. I am submitting a few questions on the FLECCS FOA.

Q9.1 The FOA states that experimentation in Phase 1 is encouraged but not required. Does this refer to experiments to generate data to improve/verify models or to experiments to optimize a new unit op or process?

ANSWER: Experimentation of any kind is encouraged but not required in Phase 1.

Q9.2 For new CCS technologies and unit ops, what range of TRLs are of interest? What TRL is expected for the CCS technology at the ends of Phase 1 and Phase 2?

ANSWER: Per Section I.A. of the FOA, ARPA-E funds research on and the development of high-potential, high-impact energy technologies that are too early for private-sector investment. Per Section I.B.3 of the FOA, ARPA-E will, subject to the availability of appropriated funds, select projects to continue to Phase 2 based primarily on the technical success of the individual projects (in Phase 1), the engineering design review, and the capacity expansion analysis. ARPA-E will not pre-assess an applicant's proposal. Applicants must review the technical requirements of the FOA and independently determine whether their proposed concept warrants a submission.

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Q9.3 For an early stage CCS technology, would it be within the scope of interest to use Phase 1 to set performance targets, and then in Phase 2 (or late Phase 1) develop a prototype of the CCS technology? Or is the program focused on scaling up/piloting mid-TRL CCS technology in Phase 2?

ANSWER: Per Section I.C.2 of the FOA, Phase 1 will identify full plant process designs and operations that minimize the system LCOE of a net-zero carbon electricity system. Phase 2 will focus on building components, unit operations, and small systems to reduce the technical risk and cost associated with such CCS systems.

Q10. We have the following question regarding cost share requirements, per the following excerpts that have been cited in FOA2220:

- *A domestic educational institution or domestic nonprofit applying as a Standalone Applicant is not required to provide cost share.*
- *Project Teams composed exclusively of domestic educational institutions, domestic nonprofits, and/or FFRDCs/DOE Labs/Federal agencies and instrumentalities (other than DOE) are not required to provide cost share.*
- *Project Teams where domestic educational institutions, domestic nonprofits, small businesses, and/or FFRDCs perform greater than or equal to 80% 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.*

We interpret this language such that if a project team consists solely of domestic educational institutions, nonprofits, and FFRDCs, then adding a small business (regardless of their budget relative to the overall project budget) would trigger a minimum 10% cost share for the entire project team – and not just the small business. Is this interpretation correct?

ANSWER: As set forth at FOA Section III.B.3, project teams that include small business participation are eligible for the 10% reduced cost share requirement under the following circumstances:

- *Small businesses – or consortia of small businesses – may provide 0% cost share from the outset of the project through the first 12 months of the project (hereinafter the “Cost Share Grace Period”). If the project is continued beyond the Cost Share Grace Period, then at least 10% of the Total Project Cost (including the costs incurred during the Cost Share Grace Period) will be required as cost share over the remaining period of performance.*
- *Project Teams where a small business is the lead organization and small businesses perform greater than or equal to 80% of the total work under the funding agreement (as measured by the Total Project Cost) are entitled to the same cost share reduction and Cost Share Grace Period as provided above to Standalone small businesses or consortia of small businesses.*

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- *Project Teams where domestic educational institutions, domestic nonprofits, small businesses, and/or FFRDCs perform greater than or equal to 80% 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. However, 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.*

Projects with small business participation not meeting any of the above criteria are subject to the base cost share requirements described in FOA Sections III.B.1 and III.B.2. Although the cost share requirement applies to the Project Team as a whole, the resulting funding agreement makes the Prime Recipient legally responsible for paying, or ensuring payment of, the entire cost share.

Q11. Please confirm:

- **\$43 million available for award for phase 1 and 2 for up to 51 months for FOA-0002221 and FOA-0002220**
 - **10-25 awards with Individual awards between \$250,000 and \$10 million (for phase 1 and 2)?**
- **7\$ million available for phase 1 for approximately 15 months for FOA-0002220**
 - **Number of awards: 10-25 ?**
 - **What is individual award range?**
- **Start date for funding agreements to be September 2020**
 - **Are funds obligated starting in September 2020?**

ANSWER: ARPA-E provides the following information:

- Per FOA2220, Section II.A, the maximum period of performance for agreements awarded is 51 months, inclusive of Phases 1 and 2 as described in the FOA. The maximum award amount is \$10,000,000. Awards may vary between \$250,000 and \$10 million.
- Under FOA2221, the maximum period of performance for agreements awarded is 51 months (not 48 months as stated in Section II.A, in the last sentence of the fourth paragraph) inclusive of Phases I, II and IIS as described in the FOA. The maximum award amount is \$3,613,889. Awards may vary between \$252,000 and \$3,613,889. ARPA-E will amend FOA2221 to revise the period of performance information when modifying the FOA to provide information about Full Applications.
- The total amount available under both FOAs combined is approximately \$43 million (refer to Section II.A of both FOAs).
- ARPA-E anticipates making approximately 10-25 awards under the two FOAs combined (as opposed to each FOA). ARPA-E may, at its discretion, issue one, multiple, or no awards. ARPA-E will amend both FOAs at Section II.A to reflect this information when modifying the FOAs to provide information about Full Applications.

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- The effective date for agreements under both FOAs is anticipated to be September 2020 (refer to Section II.A of both FOAs).
- Funding agreements under FOA2220 will be funded for the entirety of the Phase 1 performance period (not Phase 1 and Phase 2) as set forth at Section I.B.3. ARPA-E anticipates funding all agreements under FOA2221 for their entire period of performance at the time of award. ARPA-E will amend FOA2220, Section II.A, third paragraph, to be consistent with Section I.B.3 when modifying the FOA to provide information about Full Applications.

Q12.a The FLECCS FOA states, “Phase 1 will last for approximately 15 months”. Is there a minimum time requirement to complete Phase 1 before beginning Phase 2?

ANSWER: There is not a minimum time requirement to complete Phase 1. However, ARPA-E anticipates conducting the steps outlined in Section I.B.3 of the FOA—conduct an engineering design review with external reviewers to analyze the processes designed by Project Teams and analyze the market potential of the proposed technologies using the modeling tool developed under DE-FOA-0001953—at a single point in time at the conclusion of Phase 1 of the FLECCS program.

Q12.b Is there a gap between the completion of Phase 1 and the beginning of Phase 2? The FOA states “At the end of Phase 1, ARPA-E will conduct an engineering design review with external reviewers to analyze the processes designed by Project Teams. In addition, ARPA-E will analyze the market potential of the proposed technologies using the modeling tool developed under DE-FOA-0001953.”, which seems to require some time, but the FOA continues and states “Based primarily on the technical success of the individual projects, the engineering design review, and the capacity expansion analysis, ARPA-E will select projects to continue to Phase 2, subject to the availability of appropriated funds. If selected by ARPA-E for Phase 2, it is possible that an Applicant that proposed Phase 1 and Phase 2 in its submission to this FOA could move immediately to Phase 2 upon completion of Phase 1.”

ANSWER: ARPA-E anticipates that any project selected for Phase 2 will require a modification to that project’s Cooperative Agreement. The time required for such a modification can vary and ARPA-E cannot state precisely how long that would take. However, if a successful Applicant proposed Phase 1 and Phase 2 in its submission to this FOA and negotiated a Statement of Project Objectives at the outset that included tasks for Phase 1 and Phase 2, a modification at the conclusion of Phase 1 could potentially occur more quickly than for a successful Applicant that proposed Phase 1 only in its submission and subsequently negotiated tasks for Phase 2 at the conclusion of Phase 1.

Q13. [W]e have several quick questions about this FOA ..., we would appreciate if you could address them.

Q13.a We understand that applicants must use published values of power generators. Is it necessary to develop a rigorous power plant model for this project?

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ANSWER: Per Section I.D of the FOA, Project Teams will report the data in Table 4 to ARPA-E at the end of Phase 1. Project Teams must therefore be capable of reporting the data required in Table 4 at the end of Phase 1.

Q13.b Is the solicitation open to CO2 capture concepts based on solid adsorbents?

ANSWER: ARPA-E will not pre-assess an applicant's proposal. Applicants must review the technical requirements of the FOA and independently determine whether their proposed concept warrants a submission.

Q13.c We are planning on forming a team under the leadership of a university, with three small businesses as teaming partners We do not have a large business in the team. Each entity will perform less than 50% of the total work. Do we qualify for the 0% cost share as explained in Section B.3?

ANSWER: Refer to FAQ 10.

Q14. I'm working with one of my PI's who plan to submit a concept paper due 12/23/19. I'm looking for guidance on the concept paper. Do you have samples of what one would look like on your website? Will a budget need to accompany the concept paper? I noticed on the concept template provided there is a section requesting Proposed funds, cost share and project duration.

ANSWER: For guidance on how to complete a Concept Paper please refer to the instructions provided on the Concept paper template and the Section IV.C. Content and Form of Concept Papers.

Q15. We are interested in writing concept papers for DE-FOA-0002220 and DE-FOA-0002221. Are international collaborations with universities and industries permitted for this project.? All the work will be done here at [omitted]. The PI will be a US person.

ANSWER: Refer to FOA Section III and FAQ 3.1 of the General Questions published on the ARPA-E website (<http://ARPA-E.energy.gov>) FAQ page.

Q16. My question over your Funding Opportunity DE-FOA-0002220:

Q16.a For Power Generator Flexibly are there Data Acquisition and Control Units today that can augment the power requirements in a close-loop system?

ANSWER: Refer to General FAQ 6.19.

Q16.b Would a packaged unit of these tanks (illustration omitted) with a internal combustion engine that ran off of -20°C to 120°C Hydrogen be technology you'd be interested in?

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Q16.c A Quick PID (illustration omitted) illustrates the LH2 concept for energy power, but would you also like to see how you could cascade these tank to fill them with super critical CO2 as well?

Q16.d Would this technology be better proposed to another solicitation, or does this meet the majority of what you're looking for?

ANSWER (FAQs 16.b-16.d): ARPA-E will not pre-assess an applicant's proposal. Applicants must review the technical requirements of the FOA and independently determine whether their proposed concept warrants a submission.

Q17.a I wish to apply for the following two grants announcements.

DE-FOA-0002220: FLEXIBLE CARBON CAPTURE AND STORAGE (FLECCS)

DE-FOA-0002221: FLEXIBLE CARBON CAPTURE AND STORAGE SBIR/STTR (FLECCS)

ANSWER: As set forth at DE-FOA-0002220, Section III.C.2 and DE-FOA-0002221, Section III.F.2, submissions that are not scientifically distinct from applications submitted in response to other currently issued ARPA-E FOAs may be deemed nonresponsive and may not be reviewed or considered.

Q17.b Can you please let me know if applying for the above two grants means also applying for Federal assistance under the clause:

Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost when applicable) to ensure proper planning, management and completion of any financial assistance project covered by this Certifications and Representations document (See 2 CFR §200.113 Mandatory disclosures, 2 CFR §200.213 Suspension and debarment, OMB Guidance A-129, "Policies for Federal Credit Programs and Non-Tax Receivables")?

ANSWER: Among other rules and regulations, the *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* found at 2 C.F.R. Part 200, including the identified sections concerning mandatory disclosure and suspension and debarment, are applicable to ARPA-E awards.

Q17.c Currently my company ... is collaborating with an academic institution (USA) and a Canada based research organisation in carbon capture. These organisations have the facilities where part of the proposed research projects would be carried out. Kindly let me know, if the said research collaboration and accessing their research facilities for part (Phase I project) of the whole project would constitute fulfillment of non-Federal share of the whole project, which will have at least two phases?

ANSWER: Cost share requirements for FOA2220 can be found at its Section B.3. Regulatory requirements for acceptable forms of cost sharing or matching can be found at 2 C.F.R. § 200.306. There is no cost share requirement for FOA2221.

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Q17.d If I check "No" on the SAM "Representations and Certifications Page", does it mean that my company can't apply for Federal Grants?

ANSWER: On February 2, 2019, the General Services Administration implemented a new process in the System for Award Management (SAM) that allows non-federal entity registrants to submit common federal government-wide Representations and Certifications for financial assistance. Non-federal entities creating new SAM registrations and existing non-federal entities completing their annual SAM registration renewals will be required to review and certify their financial assistance Certifications and Representations before their registration can be activated. Registration in SAM is required prior to receipt of federal awards and must be updated annually by non-federal entities.

II. Full Application Phase Questions:

Q18. My team ... was just encouraged to submit a full proposal. I have a few questions:

Q18.a Is it okay to add a new co-PI to our team for the full proposal?

ANSWER: Yes.

Q18.b Is it okay to request a different budget amount than the one listed in our concept paper?

ANSWER: Yes.

Q18.c We have a potential industrial collaborator from Canada Are there any restrictions about cost-share from a company outside the US?

ANSWER: Cost share partners are not required to be based in the United States; however, the prime recipient and its project team members remain bound by U.S. Manufacturing requirements as described at FOA Section VI.B.8. Keep in mind that if a foreign entity is providing in-kind cost share (as opposed to a cash contribution), ARPA-E requires that all work under ARPA-E funding agreements be performed in the United States. Applicants may seek a waiver to this requirement as described in FOA Section IV.G.6.

Q19. After we received the encouragement letter to submit a full proposal, we reevaluated our technology with further input from project partners and it may be better to remove one component, replacing it with a more attractive alternative, but maintain the major part intact. I want to confirm that this would still be considered responsive to the FOA, before proceeding further. Please advise.

ANSWER: Whether or not a particular Full Application is responsive to the FLECCS FOA requires a fact-based determination using the criteria set forth at FOA Section III.C.2. Also refer to General FAQ 7.23.

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Q20.a If I receive [a] federal [agreement] to build two prototype[s] for capture of emissions from coal and natural gas power plants and establish the proof of concepts of our new technology as narrated in our patent application ..., can we not retain the exclusive rights for license to sell on our own the invention technology to a third party/industry?

Q20.b Is the government going to retain the exclusive rights or partial rights to sell our technology or allow companies/industries to manufacture the emission-capture equipment based on our technology?

ANSWER (both Q20.1 and Q20.2): See Sections VIII(A-C), IV(D)(7), IV(G)(3), and IX of the FOA. These sections address the retention of the primary IP rights by an awardee subject to the retention of certain rights by the Government.

Q21. Is an FFRDC considered a subrecipient and required to complete a separate budget justification workbook to justify its proposed budget if greater than or equal to 10% of the Total Project Cost? (FOA pg. 45) Or is it sufficient for an FFRDC to submit only the required F[ield] W[ork] P[roposal] and Work Authorization Form per the requirements of the Business Assurance & Disclosures Form? (FOA pg. 43)

ANSWER: If the project budget shows an FFRDC will incur 10% or more of the estimated Total Project Cost then submission of the SF-424A Workbook, Field Work Proposal, and the Work Authorization Form is required. For additional information refer to the document titled *Budget Justification / SF-424A Workbook Guidance*, Step 7, found at <https://arpa-e-foa.energy.gov/Default.aspx#Foald48a01f15-53a5-42d0-9650-d07e36f404cd>.

Q22. Our lead organization spun off a new company for carbon capture, which is different than the company name they used in our concept paper. Are there any problems that will arise if we change the name of our lead organization in the full proposal to the new spin-off company name?

ANSWER: Refer to General FAQ 7.11.

Q23. What is meant by the word "approach" in Section 2.1 of the Technical Volume [Template]? Does approach basically mean the technology we are proposing to meet the overall FOA objectives? Or does approach mean the work we will be doing for the project in order to model or develop our proposed technology?

ANSWER: There are four bullets under Section 2.1, Approach in the Technical Volume Template setting forth the description. Section 2.1 (Approach) is one section within Section 2, Proposed Work, which includes other sections to cover the work that will be done to develop the proposed technology (see, for example Section 2.4, Task Descriptions).

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Q24. We understand that cost share commitment letters are not required as part of the full proposal. If we are submitting a proposal that includes both Phase 1 and Phase 2, would you encourage us to submit cost share commitment letters that only have specific dollar amounts for Phase 1, but include a commitment to negotiate the cost share for Phase 2 once Phase 1 is completed?

ANSWER: No. All amounts proposed to be cost shared must be identified on the Cost Share sheet of the SF-424A Workbook, and are incorporated in the approved budget for any subsequent agreement. Any change in the type and kind of cost share provided by awardees are subject to ARPA-E's prior approval per 2 C.F.R. § 200.308(c)(1)(viii).

Q25. Would ARPA-E consider extending the deadline for the full application to account for the management challenges caused by the ongoing COVID-19 pandemic?

ANSWER: ARPA-E is revising the date for submission of Full Applications to 10-Apr-2020. The time for submission remains 9:30 am Eastern Daylight Time. DE-FOA-0002220 (FLECCS) and DE-FOA-0002221 (FLECCS – SBIR/STTR) will be correspondingly amended shortly.

Q26.a In the FOA [at] Section [VI.]B.1. Administrative and National Policy Requirements/DUNS Number and SAM, FSRS, and FedConnect Registrations, it states,

Prime Recipients are also required to register with the Federal Funding Accountability and Transparency Act Subaward Reporting System (FSRS) at <https://www.fsrs.gov/>. Prime Recipients are required to report to FSRS the names and total compensation of each of the Prime Recipient's five most highly compensated executives and the names and total compensation of each Subrecipient's five most highly compensated executives.

Do we need to complete any reports on FSRS.gov before the full application is due? Or is this a requirement that must be met during contract negotiations?

ANSWER: Reporting compensation information is required of Federal awardees only.

Q26.b ... Does this mean that if someone at ... works with us that we need this information for the C-suite executives or is it limited to the people with whom we work?

ANSWER: As set forth at FOA Section VI.B.1: *Prime Recipients are required to report to FSRS the names and total compensation of each of the Prime Recipient's five most highly compensated executives and the names and total compensation of each Subrecipient's five most highly compensated executives.* (emphasis added) This requirement is not limited to individuals whose compensation is reimbursed as a direct cost under any agreement or sub-agreement.

Q26.c ... [W]hat is the purpose of collecting information on people unrelated to the project?

ANSWER: The Federal Funding Accountability and Transparency Act (FFATA) was signed into law on September 26, 2006. The intent is to empower every American with the ability to hold the government

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accountable for each spending decision. The FFATA Subaward Reporting System (FSRS) is the reporting tool Federal prime awardees (i.e. prime contractors and prime grants recipients) use to capture and report subaward and executive compensation data regarding their first-tier subawards to meet the FFATA reporting requirements. Prime grant awardees will report against sub-awards. The sub-award information entered in FSRS will then be displayed on www.USASpending.gov associated with the prime award furthering Federal spending transparency.

Q27. As a verification of something in the FOA, it says to provide a Budget Justification Worksheet for the project as whole. This then means one Budget Justification Workbook [SF-]424[A] for both phases?

ANSWER: Yes.

Q28. How broad is question 3b on the business assurance form in terms of Technology Area? Does this include all CO2 capture projects, or is it limited to those regarding flexible CO2 capture?

ANSWER: The objective of the FLECCS program as stated at FOA Section I.B.2:

... is to fund the development of carbon capture and storage (CCS) technologies that enable power generators to be responsive to grid conditions in a high variable renewable energy (VRE) penetration environment. This includes retrofits to existing power generators as well as greenfield systems with a carbon-containing fuel input and electricity as an output (i.e., a “black box” in which the nature of the fuel-to-electricity conversion process is not prescribed).

Applicants must disclose all current and pending funding sources that a knowledgeable individual could conclude supports the development of any technology that is responsive to this FOA and the stated objective.

Q29. I am assisting ... in the preparation of a proposal to FOA We are attempting to distribute her salary according to task and were wondering if we could include “Liaison Activities” as a standalone Task. This activity will likely require a significant amount of time but will not require much, if any, resources. The purpose of this activity would be to connect all the tasks together so that the product is more than the sum of its parts.

ANSWER: The general allocability cost principle can be found at 2 C.F.R. § 200.405. Criteria for allocating administrative expenses as a direct cost can be found at 2 C.F.R. § 200.413(c).

Q30. On the Cover Page, we need to include a “technical category”. There is no list of categories in the FOA. Where do I need to look to find these categories?

ANSWER: Applicants may disregard Executive Summary Instruction (2) in the Technical Volume template.

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Q31. I saw the below update [omitted] from ARPA-E today including a modification to the timeline for the full FLECCS Phase I program submission. I was wondering if there is also any impact to the decision timeline for the FLECCS Electricity System Capacity Expansion and Operational Modeling? Or is that still progressing as planned with decisions sometime in April?

ANSWER: Any revisions to the timing of funding opportunity announcements will be posted to the ARPA-E eXCHANGE website.

Q32. For the NPV analysis, is captured CO2 to be considered a revenue stream? Or should the cost of CO2 be considered a penalty cost to the power plant for any emissions released over 90% capture (or otherwise defined limit)?

ANSWER: Refer to FAQ 6. Per Sections I.C.I and I.D. of the FOA, The NPV will be calculated for the following carbon prices: \$100, \$200, and \$300 per ton CO2.

Q33. The previous modifications of DE-FOA-0002220 solicitation FLEXIBLE CARBON CAPTURE AND STORAGE (FLECCS) SBIR/STTR listed that no cost share was required. For example Mod 2 (2/19/20) [S]ection III.B stated "Cost Sharing is not required for this FOA." The current modification DE-FOA-0002220.M03 (3/20/20) describes that cost share is required as discussed in [S]ection V.B.1. This text is not highlighted in yellow to indicate a new change or is a new requirement for cost share listed in the Modification summary table on page 2. Can you clarify if cost share is now required for proposals under DE-FOA-0002220?

ANSWER: DE-FOA-0002221 (not DE-FOA-0002220) details the requirements for submission to ARPA-E's SBIR/STTR program. As set forth at its Section III.E, cost share is not required.