

## 2020 H2@Scale CRADA Call Questions (and Responses) Received July 1–7, 2020

### Project Proposal Eligibility, Leadership, and Funding to Labs and/or Partners

1. Are national laboratories eligible to LEAD a proposal submission to the 2020 H2@Scale CRADA Call, or are they limited to participating as a sub-recipient only?
  - *Proposals for the 2020 H2@Scale CRADA Call may be led by EITHER a national lab (or lab team) or the cost-sharing partners (as defined on the bottom of page 6 of the CRADA Call, under the Eligibility section)*
2. Is all the funding available from DOE going to be given to the national lab(s)? If so, how will other entities (for example small businesses) support themselves during the performance of the project?
  - *Yes, all funding available from this CRADA Call will go to national labs to make use of their unique capabilities in partnership with interested stakeholders. However, goods and services provided by partners in support of a project may be deemed in-kind cost share. Other DOE opportunities, such as Funding Opportunity Announcements (FOAs), allow for the funding of non-national lab partner organizations/companies.*
3. Can part of DOE funds be provided to industry partners? Or will all DOE funds be used by national labs?
  - *All DOE funds must be spent at the national labs. Industry partners must participate through in-kind or cash cost-share (see top of page 7 of the CRADA Call for cost-sharing requirements), but they will not be the recipient of DOE funds through this call.*
4. Is the only way a university can get funding from this call is if they apply to AOI2: HyBlend, for the last two bulleted topics of “development of separation technologies for hydrogen from blends: Open eligibility” or “Compatibility of underground reservoirs with blends: Open eligibility” otherwise the funding goes to a national lab with no subcontracting to universities?
  - *The eligibility listed there was referring to any national lab restrictions applied to those two topics. All DOE funds within this CRADA Call must be spent at the national labs. Goods, services, or funding provided by universities in support of a project may be eligible as in-kind or cash cost share (see top of page 7 of the CRADA Call for cost-sharing requirements), but universities will not be the recipient of DOE funds through this call.*
5. Are the labs listed in the CRADA Call the only labs allowed to be included in the project, or can this list extend to labs at universities?
  - *At least one national laboratory must be included in the proposal, and all DOE funds within this CRADA Call must be spent at the national labs. Goods, services, or funding provided by universities in support of a project may be eligible as in-kind or cash cost share (see top of page 7 of the CRADA Call for cost-sharing requirements), but universities will not be the recipient of DOE funds through this call.*
6. In the call for proposals that has been released, on pg. 4 it states the national lab R&D lead for several disciplines. Are the national labs restricted to only participate in the topics they have been identified as the R&D lead for, or can a national lab be a candidate for a topic that is assigned to another lab?
  - *A national lab may be a partner on a topic for which another lab is a lead. A national lab that is a lead in a particular area may also compete in topics for which no lead is defined. In all*

*submissions, national labs are strongly encouraged not to duplicate capabilities at another lab unless a strong justification is provided.*

7. We are the largest exporter of ammonia and methanol in the world made from natural gas. We are interested in blending hydrogen in natural gas. Can we participate in this Call?
  - *See the bottom of page 6 for eligibility requirements and page 7 for funding and CRADA requirements.*
8. What is the percentage cost share for this CRADA? Is it 20% like HPC4E CRADA?
  - *See the top of page 7 for Funding Requirements, which states: "The CRADA project sizes may vary but must include at least 20% cost share. For education institutions, non-profits, or U.S. state, local, or tribal government entities, the cost share requirement is 10%."*

### **Other Topics**

9. What are the progress reporting requirements (e.g., monthly, quarterly, annual)?
  - *Reporting requirements include quarterly technical and financial reports, as well as the opportunity to voluntarily participate in HFTO's Annual Merit Review in Washington, D.C.*
10. Our process can co-generate hydrogen and Portland cement while reducing cement emissions by over 50%. We are wondering if this proposal would fit within your program as it does not correspond with the two areas of interest mentioned in the CRADA Call, would you consider funding this technology?
  - *The primary work scope included in the proposal must be focused on one of the two priority areas of the 2020 H2@Scale CRADA Call: (1) hydrogen fueling technologies for MD/HD fuel cell vehicles, and (2) technical barriers to hydrogen blending in natural gas pipelines.*
11. Is there interest in exploring wave powered hydrogen production as a renewable fuel source? We have been exploring this with partners in Europe and would be interested in applying for U.S. funding if there is interest.
  - *Note that the U.S. funding is made available to the national lab partners only (see questions 1–3 above) and will not be provided to the non-lab partners. The primary work scope included in the proposal must be focused on one of the two priority areas of the 2020 H2@Scale CRADA Call: (1) hydrogen fueling technologies for MD/HD fuel cell vehicles, and (2) technical barriers to hydrogen blending in natural gas pipelines.*
12. This CRADA call mentions the following: "CRADA must be fully negotiated (including the joint work statement) and ready for submission to DOE for approval or project will be abandoned." Can you please explain this statement?
  - *This statement means that DOE seeks a quick resolution to any requested changes to the H2@Scale Template CRADA (See "CRADA Requirements" on page 7): Only changes to incorporate optional or alternate language approved in the DOE CRADA Order (DOE O 483.1B) and changes considered non-substantive can be made to the H2@Scale Template CRADA. No changes are allowed to the U.S. competitiveness provision. If the participant fails to agree to the terms of the CRADA with the national laboratories within thirty (30) days from selection, DOE may rescind the selection.*

13. What is the format and length of the full proposal required by July 31st?

- *As described in the Proposal Preparation section of the CRADA Call on page 7, the proposal must be no more than 15 single-spaced pages and comply with the other requirements listed in that section of the CRADA Call.*

## 2020 H2@Scale CRADA Call Questions (and Responses) Received July 8–10, 2020

14. Page 7 of the CRADA Call describes “Required Resources and Budget.” Is there a template for the budget?
  - *No, there is not a template for the Required Resources and Budget, however it should include all the elements required in that section of the proposal.*
15. We have a technology that facilitates use of H<sub>2</sub>/NG blends in standard appliances, and has been tested in burners, boilers, and even small gas turbines. However, its adaptation to reciprocating engines is more involved. Is this topic within scope of the CRADA Call?
  - *R&D to enable use of hydrogen and natural gas blends within standard building applications is within the scope of the CRADA Call.*
16. The CRADA Call states the following: “Priority areas of R&D identified by the HyBlend team include materials compatibility, pipeline compressors, hydrogen combustion in end uses, ...” Does this mean that funds are available for R&D and testing of combustion at various end uses?
  - *R&D to enable use of hydrogen and natural gas blends within standard building applications is within the scope of the CRADA Call.*

## 2020 H2@Scale CRADA Call Questions (and Responses) Received July 11–14, 2020

17. Would foreign government entities be eligible to provide cost share (example: a foreign research institute)? If so, would they be required to provide 10% or 20% cost share?
- *A foreign government is not eligible to be a participant on a CRADA project under the H2@Scale CRADA call.*
18. Can any of the following be the lead organization on the proposal: National laboratory, University, or private company (profit or non-profit)?
- *Yes, any eligible organization can be the lead organization, however every proposal must include one or more national laboratories.*
19. In the collaboration with H2@Scale National Laboratories section it says, “Partners must provide cost share of at least 20 % of the total funding for the project.” Does that mean if we, NETL, partner with company “X” on a total \$1 million proposal, that company “X” would have to provide \$200,000 of the funding (cash or in-kind), no matter how NETL and “X” split the work?
- *In a \$1M research project, 20% cost share would mean that a stakeholder provides \$200,000 of cash funding or in-kind efforts in support of the overall (\$1M) project. Work done by the stakeholder as part of a project can count as in-kind cost share.*
20. If you have a national laboratory on a total \$1 million proposal (no cost share), with a private company (20% cost share) and an university 10% cost share, and the national lab’s portion was \$500,000, the private company was \$200,000, and the university was \$300,000. What would each’s cost share be? (Based on a simple share, this is easy, none, \$40,000, and \$30,000. Based on “Total funding for the project” this is trickier, maybe the answer is; none, \$200,000, \$100,000)?
- *It is important to clarify that DOE funds in this effort can only be spent at the national labs. If the private company were to conduct \$200,000 worth of activities in support of the project goal and the university were to conduct \$300,000 worth of activities in support of the project goal, then they can each count these activities as their cost share. In this scenario, the private company is providing 20% cost share and the university is providing 30% cost share (as \$200,000 is 20% of \$1M and \$300,000 is 30% of \$1M).*
21. The call states “The CRADA project sizes may vary but must include at least 20% cost share. For education institutions, non-profits, or U.S. state, local, or tribal government entities, the cost share requirement is 10%.” For a hypothetical project that includes a private sector company, a national lab and an educational institution, each having proposed costs equaling one-third of the overall project budget (e.g., each organization’s budget is \$100,000), how is the cost share calculated?
- *It is important to clarify that DOE funds in this effort can only be spent at the national labs. If the private company or the university were to conduct \$100,000 worth of activities in support of the project goal, then they can each count these activities as their cost share. In this scenario, the private company and university are each providing 33.3% cost share for a total project cost share of 66.6%.*

## 2020 H2@Scale CRADA Call Questions (and Responses) Received July 15–17, 2020

22. What date will the project selections will be finalized and announced, and where can I find these results?
- *As described on page 1 of the CRADA Call, selection and announcement of awards is expected to be in September 2020. The list of proposals selected will be posted on the NREL CRADA Call web site.*
23. Is there a proposal template in Word form?
- *No, there is no proposal template provided, however the proposal must follow the guidance on pages 7-8 in the Proposal Preparation section.*
24. For AOI 2, is it likely that investigations on combustor and piping materials (austenites and Ni base materials) might be funded from this program?
- *R&D on materials used in combustors or piping for blends is eligible in this Call.*
25. Is the cost share burden for partners dictated by the prime partner type? For example 10% if a nonprofit/university leads and/or 20% for private industry leadership. If partners are mixed nonprofit/university and dependent on lead organization, are the cost share requirements then 10% or 20%?
- *The cost share burden for any proposal that includes industry is 20%. It is up to the team to decide how to split the cash or in-kind contributions to meet the 20% requirement.*
26. If our proposal has a mix of both industry participants and “education institutions, non-profits, or U.S. state, local, or tribal government entities” do we have a 20% cost share requirement on the industry funding and 10% requirement on the other funding? Essentially can we mix and match cost share % requirements within a single proposal?
- *The cost share burden for any proposal that includes industry is 20%. It is up to the team to decide how to split the cash or in-kind contributions to meet the 20% requirement.*
27. For AOI 1, are the individual awards made at \$3-\$5M per award or is this the total amount of money DOE has per topic?
- *The maximum expected DOE funding allocated per year for AOI 1 is \$3M-\$5M/year for all awards, so \$6M-\$10M total DOE funding over the 2 year period. As stated on page 2: “The target range for total project cost is expected to be from \$500,000 to \$3,000,000 per year per project.”*

## 2020 H2@Scale CRADA Call Questions (and Responses) Received July 18–23, 2020

28. We are interested to propose a project for a station serving port-based heavy-duty fuel cell vehicles and other maritime operations. These do not require new fueling technologies, but the project does require techno-economic analysis R&D to inform fueling station design. Since the R&D focus is not new refueling technologies, is our assumption correct that this would be out of scope for this CRADA Call?
- *As stated on page 4 of the CRADA Call, analysis to inform fueling station design is within scope of the CRADA Call.*
29. We have a question in regard to collaborating with a company as an industry cost share partner whose operations are based outside the United States. Does the CRADA agreement facilitate contracting with such a company? In this particular case, the company is based in Japan, but we would also like to ask the question more broadly.
- *Eligibility of for-profit companies is restricted to those that are incorporated (or otherwise formed) under the laws of a particular state or territory of the United States and have a physical location for business operations in the United States. If a company is headquartered outside the U.S., partnership with the U.S. subsidiary would be eligible.*

## 2020 H2@Scale CRADA Call Questions (and Responses) Received July 24–August 11, 2020

30. With current sanitary crisis and summer vacations, we are experiencing difficulties and delays in gathering information and approvals. We understand the proposal due date was extended to 8/14; can the deadline be extended to 8/28 to allow us to dramatically increase quality of our proposal?
- *At this time, no additional extensions are planned. The deadline for proposals is August 14, 2020.*
31. We are an academic institution trying to submit a proposal with one of the national labs on AOI2. I understand all the funds should be spent at national labs, and we can put our efforts as cost share. However, our institution has a fixed indirect rate on all proposals submitted (indirect cost). Will that cost allowable under this program or we can also need to use that as cost share?
- *University costs to collaborate with a lab (including associated indirect costs) may count as cost share. However, DOE funds in this Call can only be costed at the national labs.*

**2020 H2@Scale CRADA Call Questions (and Responses) Received August 12–13, 2020**

32. Does the H2@Scale Program allow model alternative CRADA language for the U.S. Competitiveness Clause, namely the inclusion of the "future net benefits statement" clause found at DOE O483.1B, Attachment 4, page 25 (reproduced below)?

C. If the Participant later finds that it cannot meet the requirements of Paragraph A above, the Participant will submit a plan for providing net benefit to the US economy to DOE. If such plan is approved by DOE, it shall be incorporated into this CRADA by an amendment to be executed by the Parties. If the CRADA is completed or terminated and DOE approves of the plan, the DOE Contracting Officer shall issue an approval letter.

- *Yes. The paragraph above is a pre-approved optional paragraph in the CRADA order. Therefore, it may be used for the H2@Scale CRADA Call.*