# 2015 Annual Merit Review Survey Questionnaire Results Summary

Following the 2015 U.S. Department of Energy (DOE) Hydrogen and Fuel Cells Program (the Program) Annual Merit Review (AMR), all participants were asked for feedback on the review process and meeting logistics. This appendix summarizes the results of that feedback and is organized by type of respondent, as follows:

1. All Respondents
2. Responses from "Attendee, neither Reviewer nor Presenter"
3. Responses from Reviewers
4. Responses from Presenters

## 1. All Respondents

### 1.1. What is your affiliation?

| | Number of Responses | Response Ratio |
|---|---|---|
| U.S. federal government | 23 | 13.5% |
| National/government laboratory, private sector, or university researcher whose project is under review | 24 | 14.1% |
| Non-government institution that received funding from the office or sub-program under review | 42 | 22.9% |
| Non-government institution that does not receive funding from the office or sub-program under review | 31 | 18.2% |
| Government agency (non-federal, state, or foreign government) with interest in the work | 1 | <1% |
| National/government laboratory, private sector, or university researcher not being reviewed | 20 | 11.7% |
| Other | 18 | 10.5% |
| No Responses | 11 | 8.2% |
| **Total** | 170 | 100% |

**"Other" Responses**
- *From three respondents:* Reviewer
- *From two respondents:* Retired
- *From two respondents:* Contractor
- Consultant to the Vehicle Technologies Office (VTO) and Reviewer
- Consultant
- Engineering Consultant
- Battery Maker
- European Institution
- Foreign Research Institute
- Hydrogen Safety Panel
- Japanese Funding Agency
- Non-Government about to Receive Funding
- Non-Profit
- Public Company

1.2. Purpose and scope of the Annual Merit Review were well defined by the Joint Plenary Session (answer only if you attended the Joint Plenary on Monday).

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 3 | 1 | 10 | 48 | 48 |
| 3% | 1% | 9% | 44% | 44% |

*15 Comments*

- Grouping reviews according to the project topic is more efficient and effective from a time standpoint. This helps minimize the reviewers' cost to attend and optimize their time.
- The purpose and scope were very well defined by the speakers at the Joint Plenary at the onset of the meeting, thus setting the stage for the meeting's objectives.
- Having Senator Dorgan speaks volumes on where the two programs are going in terms of impact, especially the Fuel Cell Technologies Office (FCTO).
- The presentations were interesting, in particular the one from Senator Dorgan.
- The purpose and scope of the AMR were very clear.
- It provided an excellent overview.
- Some (not all) were very inspiring speakers, which set the scope appropriately for the AMR.
- In general, it was very good; there was too much talk about limited-access and unproven fuel cell vehicles—it is nice to know that it is coming, but there are still very low numbers available.
- The scope of the sub-programs is well presented. The scope of the review is, however, not clear. One hopes that it is clear to the reviewers.
- The high-level talks are somewhat interesting but do not add all that much to the reviewer's ability to review the overall programs.
- *From five respondents:* This individual did not attend the Joint Plenary Session.

1.3. The two plenary sessions after the Joint Plenary Session were helpful to understanding the direction of the Hydrogen and Fuel Cells and Vehicle Technologies Programs (answer only if you attended either the Hydrogen and Fuel Cells or Vehicle Technologies plenary sessions on Monday).

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 3 | 0 | 12 | 60 | 37 |
| 3% | 0% | 11% | 54% | 33% |

*16 Comments*

- This new way of doing plenary sessions is highly appreciated because it allows attendees to have access to the main results of the different programs. Please continue like that.
- The plenary talks are useful in showing the scope of the various sub-programs in VTO.
- Making the plenary presentations available on the USB flash drive will be valuable.
- Very informative overviews by FCTO staff.
- They provided an excellent overview.
- Both sessions were good.
- They laid out the programs and issues well—the only problem was that most presentations really had to cram in a lot in a short amount of time.

- Speakers often had too much text in their slides that was glossed over. Perhaps fewer examples that are explained or put in context would be better.
- Presentations should be more concise, should talk about information that is not online, and do not have to highlight what will be described later.
- There was a lot of repetition between these presentations and session presentations.
- *From six respondents:* This individual did not attend the plenary sessions.

### 1.4. The sub-program overviews were helpful to understanding the research objectives (answer only if you attended one or more sub-program overviews).

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 3 | 1 | 5 | 68 | 56 |
| 2% | 1% | 4% | 51% | 42% |

*16 Comments*

- Sub-program overviews are one of the most valuable aspects of the AMR.
- Very well done and informative. Just enough information was presented to grasp sub-programs, goals, progress, and challenges.
- This new way of doing plenary sessions is highly appreciated because it allows attendees to have access to the main results of the different sub-programs. Please continue like that.
- The sub-program overview provided a good sense of the resources and objectives that are assigned to the different DOE agencies involved in the relevant research and development (R&D) areas.
- Informative sub-program review sessions—most sub-programs are doing well on appropriate research areas.
- Very good overview of the Fuels and Lubricants sub-program.
- The updates on program progress are very useful for people outside of the program.
- They provided a good overview of goals and milestones.
- They were very nicely done.
- They were useful.
- The objectives of each project are outlined in the project report. How such objectives meet the program scope is less clear in the presentations.
- Unfortunately, the plenary would be better at the start of each session. This is true for the crosscut sub-programs within FCTO.
- The DOE slides were overly complicated and contained too much text. It was difficult to see.
- They were not very helpful.
- *From two respondents:* This individual was not able to attend.

### 1.5. What was your role in the Annual Merit Review? Check the most appropriate response. If you are both a presenter and a reviewer and want to comment as both, complete the evaluation twice, once as each.

|  | Number of Responses | Response Ratio |
|---|---|---|
| Attendee, neither Reviewer nor Presenter | 92 | 54% |
| Presenter of a project | 34 | 20% |
| Peer Reviewer | 39 | 23% |
| No Responses | 5 | 3% |
| **Total** | 170 | 100% |

## 2. Responses from "Attendee, neither Reviewer nor Presenter"

### 2.1. The quality, breadth, and depth of the following were sufficient to contribute to a comprehensive review:

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| | Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|---|
| Presentations | 0 | 1 | 6 | 53 | 24 |
| | 0% | 1% | 7% | 63% | 29% |
| Question and answer periods | 0 | 2 | 8 | 54 | 19 |
| | 0% | 2% | 10% | 65% | 23% |
| Answers provided to programmatic questions | 0 | 1 | 13 | 54 | 14 |
| | 0% | 1% | 16% | 66% | 17% |
| Answers provided to technical questions | 0 | 1 | 4 | 55 | 22 |
| | 0% | 1% | 5% | 67% | 27% |

*8 Comments*

- A lot of data was included in some presentations, and it could not be covered in the time available. This seems a necessary compromise, however.
- Presentations from industry do not have much detail, which compromises the benefit of the taxpayer money spent. Specifically, for the SuperTruck program, as well as the ATP-LD program, all that was given were the percentage numbers and a list of technologies. There are no details that can be transferred within the whole industry. So the company got most of the benefit of funding.
- The presentation template inhibited some presenters from covering their topic in sufficient detail (e.g., having to comment on reviewer questions from the prior year).
- Of course there are some gray areas that could not be specifically answered in the programmatic questions. There is a certain level of uncertainty about the funding and its allocation.
- Out of necessity, the presenters share very little, if any, business-sensitive information.
- "Answers provided to programmatic questions" is a "Disagree" because there was not an opportunity to ask these questions in some tracks.
- Some presentations did not have questions from the reviewers or audience members.
- Could use more time for question and answer (Q&A) for a number of talks.

### 2.2. Enough time was allocated for presentations.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 0 | 5 | 6 | 57 | 15 |
| 0% | 6% | 7% | 69% | 18% |

*6 Comments*

- It depended on the presentation—the time allotted was balanced.
- It depends on the topics. A longer time is necessary for automotive projects and/or highly funded (i.e., >$3 million) projects. For specific topics (e.g., development of materials), it is enough.
- Twenty minutes is a bit short. Thirty minutes plus questions might be better.
- Several people were cut off. Perhaps five more minutes would suffice.

- Most presentations could have used some additional time.
- The schedule was too tight.

### 2.3.    The questions asked by reviewers were sufficiently rigorous and detailed.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 1 | 3 | 17 | 45 | 16 |
| 1% | 4% | 21% | 55% | 20% |

*6 Comments*

- The reviewers cannot—because of their limited expertise and number—cover all possible topics. It is OK to give the reviewers priority to ask questions, but there should be some time "guaranteed" for questions from the general audience. Questions from the general audience should be also formally documented, like the questions from the reviewers. Both the presenters and the reviewers benefit from the questions from the general audience.
- Some reviewers were not very familiar with the field of work being reviewed.
- It seems that a few reviewers never ask questions and are not well qualified to review the topics.
- The questions vary over a wide range of rigor and detail.
- The quality of the question depended very much upon the reviewer.
- Some projects did not get questions.

### 2.4.    The frequency (once per year) of this formal review process for this Office or Program is:

| | Number of Responses | Response Ratio |
|---|---|---|
| About right | 78 | 46% |
| Too frequent | 5 | 3% |
| Not frequent enough | 0 | 0% |
| No opinion | 0 | 0% |
| No Responses | 87 | 51% |
| **Total** | 170 | 100% |

*3 Comments*

- DOE could consider every other year for this review, with smaller or more targeted or virtual reviews in the other years. This might also allow for other venues or locations, or co-locating with other conferences.
- The projects that have not been working for more than a year should not present. There is typically not enough to report or the teams do not have enough time to draw tentative conclusions on the results.
- Confirming annual progress is important.

### 2.5.    Logistics, facilities, and amenities were satisfactory.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 2 | 2 | 7 | 35 | 39 |
| 2% | 2% | 8% | 41% | 46% |

*17 Comments*

- *From three respondents:* Walking back and forth between buildings is tedious and makes it difficult to hear all the talks of interest. It makes more sense to have VTO in one hotel and FCTO in another.
- The location of the rooms was particularly practical—they were very close to one another so that having a lot of meetings was possible.
- Very well run and organized.
- Breakfast was first-class.
- Meals were satisfactory.
- The hotel was booked, but there were enough other hotels in the area that walking to the AMR was possible.
- The Crystal City hotel was not an appropriate venue. The salons were too small and cramped; during the more popular sessions, there were often people standing. The hotel did not have adequate air conditioning, and the lunch sessions had to be streamed to other facilities. The hotel and general area are perfect for the VTO AMR.
- In the J&K salon where the plenary was held on Tuesday, the podium was back against the wall. The speakers could not see their slides or use the laser pointer effectively. There was no back row, so folks had to cross in front to find a seat. One gentleman tripped on backpacks, etc., crossing in the front, and he fell down. Seats were jammed together like in an airplane, so one could not sit up straight. It is questionable whether the fire marshal would approve. Noise in the hall behind the ballroom was distracting.
- The configuration in the room for the fuel cell track did not initially provide enough aisle space to allow for easy access in and out. This was fixed later in the conference with the removal of a back row of chairs.
- One should be able to register at either hotel (Marriott or Marriott Gateway). This attendee had to register at one hotel and run to the other hotel to listen to the first talk.
- At the luncheon, it was sometimes difficult to hear speakers with the noise generated by a number of attendees in the room.
- The daily rate for hotel accommodation is too high to be accepted as affordable.
- The temperature was set too low, which wastes energy.
- The plenary rooms were very hot and humid.
- The lunches were bad.

2.6.   The visual quality of the presentations was adequate. I was able to see all of the presentations I attended.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 2 | 8 | 8 | 38 | 29 |
| 2% | 9% | 9% | 45% | 34% |

*15 Comments*

- *From four respondents:* Presenters continue to use too many words and put too many graphs on one slide. Graphs were frequently illegible. The template requires too many words. Presenters should be required to provide graphs and text at a minimum font size of 18 or 20 points. It was hard to see from the back of the meeting room. One had to choose between listening to the speaker and reading the text. A new template is required. General guidance in making AMR slide formatting is recommended.
- *From three respondents:* The screens should be raised; otherwise, only those in the first few rows can see the slides easily.
- For the most part. Having the thumb drive was helpful because one could view the presentation on one's notebook computer.
- All the information technology (IT) parts of the presentation worked very well.
- The presentation format is great.
- The sessions had adequate quality; the lunch presentations in the Crystal City hotel were not adequate.
- DOE should forbid red font on a blue background on the slides. It is impossible to read.

- There were occasional issues with pulling up presentations in the session rooms.
- The rooms were huge, the presentations contained too much information, and the text was too small.
- For the size of the rooms, the screen was small, and certain elements were not quite easily visible.

### 2.7. The audio quality of the presentations was adequate. I was able to hear all the presentations I attended.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 0 | 1 | 4 | 42 | 36 |
| 0% | 1% | 5% | 51% | 43% |

*5 Comments*

- Microphones are quickly delivered to the people questioned.
- This was only a problem when one or two of the speakers did not speak clearly, but this was not the fault of the audio equipment.
- This participant did not hear any presentations with audio.
- Noise issues outside of the session rooms need to continue to be monitored and addressed. A large number of people were mingling, and hotel staff were making significant noise in access halls behind the plenary room.
- Sometimes it was difficult to hear clearly.

### 2.8. The meeting hotel accommodations (sleeping rooms) were satisfactory.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 0 | 0 | 17 | 31 | 25 |
| 0% | 0% | 23% | 42% | 34% |

*14 Comments*

- *From six respondents:* This participant did not stay at the hotel.
- *From three respondents:* The hotel was very expensive, even at the conference rate.
- Excellent hotel; with the conference rates, it was also a good value for the price (for Washington).
- The conference planner was very helpful, even when this attendee booked a hotel room after the deadline.
- It was too expensive for the value, and there were a few issues with the room that one would not have expected for the price. This participant would have been willing to be further out of town for more economical accommodations, although having a large enough facility is obviously key.
- The hotel rooms were fine. But the Crystal hallway in front of the meeting rooms was very hot—it was uncomfortable for meeting/talking.
- Except the restroom.

### 2.9. The information about the Review and the hotel accommodations sent to me prior to the Review was adequate.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 0 | 0 | 11 | 43 | 27 |
| 0% | 0% | 14% | 53% | 33% |

*4 Comments*

- When this participant registered the contingent was already exhausted, but the conference manager was extremely helpful and took care very efficiently so that the participant could still get the rate.
- Very well organized, good job.
- A "conference bag" to hold all the materials throughout the review would have been helpful.
- The hotel information was sent a bit late this year.

### 2.10. What was the most useful part of the review process?

*52 Responses*

- *From six respondents:* The technical presentations.
- *From five respondents:* Networking.
- *From five respondents:* The presentations, feedback, and Q&A.
- *From three respondents:* The Q&A.
- *From two respondents:* Plenary session.
- *From two respondents:* Poster sessions. This time was the most effective for learning and networking. It was helpful to speak to the presenters one-on-one as well as mingle informally with the other attendees.
- The detailed breakout sessions; both presentations and poster sessions.
- Hearing the technical progress made by the various teams and hearing the questions the presentations provoked from the reviewers and others.
- Hearing experts (reviewers or audience) pose pointed questions.
- Attending the oral presentations and interacting with principal investigators (PIs) and reviewers.
- Technical content and interactions with peers.
- The presentation of project results in a concise 20-minute presentation is very useful.
- Access to the presentation material (including the technical backup slides) is the most important part of the review process. The verbal presentations by the PIs are a close second.
- Presentation materials provided on a USB memory stick.
- The memory stick of the presentations and the spreadsheet references are very helpful. The plenary sessions helped one to calibrate on the vision and priorities of DOE.
- It was useful to learn about the status and progress of all the projects being funded by FCTO and VTO, as well as the challenges/hurdles being faced by them.
- Gaining a better understanding of the type of projects being funded was useful, as was learning about future development needs that this participant's company may be able to support.
- Awareness of all R&D funding recipients, national laboratories' role, and funding levels. Technical progress is very valuable.
- The ability to see the program portfolio and provide interactions between projects that would normally not communicate is useful.
- It was very helpful to see other ongoing research in the area of lubricants, in particular.
- The review provides an opportunity to obtain external feedback on projects.
- Learning about the state of the art among various research groups. The plenary session.
- In-depth questioning with on-site personnel.
- Engaging with the technical experts.

- Being able to talk directly to the project leads.
- The ability to see the status of multiple projects in a short period of time. It is very time efficient.
- The timelines, objectives, and published deliverables.
- The overview of ongoing R&D and the networking.
- The open style of reviewing.
- Electrochemical storage.
- The overview and plenary sessions.
- The overview session.
- Briefings.
- Staying current.
- The reviews were helpful, but there should be more networking time to speak to the different presenters because Q&A is limited. The presenters do not always stick around for the breaks.

## 2.11. What could have been done better?

*43 Responses*

- *From eight respondents:* No comments. The event was satisfying.
- *From three respondents:* The presentations from the introductory and plenary sessions should be included on the USB.
- The plenary session needs to be reenergized. Talks are covering much ground covered in previous years with slides that are too detailed—this is great for review offline but not for a live audience. Senator Dorgan's talk was excellent.
- Less time introducing projects and overviews, more technical details and indicators of progress.
- More time on technical progress, less on administrative slides.
- Perhaps an exhibit of the device/technology—an example room or demonstration of a prototype selected by reviewers as the best from the last review.
- More commercial discussion about these projects would be helpful in expediting technology-to-market.
- Laboratory projects occupy prime presentation time. Industry projects, which are orders of magnitude greater in funding and actually get the technology being funded into consumer hands, were tacked on at the end when attendance was poor—late Thursday and early Friday when attendees were trying to get home.
- It seems like the few Friday presentations could have been held on an earlier day(s) to avoid a few people having to stay an extra day.
- The whole event could be condensed to four days, Monday to Thursday.
- Some talks were reviewed although the work was not even started. That should stop.
- Better seating. Attendees were seated too close together, literally rubbing elbows with the person seated adjacent.
- A little bit more space for coffee breaks was needed. It was quite difficult to find the person this participant wanted to talk to because there were so many people in a limited space.
- The luncheons are a disaster. A perfect time for networking is lost, all in the name of having a "working lunch." The current format is stressful and unproductive. It would be better to pay for lunch and meet new people.
- During lunch, the tables should carry a jar of water in case anyone needs to drink more without inconveniencing the serving staff, who are already busy enough.
- This participant brought this up at last year's AMR: It is disappointing that in this day and age, there was not recycling provided. For example, outside of the meeting rooms, during breaks, there were plenty of bottled and canned drinks, but no recycling. It is not good for the earth, and the wrong message is being sent. One hopes next year is better.
- Beverage stations during breaks were too close to the main ballrooms, which led to congestion from too many people. It was too loud to hear anyone.
- Post answers to questions that were asked after the session ended because of time constraints (presenters may choose which ones to post based on how useful the answers may be in terms of clarifying to the technical community certain key information).

- It would be better to have a smaller but more focused review on each subject matter to facilitate more discussions as a group and provide more free flow of interactions among the stakeholders and their peers.
- For those interested in more than one topic (e.g., hydrogen production and fuel cells), the parallel arrangement of the talks is not ideal. Because of the number of talks, this is probably difficult to resolve.
- Create a clear objective statement and be honest about whether the project is meeting it and whether it is going to be a relevant technology.
- Provide more detail on the program, title, and affiliation of the presentation.
- The AMR schedule should be available online rather than just in paper form to allow people to set up their personal review schedule for the week. One possible app is Guidebook.
- Perhaps links could be provided to a summary slide ahead of the AMR to help attendees decide on session priorities. Perhaps this could be made available ahead of the registration process when the memory sticks are distributed.
- Guaranteed time for questions from audience—at least 3 of the 10 minutes.
- Improve the visual quality of the presentations and set the meeting room temperature at about 75°F.
- Please keep the temperature higher during the presentations. Thank you.
- Duplicate registration desks.
- Networking with a board industry group.
- Some of the reviewers should come from an economic perspective and/or social (media).
- Conference locations were a little too far apart. It was difficult to see Advanced Powertrain Technologies and make it back to see Thermal Presentations.
- Keep VTO sessions in one hotel.
- No working lunch.
- Lunch and coffee breaks.

### 2.12. Overall, how satisfied are you with the review process?

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 0 | 0 | 7 | 50 | 23 |
| 0% | 0% | 9% | 63% | 29% |

*3 Comments*

- It provided a comprehensive outline of DOE projects.
- It was very beneficial.
- This participant did not hear anyone say that funding decisions would be made based, at least in part, on these presentations/reviews. The quality of the talks is mixed.

### 2.13. Would you recommend this review process to others, and should it be applied to other DOE programs?

| | Number of Responses | Response Ratio |
|---|---|---|
| Yes | 77 | 45% |
| No | 5 | 3% |
| No Responses | 88 | 52% |
| **Total** | 170 | 100% |

*5 Comments*

- There is great value in having projects report out periodically and collecting feedback from qualified reviewers.

- This is the best all-around event.
- It is very key for getting all parties together.
- The review process is still good.
- This is a reasonable forum for the laboratory projects to be reviewed but not for the industry partners.

## 2.14. Please provide comments and recommendations on the overall review process.

*24 Responses*

- *From two respondents:* The meeting was well organized.
- The AMR event is fascinating and unique. Although highly technical in nature, it attracts significant interest and participation from industry. Attendees are able to meet with more customers, partners, and collaborators in one event than almost any other event (and definitely more than any other event in the United States).
- The transparent approach to information enables stakeholders to make certain decisions regarding advice given to clients and researchers.
- This review is now the most valuable conference for networking in the fuel cell industry.
- Thanks a lot to the organization committee for its effort.
- This review featured the best time management of presenters ever witnessed at a conference.
- The meeting was informative and well organized.
- The meeting was efficient and transparent.
- It is good that this AMR is open to everyone.
- This participant was not involved in a reviewed project and cannot really comment on this.
- The luncheon speech process was really unpleasant, particularly on Wednesday. The speaker was shouting so the audience continued to speak even louder, so no one could hear anything. Perhaps the luncheon speeches can be eliminated. After all, lots of work gets accomplished during lunch talking to one's seatmates.
- Peer networking is one purpose of the meeting, and lunches should allow for conversation and sharing without other lectures and working sessions, other than awards presentations.
- It is highly recommended that DOE allocate some "guaranteed time" for questions from the audience, while preserving the priority for reviewers. Audience questions are useful for both the presenters and the reviewers.
- It would be good to see more commercial discussions as well as possibly seeking feedback from the industry on the technologies.
- It seems like the few Friday presentations could have been held on an earlier day(s) to avoid a few people having to stay an extra day.
- All VTO projects should be held in one hotel. Too much running through the tunnel was required to see projects.
- Non-DOE people should be charged to support the catering of breakfast, lunch, and poster session snacks.
- Recommend plastic badge covers—this participant's badge got wrinkled/damaged throughout the week.
- One hopes that reviewers are people who are not funded through this program.
- Presentations from the overview sessions should be provided.
- It was not always clear what the review criteria are and how the achievements, completed or failed, are reviewed.
- Additional accountability to the mission and goals initially set would be appropriate.
- It may be better to do a panel discussion to summarize DOE projects.

## 3. Responses from Reviewers

### 3.1. Information about the sub-program(s)/project(s) under review was provided sufficiently prior to the review session.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 0 | 0 | 0 | 20 | 14 |
| 0% | 0% | 0% | 59% | 41% |

*7 Comments*

- All information was provided except for overviews.
- Having one more week for reviewing would be appreciated.
- It might be helpful to have it a little sooner.
- A summary of reviewers' comments from the previous year will also be useful.
- This reviewer did not get the sub-program manager's presentations prior to the meeting, although the project presentations were received.
- One poster was available on PeerNet only a number of hours before the session—the poster was not available during the poster session. Reviewing this poster was, as a result, very difficult.
- No copy of presentation materials was provided either before or during the meeting for one project that this reviewer had to review.

### 3.2. Review instructions were provided in a timely manner.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 0 | 0 | 0 | 14 | 21 |
| 0% | 0% | 0% | 40% | 60% |

*4 Comments*

- The reviewer process information was very clear.
- No problem—but this reviewer has been doing it for a number of years.
- Grouping reviews according to the project topic is more efficient and effective from a time standpoint. This helps minimize the reviewers' cost to attend and optimizes their time.
- There were some problems getting the material and video because of internal firewalls.

### 3.3. The information provided in the presentations was adequate for a meaningful review of the projects.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 0 | 1 | 3 | 20 | 10 |
| 0% | 3% | 9% | 59% | 29% |

*7 Comments*

- This reviewer has a much better sense of the resources and objectives that are assigned to the different DOE agencies involved in the relevant R&D areas than prior to attending the program overview
- Presenters had difficulty presenting a few of the more complicated projects in the time allotted, but for the most part, information was sufficient.
- Several of the presentations did not provide enough detail for a thorough review. Also, some projects that were reviewed were less than $100,000 in size, and others were several million. The smaller the project, the more sufficient the detail provided. Bigger projects did not have nearly enough information.
- In some cases, the information was perfect, while in others, the information provided by the applicants was weak, was poorly organized, and did not really allow for a complete review of the progress of the work. They were academics who concentrated too much on the technical details and not enough on the management aspects of the work, which is key.
- It would be useful if what was presented as future work from the previous year was used as a basis for the work completed in the current year. There should be a slide from the project's last AMR that says what the team planned to accomplish so that during this AMR they would be able to check off progress—or to understand the challenges that need to be overcome to achieve the planned accomplishments. (This approach works only for multiyear projects.)
- The required format of the presentations puts far too much emphasis on the approach and collaboration sections—both are important, but evaluating the results and their relevance to DOE goals is of highest value and should receive more time.
- In some cases not enough was provided, but that is typical for industry-based development-type projects.

### 3.4. The evaluation criteria upon which the review was organized (see below) were clearly defined.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| | Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|---|
| Relevance/Potential Impact | 0 | 0 | 1 | 20 | 15 |
| | 0% | 0% | 3% | 56% | 42% |
| Approach | 0 | 0 | 0 | 18 | 16 |
| | 0% | 0% | 0% | 53% | 47% |
| Technical Accomplishments and Progress | 0 | 1 | 2 | 17 | 14 |
| | 0% | 3% | 6% | 50% | 41% |
| Collaboration and Coordination | 0 | 1 | 1 | 18 | 14 |
| | 0% | 3% | 3% | 53% | 41% |
| Proposed Future Research | 0 | 0 | 2 | 19 | 12 |
| | 0% | 0% | 6% | 58% | 36% |
| Resources (for Vehicle Technologies Office Projects) | 0 | 2 | 6 | 14 | 7 |
| | 0% | 7% | 21% | 48% | 24% |
| Strategy for Technology Validation or Deployment (for Market Transformation and Technology Validation Projects) | 0 | 1 | 12 | 10 | 6 |
| | 0% | 3% | 41% | 34% | 21% |
| Alternative Fuel Market Expansion and/or Petroleum Reduction Potential (for Technology Integration/Clean Cities Projects) | 0 | 1 | 8 | 11 | 6 |
| | 0% | 4% | 31% | 42% | 23% |

*4 Comments*

- All were very well defined; the issue was that some applicants simply ignored the guidelines, and this was reflected in this reviewer's evaluations of their work.

- Resources and the assessment of resources were not clearly quantified in the respective presentations that this reviewer attended. Also, the impact on petroleum reduction was not quantified, other than just a general statement indicating that petroleum consumption will be reduced.
- Very few PIs mention whether resources are sufficient—there is not much incentive for them to raise this issue, because insufficiency is a negative in scoring. Plus, this might not be the forum for the PIs to raise this to the technology managers.
- This reviewer does not recall the last two criteria being mentioned in the reviews.

### 3.5. The evaluation criteria were adequately addressed in the presentations.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| | Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|---|
| Relevance/Potential Impact | 0 | 0 | 1 | 19 | 15 |
| | 0% | 0% | 3% | 54% | 43% |
| Approach | 0 | 1 | 1 | 16 | 16 |
| | 0% | 3% | 3% | 47% | 47% |
| Technical Accomplishments and Progress | 0 | 1 | 2 | 14 | 17 |
| | 0% | 3% | 6% | 41% | 50% |
| Collaboration and Coordination | 1 | 2 | 3 | 16 | 13 |
| | 3% | 6% | 9% | 46% | 37% |
| Proposed Future Research | 0 | 2 | 4 | 14 | 11 |
| | 0% | 6% | 13% | 45% | 35% |
| Resources (for Vehicle Technologies Office Projects) | 0 | 3 | 6 | 16 | 5 |
| | 0% | 10% | 20% | 53% | 17% |
| Strategy for Technology Validation or Deployment (for Market Transformation and Technology Validation Projects) | 0 | 2 | 13 | 8 | 5 |
| | 0% | 7% | 46% | 29% | 18% |
| Alternative Fuel Market Expansion and/or Petroleum Reduction Potential (for Technology Integration/Clean Cities Projects) | 0 | 2 | 11 | 7 | 6 |
| | 0% | 8% | 42% | 27% | 23% |

*7 Comments*

- Many projects were ending soon, so future research discussions were limited to work left to complete. A few mentioned follow-on work suggestions, but that was rare. Again, the focus at the AMR is on the specific project and completion of required activities, while future efforts are not that much of a priority at this venue. Perhaps they should be.
- The proposed future research areas were generally only a couple of lines with high-level task descriptions—this is not enough detail for one to judge accurately.
- In some presentations, only a given part of the results has been presented. A general status of all the work done should be given, at least in the Reviewer slides.
- More focus on accomplishments and progress and less on the softer items would be much more valuable for reviewing the projects.
- The range varied between individual presentations; some were more thorough than others. Most made an effort to address how their projects were addressing the criteria for evaluation.
- Very often the "barriers" quoted in the presentations were quite often not "barriers" but goals/objectives.
- These ratings apply only to *some* of the projects this reviewer reviewed.

### 3.6. The right criteria and weightings were used to evaluate the project(s)/sub-program(s).

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| | Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|---|
| Relevance/Potential Impact | 0 | 0 | 5 | 16 | 12 |
| | 0% | 0% | 15% | 48% | 36% |
| Approach | 0 | 1 | 3 | 17 | 12 |
| | 0% | 3% | 9% | 52% | 36% |
| Technical Accomplishments and Progress | 0 | 1 | 3 | 17 | 12 |
| | 0% | 3% | 9% | 52% | 36% |
| Collaboration and Coordination | 0 | 1 | 4 | 16 | 11 |
| | 0% | 3% | 13% | 50% | 34% |
| Proposed Future Research | 0 | 0 | 5 | 17 | 10 |
| | 0% | 0% | 16% | 53% | 31% |
| Resources (for Vehicle Technologies Office Projects) | 0 | 0 | 6 | 14 | 9 |
| | 0% | 0% | 21% | 48% | 31% |
| Strategy for Technology Validation or Deployment (for Market Transformation and Technology Validation Projects) | 0 | 1 | 13 | 4 | 8 |
| | 0% | 4% | 50% | 15% | 31% |
| Alternative Fuel Market Expansion and/or Petroleum Reduction Potential (for Technology Integration/Clean Cities Projects) | 0 | 0 | 12 | 7 | 6 |
| | 0% | 0% | 48% | 28% | 24% |

*7 Comments*

- The criteria and weightings seemed reasonable.
- Most criteria/weightings seemed fine, except for a few issues.
- It is difficult for a reviewer to judge whether the weightings were appropriate—this is more related to the relative importance to DOE.
- This reviewer did not pay any attention to the weightings.
- Technology validation or deployment does not seem to have the required emphasis and weightings.
- The basis/criteria used for proposed future work was unclear.
- One of this reviewer's reviewed presentations (ST-116) was not for vehicles but for other types of applications. The presentation did not clearly indicate this fact, resulting in some confusion on what target parameters (e.g., costs) were relevant.

### 3.7. During the Annual Merit Review, reviewers had adequate access to the Principal Investigators.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 0 | 1 | 0 | 19 | 15 |
| 0% | 3% | 0% | 54% | 43% |

*4 Comments*

- This is a particularly valuable element of the AMR.
- Access was OK.

- The poster session was very busy and extremely noisy—this participant did not have sufficient time to talk with the PI, who was constantly distracted/interrupted by others. In general, one had to wait to talk with the PI, and there was always a queue formed, making the discussions somewhat "pressured."
- Some PIs had little time for reviewers.

### 3.8. Information on the location and timing of the projects was adequate and easy to find.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 0 | 1 | 1 | 13 | 20 |
| 0% | 3% | 3% | 37% | 57% |

*5 Comments*

- It was excellent, like every year.
- The team has the system down.
- Frankly, this participant has usually found the schedule to be complex and a little tough to follow and has often made his own. However, this is a very large and complex event, so perhaps there is not anything that can be done about that.
- Once one found the room designations.
- The crosscut infrastructure session for FCTO was not advertised correctly and probably should not have been in the smaller hotel. Almost all other FCTO projects were in the larger hotel.

### 3.9. The number of projects I was expected to review was:

| | Number of Responses | Response Ratio |
|---|---|---|
| Too many | 2 | 1% |
| Too few | 2 | 1% |
| About right | 31 | 18% |
| No Responses | 135 | 79% |
| **Total** | 170 | 100% |

*5 Comments*

- It was great overall, and the chair of the session did a superb job of keeping everything flowing along efficiently.
- Four projects seems to be a good number.
- The number of projects assigned to this reviewer is more than normal. This reviewer would not mind doing the reviews but needs more time to complete them.
- This reviewer could have done a few more, but schedule and conflicts made that tough.
- This reviewer did 8 and could have done 10 to 12.

### 3.10. Altogether, the preparatory materials, presentations, and question and answer period provided sufficient depth for a meaningful review.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 0 | 0 | 4 | 18 | 13 |
| 0% | 0% | 11% | 51% | 37% |

*5 Comments*

- It was a very good review.
- Yes—the only problem was that some of the presenters did not present what they were asked to.
- It was adequate for the time allotted for the review and the magnitude of projects that were reviewed.
- For the most part, yes.
- Recently, there have been more mandatory slides, such as Response to Reviewers and Collaborations. Therefore, providing a few extra minutes and a few extra slides for the PIs to elaborate on their technical accomplishments would be useful.

### 3.11. Please provide additional comments.

*11 Responses*

- This is an excellent platform for DOE, both from an outreach point of view and to get the feedback from non-DOE specialists.  This was indeed a well-organized meeting.
- It is an honor and a pleasure to be involved with this excellent process.  Thanks so much for including this participant.
- Looking forward to the next AMR.
- Great opportunity to learn about activities—the only problem is too many presentations at once, meaning there can be direct schedule conflicts.
- Not all presentations follow the format suggested, but they supply the information verbally during the presentation. Perhaps it can be made clearer to the presenter that the responses to the evaluation criteria should be included in  the presentation in written form.
- While the physical facilities at this location were good, this function should be held within the District of Columbia, which has greater need for the positive economic impact.
- DOE should space out all the presentations by at least five minutes to help allow for (1) the reviewers to change seating and (2) the audience to go to other rooms for different presentations.
- The presentations are becoming too boilerplate to the point that the PIs are not allowed to really show the technical merit of the projects in some cases.
- It was extremely hard to hear what was being said during the lunch presentations—attendees were very rude this year and are getting worse. Perhaps the presentations can be made before the food is served.
- Presentations during the Tuesday/Wednesday lunches did not seem to work well. It is difficult to get and keep the audience's attention.
- Please provide the program managers' presentations prior to the meeting if participants are asked to review those presentations.

## 4. Responses from Presenters

### 4.1. The request to provide a presentation for the Annual Merit Review was provided sufficiently prior to the deadline for submission.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|
| 0 | 0 | 1 | 13 | 17 |
| 0% | 0% | 3% | 42% | 55% |

*4 Comments*

- *From three respondents:* The deadline for submission seems early with respect to the meeting. This prevents the project from reviewing progress closer to the meeting, and the material is stale by the time of the AMR.
- Two months beforehand is sufficient.

### 4.2. Instructions for preparing the presentation were sufficient.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|:---:|:---:|:---:|:---:|:---:|
| 0 | 2 | 0 | 12 | 17 |
| 0% | 6% | 0% | 39% | 55% |

*5 Comments*

- The instructions were very specific.
- Please consider the trend over the last couple years of continuing to add more and more required slides into the presentation. Presenters still have only 20 minutes, but all these new required slides are cutting down on the time for technical accomplishments, which should always be the meat of the presentation.
- The instructions are very long—the level of detail was great for this participant's first AMR, but after several years, the instructions are just tedious to read. It would be helpful if the organizers also offered a short summary of "what's different this year" so that attendees do not have to reread 70+ slides of instructions every year.
- The instructions were confusing. Without having been to the AMR previously, one would have a hard time knowing exactly what to do given the current instructions. Furthermore, the instructions were onerous to read through.
- The instructions were almost overkill—70 slides of instructions was a lot to wade through (even if most were examples).

### 4.3. The audio and visual equipment worked properly and were adequate.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|:---:|:---:|:---:|:---:|:---:|
| 0 | 0 | 2 | 11 | 17 |
| 0% | 0% | 7% | 37% | 57% |

*5 Comments*

- The audio and visual preparation was excellent and made transitions smooth and easy. This is a rarity among meetings.
- It worked great for preloaded presentations. There were a couple issues with presenters bringing updated slides—this should not have happened.
- This presenter generally likes to use his own laptop for presentations because it is a touch screen, which helps him communicate what is being projected on the screen by drawing on it during the presentation. This presenter is not sure whether the provided laptops were touch screen, but if not, that would be nice.
- Many of the rooms were set up such that the presenter had a very bad angle toward the projection screen; thus, it was hard to use a laser pointer.
- Many speakers had a "reviewers' comments slide." It is unclear whether this was required for the presentation or whether it should be in the backup slides or the reviewer-only slides.

4.4. The evaluation criteria upon which the Review was organized were clearly defined and used appropriately.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| | Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|---|
| Relevance | 0 | 0 | 2 | 19 | 9 |
| | 0% | 0% | 7% | 63% | 30% |
| Approach | 0 | 1 | 1 | 19 | 9 |
| | 0% | 3% | 3% | 63% | 30% |
| Technical Accomplishments and Progress | 0 | 0 | 2 | 18 | 10 |
| | 0% | 0% | 7% | 60% | 33% |
| Technology Transfer and Collaboration | 0 | 0 | 2 | 18 | 10 |
| | 0% | 0% | 7% | 60% | 33% |
| Proposed Future Research | 0 | 0 | 1 | 22 | 7 |
| | 0% | 0% | 3% | 73% | 23% |

*3 Comments*

- Having responses to reviewer comments as part of the presentation does not work well. These should be included in the reviewer-only slides or at the end but not directly presented.
- This presenter does not recollect that an emphasis was placed on technology transfer in the slides. Thus, that piece may not have come through as strongly as the others.
- It is sometimes difficult to identify where relevance ends and where approach begins.

4.5. Explanation of the questions within the criteria was clear and sufficient.

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| | Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|---|
| Relevance | 0 | 0 | 2 | 20 | 8 |
| | 0% | 0% | 7% | 67% | 27% |
| Approach | 0 | 1 | 1 | 21 | 7 |
| | 0% | 3% | 3% | 70% | 23% |
| Technical Accomplishments and Progress | 0 | 0 | 1 | 21 | 8 |
| | 0% | 0% | 3% | 70% | 27% |
| Technology Transfer and Collaboration | 0 | 0 | 2 | 20 | 8 |
| | 0% | 0% | 7% | 67% | 27% |
| Proposed Future Research | 0 | 0 | 1 | 22 | 6 |
| | 0% | 0% | 3% | 76% | 21% |

*0 Comments*

### 4.6. The right criteria and weightings were used to evaluate the project(s)/sub-program(s).

The top number is the count of respondents selecting the option. The bottom percentage is the percent of the total respondents selecting the option.

| | Highly Disagree | Disagree | Neutral | Agree | Highly Agree |
|---|---|---|---|---|---|
| Relevance | 0 | 0 | 5 | 18 | 7 |
| | 0% | 0% | 17% | 60% | 23% |
| Approach | 0 | 1 | 5 | 18 | 6 |
| | 0% | 3% | 17% | 60% | 20% |
| Technical Accomplishments and Progress | 0 | 0 | 5 | 19 | 6 |
| | 0% | 0% | 17% | 63% | 20% |
| Technology Transfer and Collaboration | 0 | 1 | 7 | 16 | 6 |
| | 0% | 3% | 23% | 53% | 20% |
| Proposed Future Research | 0 | 0 | 6 | 19 | 5 |
| | 0% | 0% | 20% | 63% | 17% |

*2 Comments*

- Approach seems underweighted.
- Technology transfer does not always have the same relevance for all projects.

### 4.7. Please provide additional comments:

*7 Responses*

- Great meeting. Excellently organized. Providing a flash drive with all the presentations makes life much easier. Thanks for the change from CD to flash drive.
- Clearly a lot of work goes into organizing this review. All the DOE employees and other support personnel should be congratulated for putting together a very good review.
- None. The whole meeting was well done.
- The review uses an effective format for communicating about the project by allowing reviewers and presenters to have back-and-forth communication. It would be nice if the lab call used a similar format to reduce communication issues. Also, the AMR would be much more useful if the comments came back before the lab call submission deadlines.
- The salons that had main entry to the side were set up horribly. The only way to get to the far side was to shove past the reviewers. An aisle from the main entry across the middle of the room would have been exceedingly helpful.
- From past experience, review comments have typically not gotten back to the PIs until about five months after the AMR. It would be much more effective for PIs to receive the review comments one or at most two months after the AMR.
- The only difficulty was in addressing all aspects of each criterion within the allocated page count.