



Questions and Answers for the Fiscal Year 2016-17 Off-Road Advanced Technology Demonstration Projects Solicitation Applicant Teleconference

August 8, 2017

Introduction

On July 6, 2017, California Air Resources Board (CARB) staff held an Applicant Teleconference to answer questions regarding the Off-Road Advanced Technology Demonstration Projects Solicitation¹ (solicitation) which was approved in the *Fiscal Year 2016-17 Funding Plan for Low Carbon Transportation and Fuels Investments and the Air Quality Improvement Program*² (FY 2016-17 Funding Plan). Applicants are encouraged to read through this document, as it provides more-detailed responses than what was provided during the Applicant Teleconference. The questions and answers below are grouped by topic.

Grantee and Project Team Eligibility

1. Is there a limit to how many private sector parties an eligible applicant can partner with?

Answer: No, there is no limit on the number of parties an eligible applicant can partner with.

2. May the technology provider/manufacturer also serve as the data collection and analysis provider if they can show qualifications to do the required work?

Answer: No, the technology manufacturer cannot also serve as the data collection and analysis provider.

3. Would an end-user be required to sign a contractual agreement in order to demonstrate the equipment or would a simple letter of commitment suffice?

Answer: The only required contract is between CARB and the grantee. All sub-agreements are determined by the Grantee and the other team members although this is typically completed via a contract.

¹ CARB, Off-Road Advanced Technology Demonstration Projects Solicitation, <https://www.arb.ca.gov/msprog/aqip/solicitations.htm#fy1617offroaddemo>, accessed August 1, 2017.

² CARB, Fiscal Year 2016-17 Funding Plan for Low Carbon Transportation and Fuels Investments and the Air Quality Improvement Program, https://www.arb.ca.gov/msprog/aqip/fundplan/proposed_fy16-17_fundingplan_full.pdf, accessed August 1, 2017.

4. As an end-user fleet, how does someone go about participating in this solicitation opportunity and apply for funding?

Answer: The only entities that are eligible to submit applications for this solicitation are California -based governmental entities and California-based non-profit organizations. Other entities, such as end-user fleets, wishing to apply to this solicitation must form a partnership with an eligible applicant.

Technology and Equipment Eligibility

5. Are zero-emission hostlers, forklifts, pickups, or rubber tired gantry cranes eligible for this demonstration?

Answer: If the potential technology meets the eligibility requirements outlined in Section IX, Eligible Projects, of the solicitation, then yes, these types of technologies are eligible for this demonstration. Some of these requirements include supporting zero- and near zero-emission technologies in the off-road categories outlined in the FY 2016-17 Funding Plan, being on the cusp of commercialization, and achieving direct greenhouse gas (GHG) reduction benefits.

6. Are diesel generator replacements eligible under this solicitation?

Answer: No, stationary generator technologies are not included as eligible technologies. As outlined in Section IX, Eligible Projects, of the solicitation, the technology being demonstrated must be connected to one of the approved off-road categories in the FY 2016-17 Funding Plan.

7. Would a demonstration of specific components or elements of the overall system, such as software for controls, without hardware suffice as a field demonstration?

Answer: It depends on the application. Software is eligible under the advanced port and zero-emission ground support equipment categories outlined in Section IX, Eligible Projects, of the solicitation, if the software enables more efficient port operations or reduces emissions from aircraft while being loaded or unloaded, taxiing, and queuing (there is also similar language in the agricultural and construction equipment categories, which include automation strategies that lead to efficiency gains). For all other categories, a piece of mobile off-road equipment would be necessary.

8. Reference Section IV, Page 5: In the “Advanced Port Equipment” section, you ask for technologies that enable more efficient port operations, such as automated container movement technologies and software strategies. Would a

project that demonstrates such technology at a distribution center be eligible for funding?

Answer: Yes, automated container movement technologies and software systems at distribution centers would be eligible under this solicitation, although it should be noted that the “Advanced Port Equipment” category clearly specifies that the automated container movement technologies should be zero-emission. The intent of the advanced port equipment section is to develop technologies that would enable more efficient port operation, and demonstrating this type of technology at a distribution center has a strong potential to transfer into a direct port application. Also, more explicitly, zero-emission cargo handling equipment is directly called out in a separate category and zero-emission automated container movement technologies would fit into this section as well.

9. Reference Section IX, page 13: “[P]rojects that would demonstrate advanced transport refrigeration unit (TRU) technologies are only eligible under this Solicitation if such projects do not include an on-road demonstration element.” Please clarify. Are zero-emission and near zero-emission TRU technologies eligible for funding as a FY 2016-17 off-road advanced technology demonstration project when demonstrated on a standalone basis with advanced technology refrigerated trailers pulled by conventional technology tractors?

Answer: Yes, TRU technologies are eligible for this demonstration under the condition that there are no on-road advanced technologies included as a funded element of the project, as cash match, or as in-kind match.

10. If an advanced technology, such as a zero-emission TRU, will be demonstrated with an eligible on-road tractor or drivetrain technology as a part of a FY 2016-17 On-Road Advanced Technology Demonstration Project, does such an on-road demonstration detrimentally affect eligibility for an off-road advanced technology demonstration of that same technology with a different end-user fleet?

Answer: No, submitting applications to any other open solicitation or being chosen as a grantee for the FY 2016-17 On-Road Advanced Technology Demonstration Solicitation would not impact scoring or the proposed project’s eligibility as an off-road advanced technology demonstration.

11. A company has an Executive Order for a 7.4 Liter gasoline large spark ignition engine Port Tractor (Model Year 2016 approved, 2017 pending approval). With a little more development, this company would be able to meet optional Low-Oxides of Nitrogen (NOx) standards with this gasoline engine. Are there some cleaner emissions levels that would make this engine eligible for a grant under this solicitation?

Answer: Although criteria pollutants are a valuable co-benefit of these advanced demonstration projects, the main purpose of these demonstrations is to achieve GHG reduction benefits. Technologies which only achieve NOx emission reductions and no GHG emission reductions will not be eligible. In addition to the GHG reduction requirement, technologies must be on the cusp of commercialization. If a technology meets these requirements, along with all other requirements outlined in the solicitation, then it could be eligible under this solicitation. It should also be noted that the scoring will reflect the technology's potential GHG reduction benefits and only the most competitive proposals will be chosen.

12. The language of the solicitation implies that the types of projects CARB is seeking are those creating equipment/vehicles that can run on existing infrastructure. Would a project involving an emerging technology that requires a fixed guideway be eligible?

Answer: Yes, as long as that technology meets all the requirements outlined in the solicitation, such as the eligibility requirements in Section IX, Eligible Projects, and the infrastructure requirements outlined in Section X, Scope of Work, of the solicitation.

13. Would a fixed guideway connecting a port and a distribution center be eligible?

Answer: Yes, a fixed guideway could be eligible as long as it meets the requirements outlined in the solicitation and supports the FY 2016-17 Funding Plan categories outlined in Section IX of the solicitation.

14. Is there a minimum length required for fixed guideways?

Answer: No, there is no requirement outlined in the solicitation for a specific fixed guideway length. Whatever length is necessary for a successful demonstration of the technology would be required.

Other Project Eligibility Requirements

15. Do proposed demonstrations have to achieve direct or indirect emission reductions?

Answer: Direct emission reductions, specifically direct greenhouse gas emission reductions, must be achieved from the proposed demonstration. Other emission reductions, such as criteria pollutant emission reductions and indirect emission reductions, should also be noted in the project proposal as these are valuable co-benefits.

16. Can a demonstration build upon existing projects?

Answer: Yes, demonstrations can build upon existing projects and are encouraged to leverage funds effectively. It should be noted that if a project is building upon a previous demonstration, the applicant should describe in the project narrative why further demonstration of that technology is necessary.

17. Can the CARB-required data collected by the project team be disseminated by the project team through journal articles, conference proceedings, reports, presentations, and other similar methods, in addition to being submitted to CARB?

Answer: Yes, this information can be released to other entities using these methods but only after the details regarding the release have been approved by the CARB project liaison.

Commercialization Clarification

18. What is the definition of commercial and pre-commercial for the purposes of this solicitation?

Answer: For the purpose of this solicitation, a commercial technology is a product for which at least one unit has been sold. Only technologies that have not been sold (and are within three years of commercialization) will be eligible under this solicitation. Please see the answer to question 19 for how “sold” is defined for the purpose of the solicitation.

19. How is “sold” defined?

Answer: For the purpose of this solicitation, a technology is considered sold if a legally binding transaction that leads to the transfer of ownership of the technology to an end-user fleet has been initiated.

20. Do pre-orders count as being “sold” and therefore considered commercial? What about a waiting list with the intent to enter a contract?

Answer: If the transaction is not legally binding, then it will not be considered sold for the purpose of this solicitation. It should be noted that even if a technology is eligible as a pre-commercial technology, a technology that is developed enough to be ready for pre-orders may score more poorly in criterion 9, Technology and Innovation, of the solicitation, because the technology is already well developed.

21. If a piece of equipment has been previously demonstrated and is sold following that demonstration, would that technology application be considered commercial?

Answer: Such technology applications may be eligible under this solicitation for further demonstration, but the project narrative must clearly explain why further demonstration testing is necessary. As an example, if there have been significant technological changes between the completed initial demonstration and the proposed demonstration under this solicitation, then that technology may be eligible as long as the necessity for further demonstration of the changes is very clearly defined in the project narrative.

Infrastructure Eligibility

22. Is infrastructure an eligible cost under this demonstration?

Answer: Yes, infrastructure that is necessary to complete a successful demonstration is an allowable cost.

23. Does the infrastructure also have to be considered pre-commercial in order to be eligible?

Answer: No, the infrastructure does not have to be pre-commercial. It must be able to reliably support the piece of equipment that is being demonstrated and is expected to be ready by the time of demonstration.

24. Please clarify what is meant by the requirement of installing infrastructure where existing infrastructure already exists? Does this mean hydrogen fueling infrastructure must be placed where similar hydrogen fueling infrastructure already exists?

Answer: Installation of fueling infrastructure must be located in an area where similar fueling infrastructure already exists. Existing infrastructure does not necessarily have to dispense the same type of fuel (as an example, hydrogen fueling infrastructure could be located at an existing fueling station or industrial facility).

Funding Amounts and Caps

25. How is the 60 percent single-technology-type funding limit applied?

Answer: The 60-percent single-technology cap is applied to the entire \$17 million of funding. That is, no one technology type (e.g., battery-electric

powertrain) may receive more than \$10.2 million in funding through this solicitation.

26. Are single-technology non-freight projects eligible for the full \$3 million non-freight subset allocation?

Answer: Yes, single-technology non-freight projects are eligible for the full \$3 million subset allocation.

27. Does the 75 percent single-grantee limit apply only to the full \$17 million or does it also apply separately to the \$3 million non-freight subset allocation, i.e. is a single grantee eligible for the full \$3 million subset or only 75 percent of the subset?

Answer: The 75-percent single grantee cap is applied to the entire \$17 million of funding. Single-grantee non-freight projects are eligible for the full \$3 million subset allocation.

In-Kind and Cash Match

28. Can you clarify the distinction between cash and in-kind match? For example, when would labor count as cash instead of in-kind? Would equipment transportation count as in-kind even if the applicant paid cash to a third party to transport it? Would materials count as in-kind if the applicant paid cash to purchase them? Please provide a more precise method of determining when a match is cash and when in-kind.

Answer: Cash match are funds that are spent after the grant agreement has been executed. Anything that is bought or paid for after the grant execution (which could include labor) can be considered cash match, and any expense that has already been paid for prior to grant execution (such as equipment or materials already owned by the applicant team) is considered in-kind match.

29. In the solicitation, you state: "While other publicly funded projects may work in coordination with this program, none of those funds or anything funded by those projects may be included in fulfilling any of the 25 percent match requirement." You then go on to say in Appendix A: "In-kind match can also include funding from State sources such as Assembly Bill 118 or GGRF." Please clarify. Also, please clarify when a previous publicly funded project can and cannot count as in-kind match because the solicitation states that past publicly funded projects can count as in-kind match in certain situations.

Answer: The first statement is exclusively referencing projects that have already been executed and utilized public funds, where the second statement is referencing sources of funding, such as funds available

through another state agency (e.g., a co-funding opportunity), as a potential future funding source. If a previous publicly funded project has been completed and is no longer under any contractual obligations, then it can also be included as in-kind match. To try and add some clarity, the three scenarios are:

- A project that has been publicly funded and is still under contractual agreements to that funding source may only be used as leverage and not in-kind match,
- A project that has been publicly funded, has completed its contract, and has no contractual obligations to that funding source may be used as in-kind match, and
- Other public funds not otherwise restricted from use in a FY 2016-17 off-road advanced technology demonstration project may be used as in-kind match.

30. If I have a piece of equipment that was partially funded through a public grant and partially funded privately, and the equipment is currently part of that ongoing public grant project, can I use the percentage of my private investment that I made in that project as in-kind match in my application?

Answer: No, a piece of equipment that is part of another public grant project and still under a contractual agreement under that project cannot be used as in-kind match and there is no mechanism to allow for the percentage of private investments to be considered in-kind match in this situation. It should be noted that a piece of equipment that was part of a previous grant project that has already been completed and that is owned outright by the demonstration partner can be used as in-kind match.

31. Could existing infrastructure be used as in-kind match? How does the valuation occur? If a piece of fueling infrastructure is currently valued at \$1 million, does the entire \$1 million count as in-kind match?

Answer: Fueling infrastructure that is owned by an applicant team member may be considered in-kind match. The level of in-kind cost share for existing fueling infrastructure should be the fair market value for the use of the fueling infrastructure for the duration of the demonstration project. For the purposes of this solicitation, fair market value can include:

- refueling equipment and maintenance,
- depreciation of equipment used to fuel the demonstration pieces of equipment,
- security for the station,
- labor for refueling, and
- other costs that are related to fueling the demonstration pieces of equipment.

The exact value of the in-kind contribution for the existing fueling infrastructure will be up to the applicant to determine and justify in the application.

32. Can work with sub-contractors count toward in-kind match?

Answer: Yes, funds that are spent towards sub-contractors can be counted as in-kind match. It should be noted that if the funds are spent after the grant agreement has been executed, then the funds can be counted as cash match instead.

Field Demonstrations

33. When should the demonstration equipment become available and how long must the demonstration last?

Answer: The piece of equipment must become available during the term of the project in order to demonstrate the technology in revenue service for a minimum of three months. As stated in the solicitation, all work must be completed by March 30, 2020, so the timing of the equipment availability and the field demonstration must allow for this deadline to be met.

34. The solicitation states that field demonstrations must be at least three months but that six months or more is desirable. How does the demonstration length affect proposal scoring, assuming the minimum three months is met?

Answer: A project that allows for a longer demonstration will score more competitively because a longer demonstration allows for better data collection, proves out the technology more thoroughly, and can provide stronger support to the technology's commercialization prospects, all of which are important considerations in scoring criterion 9, Technology and Innovation, and criterion 10, Potential for Market Penetration and Commercialization of the Technology, of the solicitation.

35. Does the field demonstration have to occur at the location of final revenue service?

Answer: Yes.

36. Does the field demonstration have to occur in California?

Answer: There is no specific requirement that the demonstration must occur in California, but all projects must meet the requirements of

benefitting a disadvantaged community within California, as described in the solicitation.

37. Can a proof-of-operations facility suffice as a field demonstration?

Answer: No, the technology must be demonstrated in revenue service.

38. How does one “demonstrate” in “revenue service” a technology that is yet to be commercialized or developed? There could be certain regulatory and safety approvals required in order to be able to demonstrate technology outside of a controlled environment.

Answer: The purpose of a project funded through this solicitation is to demonstrate a technology that is within three years of commercialization, and this requires the creation of a developed piece of equipment. Basic research and proof of concept work is not eligible under this solicitation.

A technology application that meets the requirement of being on the cusp of commercialization is expected to be far enough along the commercialization arc to be able to receive all required regulatory and safety approvals necessary for a successful demonstration. Clearly explaining in the project proposal what approvals need to be acquired prior to running the equipment in revenue service will make a proposal more competitive and score higher.

39. Is there a penalty, other than denial or modification of grant terms, if the field demonstration isn't successful?

Answer: There is no way to ensure the success of a demonstration and there is no direct penalty if the demonstration is not successful. It should be noted that the project team's past experience is considered during the scoring process, so a demonstration that is not successful may negatively impact the scoring of future solicitation applications.

Timeline for the Demonstration Project

40. When is the earliest that a demonstration can start? When is the applicant able to begin counting matching funds?

Answer: Some work can begin and in-kind match funds can be expended and count toward the match requirements before the grant is executed, but only after the issuance of the preliminary award letter. The in-kind match funds may be used for such activities as completing the California Environmental Quality Act (CEQA) requirements, entering into sub-agreements with technology manufacturers and end-users, and performing other administrative activities required by the prospective

grantee to enter into the grant agreement. Money spent during this period is not reimbursable and can only be counted as in-kind match. Note that any work begun before a fully executed grant agreement is completed will be at the applicant's sole risk as there is no guarantee that a grant will be issued.

41. Can the field demonstration begin prior to executing the contract with CARB?

Answer: There is no requirement stating that the field demonstration cannot start after the preliminary award letter has been issued, but a demonstration project would most likely have several milestones necessary to complete before the field demonstration could take place, making it difficult to begin the field demonstration before the grant is executed.

Scoring

42. Would other benefits such as improved safety, reduced congestion, and increased productivity factor in to the scoring criteria?

Answer: Yes, these benefits would help a proposal score more competitively. There are several scoring criteria that would be directly affected if these benefits are achieved in a proposed demonstration. As an example, scoring criterion 10, Potential for Market Penetration and Commercialization of the Technology, of the solicitation, is focused on a technology's potential for market penetration and acceptance, and benefits such as increased productivity and improved safety would improve a proposal's potential for market acceptance.

43. Reference Section IX, page 14: Regarding "in-state passenger transportation," will trains or marine craft that serve one type of passenger be scored differently than another type of passenger, for example, a tourists that leaves from and returns to the same point versus a commuter that goes from one point to another?

Answer: No, there is no scoring criterion that gives preference to distinct types of passenger transportation. However, it should be noted that disadvantaged community requirements must still be met and the location of operation and services could potentially have an effect on this scoring criterion.

44. What is the difference, in terms of scoring, between benefitting and being located within a disadvantaged community?

Answer: Projects that are located within a disadvantaged community will score more competitively than projects that benefit disadvantaged

communities, as explained in scoring criterion 8, Benefits to Disadvantaged Communities. The actual scores will depend on the nature and level of benefits to disadvantaged communities. It should be noted that projects that benefit and projects that are located within a disadvantaged community are both eligible under this solicitation.

Cost-Effectiveness Calculations

45. If a proposal is focused on the demonstration of an intelligent transportation system solution, can the pollutant reduction benefits of running a battery-electric class 8 tractor as the demonstration vehicle be included in the cost-effectiveness calculations?

Answer: No, only off-road pieces of equipment are eligible under this solicitation. An on-road battery-electric class 8 tractor is not eligible for funding under this proposal, and therefore, the emission reduction benefits of that vehicle cannot be included.

46. Two methods are given to estimate annual emissions reductions – one based on hours of operation and another based on fuel consumption. Are there any requirements as to which method is used?

Answer: There is no requirement, and it is up to the applicant team to decide which method to follow.

47. If the piece of equipment being funded has a decreased powertrain power compared to the current diesel baseline equipment, should the emission reduction benefits calculations use the original sized diesel engine and corresponding fuel consumption for the baseline calculation or use a notional diesel engine with the same power output as the new powertrain solution?

Answer: The emission reduction benefit calculations shall use the original sized cleanest-available diesel engine used in the application for demonstration for the baseline calculation in order to properly compare the new piece of equipment to a conventional baseline piece of equipment that is able to perform the same work.

48. Emission factors are given for different engine horsepower. If the piece of equipment normally contains two diesel engines that work in tandem, should the emission factor to be used in calculations correspond to the actual horsepower of each engine or the sum of both engine horsepower?

Answer: The calculation should be performed for each individual engine and then the annual emissions of each engine will be combined at the end to determine the total annual emissions for the piece of equipment.

49. Which energy efficiency ratio (EER) is to be used for a marine passenger ferry powered by a hydrogen fuel cell?

Answer: The EER value labeled “H2 / Fuel Cell Vehicle” located in Table II-3 in Appendix D of the solicitation should be used.

50. If the hydrogen used by the project has a different renewable content than 33 percent renewable, is it required to use a carbon intensity of 88.33 grams CO₂ equivalent per megajoule (gCO_{2e}/MJ) for the scored GHG emission factor calculation? If not, what values should be used for other percentages of renewable content?

Answer: All applicants must use the provided hydrogen carbon intensity in Appendix D of the solicitation, but if the applicant is contracting with a fuel provider with its own certified carbon intensity, then the applicant can submit alternate calculations **in addition** to the required calculations. Requirements for submitting alternative methodologies are included in Section X, Scope of Work, of the solicitation.

51. By what method should the value of both the new technology equipment and the baseline equipment be estimated after the two-year demonstration? For example, is it the projected sale value, is there a depreciation schedule to be used, or is there some other method?

Answer: Appendix D of the solicitation states that the value two years after demonstration must be determined using a ten year useful life and under the assumption that the technology would be commercialized and utilize economies of scale cost reductions.

Determining the Value/Cost of Equipment

52. Commercial passenger ferries are almost always uniquely designed, which makes finding an exact comparable ferry to use as a baseline nearly impossible. By what method should a baseline ferry value be estimated in this situation?

Answer: The method used to determine the cost of a baseline ferry is at the discretion of the applicant team. In cases where there is not an exact comparison, the applicant should explain in their application the basis for their selection of the baseline. A common method is to price ferries based on the passenger capacity, so the baseline cost could be the cost of a ferry with a similar passenger capacity.

53. For a conversion project, should the cost of the baseline technology at demonstration be set equal to the cost of acquiring the specific piece of equipment for the conversion by the project, the cost of a similar new piece of equipment, or some other method?

Answer: For the baseline piece of equipment, the cost should be set equal to a similar new piece of equipment.

54. For a conversion project, should the cost of the advanced technology be set equal to the cost of the entire new vehicle or just the new technology being used on a legacy piece of equipment?

Answer: For the advanced technology piece of equipment, the cost should be set equal to what the technology would be as a final product. If the demonstration product would be a new technology sold for the purpose of being used on a legacy piece of equipment, then the cost should be set equal to only the cost of the new technology.

55. It appears that the value of the new technology equipment at demonstration should be set to that equal to the grant amount from CARB (including administrative costs but excluding cost share) is that correct?

Answer: No, this is incorrect. For the cost-effectiveness calculations, the value of the new technology equipment at demonstration should be set equal to whatever the actual cost of that new equipment is.

56. In cases where a significant portion of the equipment cost is contributed via cost share, the cost of the baseline equipment may be more than that of the grant amount (assuming the new technology cost is set to the grant amount) leading to a negative cost-effectiveness number. Is this allowable, or if not, how to handle this situation?

Answer: This will not occur because the cost of the new technology equipment is set to the actual cost of the new equipment, not to the grant amount.

Emission Testing

57. What is meant by “reproducible emission testing”? Should Title 40, Code of Federal Regulations, Part 1065 be used?

Answer: Reproducible emission testing is emission testing that can be reliably duplicated by other entities and is often linked to certification testing. Part 1065 does not need to be used, but any emission test method used must be able to be reproduced.

58. On projects that involve the deployment of new zero-emissions cargo handling equipment, what will require emissions testing—the diesel baseline vehicles? What if an applicant is purchasing new zero-emissions equipment for which it owns no comparable diesel baseline equipment? In that scenario, is any

emissions testing required at all? Please clarify what exactly needs emissions testing.

Answer: Emission testing is required as appropriate and as stated in Section X, Scope of Work, of the solicitation, “reproducible emission testing for internal combustion engines to verify the emission benefits from the demonstration of technologies funded under this Solicitation will be required to be performed.” To clarify further:

- If internal combustion technology is involved in the advanced technology being demonstrated, emission testing of both the baseline and the advanced technology is required. If the applicant team has no baseline available then one must be procured.
- If the advanced technology is fully zero-emission, then no emission testing is required for the tailpipe emissions, but performing emission testing on the baseline equipment would make the application score more competitively because performing these tests would help support claims of emission reductions and the advanced technology’s ability to perform similar work. Therefore the proposal that included emission testing of the baseline equipment could score more competitively.

59. Is internal combustion engine emissions data required for projects using 100 percent battery or hydrogen fuel cells? If so, but there is no existing direct comparison to the piece of equipment being outfitted with the advanced technology, how should such an engine be selected?

Answer: Emission testing for fully zero-emission technologies is not required but performing emission testing on the baseline internal combustion piece of equipment is encouraged and may help an application score more competitively. If there is no existing direct comparison to the new piece of equipment, then a piece of equipment that would be performing similar work should be chosen.

60. Can manufacturer data be used to substitute for actual engine testing seeing as how testing an actual internal combustion engine that is not part of the project will require purchase or rental of the engine?

Answer: No, manufacturer data and industry benchmarks are not sufficient for determining efficiency and emission reductions for advanced technology vehicles.

61. When performing emission testing on conventional legacy equipment for an all-electric project, what should be tested? What pollutants and data?

Answer: Greenhouse gases (which can include, but are not necessarily limited to, carbon dioxide (CO₂), methane (CH₄), ozone (O₃), and nitrous oxide (N₂O)), particulate matter (PM), reactive organic gases, and NOx emissions should all be tested. In addition, data related to duty-cycles, usage, and performance would be beneficial in order to determine whether the advanced technology will be able to do the work performed by the baseline piece of legacy equipment. A proposal which intended to collect this type of data from a conventional piece of legacy equipment may score more competitively.

Disadvantaged Community Benefits

62. Why not require the use of CalEnviroScreen 3.0 instead, as it was released before the solicitation was released?

Answer: CalEnviroScreen 2.0 should be used because it is required by the FY 2016-17 Funding Plan. CalEnviroScreen 2.0 can be found by following this link: <http://calepa.ca.gov/EnvJustice/GHGInvest/> and scrolling to the lower portion of the page.

63. If the equipment is manufactured in a disadvantaged community, does that meet the requirements for being located in or benefitting a disadvantaged community?

Answer: No, manufacturing in a disadvantaged community does not qualify as benefitting a disadvantaged community as described in the *Cap-and-Trade Auction Proceeds Guidelines for Agencies that Administer California Climate Investments*³ (portions of which are included in Appendix A of the solicitation).

64. Because disadvantaged community groups may have a limited ability to participate as a partner for these demonstrations based on funding and resources, could a percentage of the grant be spent on the community instead?

Answer: No, the purpose of partnering with community groups is to show that there is cooperation and involvement from the communities affected by these demonstration projects, and engaging with these community groups should not be overly burdensome to these groups.

³ CARB, Cap-and-Trade Auction Proceeds Guidelines for Agencies that Administer California Climate Investments, <https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/arb-funding-guidelines-for-ca-climate-investments.pdf>, accessed on August 1, 2017.

Application Questions

65. Solicitation document, Section X.B (Scope of Work - Vehicle Certification, Verification, and Permitting) states that "a clear explanation of what steps are required in the process for legal operations" is needed. Where in the Application and under which Scoring Criteria category should this information be included?

Answer: This information should be included in the Project Narrative and Work Plan, noted in Attachment 2 of Appendix A of the solicitation, and is accounted for in scoring criterion 3, Project Objectives and Work Plan, of the solicitation.

66. The solicitation document Section IX states that for non-freight applications, justification must be included to show how the demonstration could be freight enabling. Where in the Application and under which Scoring Criteria category should this information be included?

Answer: This information should be included in the Project Narrative, noted in Attachment 2 of Appendix A of the solicitation, and is accounted for in scoring criterion 9, Technology and Innovation, and criterion 10, Potential for Market Penetration and Commercialization of the Technology, of the solicitation.

67. Can you confirm that the Work Plan is a separate document and not a part of the narrative with its limit of 15 pages? What is the page limit for the Work Plan? Can we modify the template you provided in Appendix A?

Answer: The Project Narrative and the Work Plan are two separate documents and the 15 page limit applies specifically to the Project Narrative. The Work Plan has no page limit. The template choice is up to the applicant team, but it must provide at least the same level of detail and information that is requested in Appendix A of the solicitation.

68. Does Attachment 3 have a page limit?

Answer: No.

69. Do you require only a single budget form describing the entire project or would you like sub-budgets breaking down the project budget by partner?

Answer: This is up to the applicant team to decide. CARB staff would like to see as much granularity as possible and proposed budgets that are clearer and outline the budget in more detail may score more competitively. However, deciding if this requires sub-budgets is up to the applicant.

70. Will the grantee and project team be able to make changes to the projects scope of work or budget after the application is submitted?

Answer: No, the application is a commitment from the whole project team including the grantee, technology demonstrator and end user fleet as to the scope and cost of the project. The application chosen to be funded will be incorporated into the grant agreement as a binding part of said grant agreement. Further, the application will be used to develop the grant agreement's budget, timeline and scope of work. Project team members should be aware of all the requirements of the solicitation including being held to the budget, deliverable dates and other commitments made in the application. Any expectation of cost of living increases or increases in cost for project administration for any reason needs to be included in the proposed budget along with the rationale for any increases during the term of the agreement.

Solicitation Implementation Process

71. Does CARB have a list of interested project partners who are looking for other entities to partner with in order to apply for this demonstration?

Answer: No, CARB does not have a list of interested project partners for this solicitation.

72. Will there be additional Applicant Teleconferences?

Answer: No, CARB will not be holding any further Applicant Teleconferences for the FY 2016-17 Off-Road Advanced Technology Demonstration Solicitation.