

2010 Annual Merit Review Survey Questionnaire Results

The 2010 DOE Hydrogen Program and Vehicle Technologies Program Merit Review and Peer Evaluation Meeting was held June 7–11, 2010, at the Marriott Wardman Park in Washington, D.C. A plenary session was held on Monday afternoon, and oral presentations were held in eight parallel sessions all day Tuesday, Wednesday, and Thursday, and a half day on Friday. There were 349 Hydrogen Program presentations—with 218 presented orally and 131 presented in poster sessions. Over 1,700 people attended the meeting. This report documents results from a survey questionnaire given to all participants.

1.) What is your affiliation?

	Number of Responses	Response Ratio
Government agency directly sponsoring the program under review	8	5.6%
National/government lab, private sector or university	65	45.7%
In an industry directly involved in the program under review	32	22.5%
In an industry with interest in the work under review	17	11.9%
Government agency with interest in the work	7	4.9%
Other	10	7.0%
No Response	3	2.1%
Total	142	100%

“Other” Responses

Support contractor
 Not-For-Profit R&D
 Academia
 An observer of fuel cell industry and government policy
 University
 Consultant
 NIST / TIP
 German not for profit organization
 International Government Agency

2.) Purpose and scope of the Annual Merit Review were well defined. Answer only if you attended the plenary on Monday.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
2	4	5	56	34
2%	4%	5%	55%	34%

12 Comment(s)

The presentations seemed to be a self-lauding exercise for the presenters. But we, the reviewers, seemed most interested in details, such as what the presenters learned and how they plan to expand their work.

The fact that it is a joint review of two programs seemed to be lost on some of the plenary speakers.

The plenary was a meeting for battery electric and plug-in hybrids and did not address hydrogen other than superficially. The HFCV (hydrogen fuel cell vehicle) program has met all its targets (from competitive storage targets to expected battery targets) and is treated apathetically by DOE management. That is not rational management.

The status was well reviewed; however, unlike in the past, there was not much mention of future programs and solicitations. This could be due to the fact that future programs have not been decided on yet, but mentioning that would be better than saying nothing on the subject at all.

Honestly, the plenary session was not very useful. Overviews of the research were not detailed enough. If one is going to spend time at the plenary session, please present something important and useful. Research presented from higher level officials usually means the presentation lacks details, with generic statements and opinions being substituted for said details. Those aforementioned substitutions are meaningless.

The plenary talks, primarily the initial section of high-level talks, were a disappointment this year. Some speeches were poorly prepared and the talks in general did not sufficiently address the DOE's Hydrogen Program.

The intent of the plenary session was clear, but the process by which the review comments will be used going forward is not completely understood.

The meeting provided insufficient descriptions of overall program goals and how the review results are going to be used.

A few presentations seemed to be primarily concerned with the format of the review rather than providing an actual purpose.

With a little fine tuning, this program would excel on most fronts.

It was surprising to hear that only 85% of the presentations would be reviewed. How does one find out if a particular project was reviewed, and if so, what the results of that review are?

The plenary session was very good.

3.) The plenary presentations were helpful to understanding the direction of the Hydrogen and Vehicle Technologies Programs. Answer only if you attended the plenary on Monday.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
7	9	16	42	13
8%	10%	18%	48%	15%

21 Comment(s)

The plenary presentations varied in quality and direction. Pat Davis' presentation was particularly good at explaining the VTP (Vehicle Technologies Program) direction. Other presentations were not as successful.

Rick Farmer's and Pat Davis' presentations were helpful in understanding the direction of the Hydrogen and Vehicle Technologies Program.

Several of the talks were poor. Some presentations could have been deleted without losing anything.

It is well understood that the Administration is not supportive of fuel cell development. Nonetheless, it is not helpful that the plenary presentations did not pay much attention to fuel cell issues. The DOE leaders at least should pay respect to the efforts and sacrifices that are made for fuel cell development and give equal time to fuel cell speakers.

While DOE managed a \$2.5 billion ARRA (American Recovery and Reinvestment Act of 2009) program, there were no funds devoted to a HFCV (hydrogen fuel cell vehicle) market transformation program succeeding a technology validation effort. One senior official mentioned forklifts but there was no real recognition of where the Hydrogen Program has progressed or any recognition or support for the CA ZEV (California's Zero Emission Vehicle) mandate.

The status was well reviewed. However, unlike in the past, there was not much mention of future programs and solicitations. This could be due to the fact that future programs have not been decided on yet, but mentioning that would be better than saying nothing on the subject at all.

This year included talks from EPA (Environmental Protection Agency) and TARDEC. While interesting and clearly relevant to the program, it did little to give a better understanding of the program direction, particularly the TARDEC talk. It's understandable that the successes and failures of the partnership could affect the future regulatory landscape, for example, EPA and NHTSA (National Highway Traffic Safety Administration).

The goals and directions of the programs were clearly presented.

APPENDIX E: SURVEY RESULTS

It was interesting that hydrogen was included as a part of a broader focus on diversity along with energy systems as a whole, especially for the transportation sector, but was de-emphasized in the early plenary presentations.

Comments from the first speakers largely ignored hydrogen and fuel cells. I am concerned that one senior official seemed unconcerned about his audience's position.

A timeline displayed per program would have been helpful to understand where the program is in its maturity.

The non-DOE speakers did not even mention hydrogen and barely said anything about fuel cells. The plenary room needed larger screens, louder sound, and more aisles (shorter rows) to accommodate audience seating.

The presentations overlapped quite a bit.

There was almost no mention of hydrogen, and the speakers said "fuel cells" three times in total.

As a member of the hydrogen and fuel cell program, it was very obvious that this program was only mentioned as an afterthought. I suggest that all plenary talks be removed, with the exception of the Program Manager Overview presentations.

The direction of the Hydrogen Program is unclear, and the plenary presentations did not help clarify the direction and goals of the Hydrogen Program.

This comment would be different from those made by people at the AMR for Office of Vehicle Technologies purposes. For those who were there for FCT (fuel cell technology) purposes, the message that was conveyed (by omission) was that hydrogen and FCT are of no importance or value to the DOE or the community at large.

Some presentations seemed to be aimed at a more general audience, not an audience of people who are very knowledgeable about the industry. Also, it was almost completely battery-focused with very little mention of the fuel cell and hydrogen program.

The presentations were too generic.

Is there access to the presentations? They were not found on the CD provided during registration. Are they online somewhere?

The plenary session was somewhat light on details regarding the overall planning of the programs.

4.) Sub-program overviews were helpful to understanding the research objectives. Answer only if you attended one or more sub-program overviews.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
1	1	9	69	39
1%	1%	8%	58%	33%

8 Comment(s)

Hearing from the sub-program leaders is important to set the stage for the detailed work discussions that follow.

Presentations were consistent and to the point between several technology team sessions. The presentations provided clear targets, funding, status, etc., for all in attendance.

The overviews were somewhat “business as usual.” Many presentations simply listed what occurring with a very limited number of “success stories.” The presenters were good.

The overviews were short but focused.

It might be an improvement if these sessions were 30 minutes long. Many sessions run over, which makes the rest of the day more difficult with respect to keeping time.

Some presentations were helpful, while some were not as clear.

It is often difficult to attend all presentations within a specific sub-program, which makes the overview session very beneficial in understanding the overall program objectives, progress, and budget.

The program reviews were excellent. It’s challenging for reviewers to remain mentally focused having to go through so many advanced research presentations back to back. The PIs are at a disadvantage when asked to present their work without the full benefit of time on their side.

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	63	44.3%
Presenter of a project	53	37.3%
Peer Reviewer	23	16.1%
No Response	3	2.1%
Total	142	100%

APPENDIX E: SURVEY RESULTS

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

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

	Highly Disagree	Disagree	Neutral	Agree	Highly Agree
Presentation	0	1	5	30	24
	0%	2%	8%	50%	40%
Question and answer periods	1	2	6	34	17
	2%	3%	10%	57%	28%
Answers provided to programmatic questions	0	2	10	31	17
	0%	3%	17%	52%	28%
Answers provided to technical questions	0	3	5	35	17
	0%	5%	8%	58%	28%

7 Comment(s)

More time was needed for the question and answer session. More technical details should be available before the review so one can investigate and ask more detailed questions.

The reviews for the national labs were very well done with good comments, as well as focused challenges and direction. The reviews of the industry presentations on Thursday (section V) were poor. The reviewers asked few questions, and nothing was really challenged.

The sessions were very well run. Reviewers were generally objective with just one or two having an overly negative and confrontational attitude.

The auto companies were never asked about how the DOE funding applied to their respective programs; instead, they just talked about their vehicles.

Many of the presentations lacked depth.

Some of the presenters were not very knowledgeable about their topic. It was apparent they were more business-related and less technically informed.

It is understood that the Q&A had to be limited to 10 minutes due to the number of projects being reviewed, but in some cases this was an insufficient amount of time.

7.) Enough time was allocated for presentations.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
0	3	7	35	15
0%	5%	12%	58%	25%

7 Comment(s)

In some cases it would have made more sense to allot presentation time commensurate with project size.

Some of the presentations needed more time to be effective.

Time allocation was perfect!

As always, 20 minutes is not much time to properly present some of the complex projects, but it is the best that can be done when you factor in the number of projects and the length of the event.

There was not enough allocated time for a few projects where the scope was larger and more complex than average.

There was enough time allocated, yet many presenters were not prepared for the time limitation.

Some presenters did not do a sufficient job managing their limited time.

8.) The questions asked by reviewers were sufficiently rigorous and detailed.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
1	5	16	31	6
2%	8%	27%	53%	10%

8 Comment(s)

Some reviewers were better at this than others. Are guidelines provided to reviewers?

Many reviewers were not specialized enough in certain fields to fully understand the ramifications of the projects and ask good questions.

Some review panels were not up to the task.

Reviewers did not ask sufficiently detailed questions to the automakers or to the presenters using Clean Cities funds for education and outreach. At all other sessions attended, the reviewers asked great questions.

The reviewers need to be tougher. We allocate money from taxpayers to support the industrial research, and we need to know exactly where the money has been spent and what exactly the program status is.

The panel questions were usually not very probing. It seemed more like an exercise and less like a review.

The reviewers and their questions were great this year for the fuel cell track.

APPENDIX E: SURVEY RESULTS

Some reviewers use the Q&A sessions to get on their own “soap box” while displaying little to no objectivity in their review. Note that this is a minority of the reviewers, but the few that do it take away from an objective review process.

9.) The frequency (once per year) of this formal review process for this Program is:

	Number of Responses	Response Ratio
About right	53	37.3%
Too frequent	2	1.4%
Not frequent enough	3	2.1%
No opinion	2	1.4%
No Response	82	57.7%
Total	142	100%

6 Comment(s)

The frequency is good, though the timing was a bit off, considering the presentations were all outdated and next year’s budget is already in place.

One consideration may be to review each project every other year. In other words, the AMR would be held each year but at about half the current size. The quality may improve as a result.

Having the event take place more frequently makes no sense as it takes time to make significant progress on something so complex. About 18 months would probably be okay, while 24 months is too long.

Every other year would be sufficient.

I suggest a bi-weekly review showcasing different tracks.

It is difficult to attend the full AMR as it is necessary to miss an entire week of work to do so. Is it practical, feasible, and convenient for the DOE to split the AMR into two meeting events (spring and fall)?

10.) Logistics, facilities and amenities were satisfactory.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
0	1	5	26	28
0%	2%	8%	43%	47%

13 Comment(s)

The DOE should require that all of the facilities in use during the AMR (including the hotel) offer recycling.

Great work on the facilities!

The conference rooms were spread out too far and some were oddly shaped, which was not conducive to PowerPoint presentations.

Everything was outstanding!

The only glitches that occurred involved issues with room sizes.

Please consider cheaper venues. Paying \$250 or more a night for a hotel is very expensive for many average companies. There are many locations available for around \$100 a night.

The Wardman Hotel facilities were terrific.

The hotel was great and was also an improvement over Crystal City.

This aspect of the event was highly impressive and deserves my congratulations.

Judi Abraham did an amazing job by moving the entire Fuel Cells Session at a moment's notice when the session was overcrowded and the air conditioning was not working well on the first day! The hotel in general was much nicer than Crystal City.

The hotel was very expensive.

The DOE might consider moving the review out of D.C. While this location is convenient for the few DOE participants located in D.C., the expense for the rest of the participants is significant. This review will end up costing roughly \$2,500 on one particular company's DOE contracts. This is money that is no longer available to conduct research.

The initial room for the fuel cell session was much too small. The session was moved to a larger room in a less prominent section of the hotel.

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

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
1	12	8	25	13
2%	20%	14%	42%	22%

17 Comment(s)

The screens were placed too low. The heads of the people often blocked text. Most presenters used small fonts and lots of text, which created more viewing trouble.

Long, narrow rooms made viewing difficult.

The text and graphs on slides should be larger.

Some projector screens seem to be a little small and hard to read if one sat in the back rows.

APPENDIX E: SURVEY RESULTS

In some of the rooms, it was difficult to see slides.

In some rooms the screens were blocked by the heads of attendees. If the screens were up a few more feet, it would have been much better. Either that, or select a location with tiered seating. But lifting screens a few feet would be much more practical.

The plenary talks were an issue as the screen was not readable for half of the audience. The technical sessions were better, but the screens were still too small.

The screens were too small in the grand ballrooms.

For such big conference rooms, the font was too small on most of the presentations.

The visual quality was adequate in the tracks. But, the screens were too small for Monday evening's plenary.

Some rooms were well laid out for viewing the presentations, but some, particularly the balconies, were not. It was very hard to read the slides from the back of the room in the long, skinny balcony rooms.

In some of the venues, the presentation screens were too low.

The overhead lights in the FC session could not be adjusted over the screen. We improvised (by turning off most of the lights) when the presenter needed the presentation photos to be seen clearly. At the plenary, the slides were unreadable from the back of the massive hall.

Many of the screens were too small to see the details on the screen. Either larger screens should be available, or the PIs need to be instructed not to put so much material on one slide.

It would be great to have the screens larger and higher. Most of the conference was spent trying to look through someone's head at the presentation. Please find a way to make the screens visible to everyone in the audience.

It was sometimes hard to see the screens. This was due to a combination of views being obstructed by people's heads and/or too much lighting above the screen.

It was very difficult to see the slides due to people's heads being in the way and the way the chairs were set up.

12.) The audio quality of the presentations was adequate. I was able to hear all the presentations I attended.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
0	0	3	32	23
0%	0%	5%	55%	40%

3 Comment(s)

Sometimes the audio/visual person let the microphone “hum” with some feedback that was annoying.

It was sometimes hard to hear during the Q&A. Next time, the moderator just needs to make sure that he/she forces the audience to use microphones.

Although the presenters could be heard, it was often difficult to hear questions from the audience.

13.) The meeting hotel accommodations (sleeping rooms) were satisfactory.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
0	0	14	12	19
0%	0%	31%	27%	42%

6 Comment(s)

This hotel location (Adams-Morgan) is much better than the Crystal City location of past reviews.

Overall, it would be preferable to stay at a hotel with free Internet access in the rooms and/or free Internet access in the business center, neither of which this hotel had. They did a great job with everything else, and the accommodations were thoroughly satisfying.

The hotel was nice but expensive!

The hotel was expensive.

The hotel was full when trying to reserve a room.

A different hotel was used.

14.) The information about the Review and the hotel accommodations sent to me prior to the Review was adequate.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
0	1	3	28	25
0%	2%	5%	49%	44%

2 Comment(s)

The dates should be locked in sooner for attendees. Thank you for sending along the dates for 2011 with this survey invitation.

The agenda needs to have meeting rooms on it and a hotel map. If the agenda could all fit on two sides of one sheet, that would be perfect.

15.) What was the most useful part of the review process?

33 Response(s)

The most useful part of the review process was personal interactions and having a place where everyone is present to conduct conversations and meetings.

Learning about each participant's role was most useful.

The Q&A sessions were the most productive part of the review process.

The Q&A sessions after the presentations and talking with folks in between sessions proved to be very useful.

It was extremely productive getting to know the major players, such as researchers and companies with related products.

The individual presentations proved to be the most effective part of the review process. The presentations were extremely helpful compared to anything else.

Attending a few of the technical sessions on lithium ion batteries was useful.

There's been very impressive progress! The overview of projects supported by the DOE provided industry an opportunity to consider future collaboration areas with national labs.

The most useful aspect was one place to learn about all the DOE projects. The most detrimental was the fact that there was a limited opportunity to ask questions.

There were great technical presentations as well as questions and answers.

The most effective aspect of the conference was the questions from the audience.

It was very fruitful hearing about the technical progress and plans for the projects.

The fact that there was an ability to meet with nearly everyone who is active in the field in the U.S. was incredibly useful.

Making all presenters use the same slide format proved to be useful, as it made the presentations very easy to understand.

It was really beneficial getting to see related work beyond one's own project.

It was very helpful having great opportunities to meet with people at the breaks and lunches. Both were very beneficial.

The electronic copies of the presentations were very useful.

The technical information proved to be very worthwhile. The posters and poster process were better than most other conferences with posters.

The number of topics covered, poster sessions, and networking opportunities were all extremely constructive.

The presentation materials were interesting.

The AMR gave a larger vision to these areas. It also gave people an opportunity to communicate with each other.

Not being a reviewer and therefore not being tied to any particular topic or presentation, one participant was able to move around among various topics and presentations in order to cover many bases.

The process itself was highly informative and appropriate for its purpose. The technical part of the presentations proved to be the most advantageous.

The presentations and the Q&A sessions were both gainful.

It's great to see the real progress that is being made in the hydrogen vehicle technologies program and all the other DOE programs. Also, the forum serves as a good networking event among hydrogen industry colleagues.

The most valuable aspect was using PeerNet. And, as an organizing committee member, using Sharepoint was great. Having the presentations ahead of time helped the reviewers.

The ability to make contact with PIs and others across many organizations is really important. Also, the ability to see in a quick nutshell what is going on across the board is good.

An understanding of the scope of the DOE work and the ability to identify key programs of merit proved to be the most profitable.
The presentations were most useful.

The most advantageous facet was the enhanced understanding of the DOE research progress and direction in the vehicle technologies area that the conference afforded.

The fact one could oversee the overall scope of effort, or lack thereof, proved to be the most useful.

Discussing research with colleagues was very beneficial.

Poster sessions and presentations proved to be the most valuable facets of the conference.

16.) What could have been done better?

21 Response(s)

There needs to be longer time for Q&A and more time for audience questions. Ask speakers to be available after the review for questions, cluster meeting rooms, and choose meeting rooms conducive to PowerPoint presentations.

There need to be better plenary session speakers.

Nothing could be done better.

Not much could be done better. It was pretty good.

The initial sessions were the ones participants wanted to review, but they overlap, so it is impossible to attend battery and fuel cell overview sessions, which are needed together for a balanced understanding. Perhaps some sessions can be moved to the afternoon. Make presentations available earlier online and allow questions to be sent online. Consider different venues at a lower cost (e.g., Oak Ridge National Laboratory). Consider Webex or online options. Make more technical details (papers) also available online.

The review of the industry presentations on Thursday (section V) was poor.

Since this is a technical review to assess and provide guidance for each specific project, it may be useful to only include projects that still have more than a year or so to go before completion. Therefore, a suggestion is to eliminate presentation of projects that are nearing completion.

In regards to the plenary session initial section talks, only invite people who are committed to providing a good talk. The screens need to be larger.

A suggestion is to ensure power outlets are in a location where the chords cannot be accidentally displaced.

Tough reviewers are needed.

Poster sessions did not seem to be part of the review; rather, they were more of an excellent networking event.

The plenary session was pitiful. The breaks ran out of food and coffee every time.

The reviewer questions could have been more in depth.

It will be much easier for the audience to see the slides if more screens were put in the conference room.

A couple of the track rooms were remote and hard to find, but I'm unsure what could have been done about that given the size of the event.

The presentation screens could have been higher.

Everything was well coordinated.

It is recommended that there be some means for the TDMs to know if the reviewer actually attended the presentations, such as a check in on PeerNet. Perhaps a list of which reviewers are supposed to be in the session, with a "reviewer" ribbon on their badge, to make sure reviewers get to ask questions first.

In general, most session presenters adhered to their allotted time. However, in some sessions where presenters got done quickly and there were minimal questions, the session got ahead of time. That caused participants to miss some presentations, because the session chair did not wait until the allotted time to start.

There needs to be a coaching session for the presenters to help them better summarize their presentations and limit the number of slides to fit within the 20 minutes allotted.

It is recommended they minimize side meetings that distract from central purpose of the review.

17.) Overall, how satisfied are you with the review process?

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
0	1	2	37	18
0%	2%	3%	64%	31%

2 Comment(s)

The review is good, as it brings transparency to the DOE-funded projects, providing many with an opportunity to learn about DOE activities.

It is suggested to hold separate reviews for hydrogen and vehicles. From a TDM’s perspective, there’s no advantage (technical, logistic, or political) in holding a combined review. However, there is an immense logistical, cost, technical, and timing advantage to having them separate! It is very difficult to focus everyone’s effort on the actual review. It is simply too large to be efficient and effective, although the organizers did a great job with it.

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

	Number of Responses	Response Ratio
Yes	54	38.0%
No	2	1.4%
No Response	86	60.5%
Total	142	100%

4 Comment(s)

It is very important, however, to consider cost reduction options such as a less expensive location, no meals, etc.

Every DOE program should have a similar review process!

Maybe, but it is expensive.

It is too expensive to attend unless you are obligated by a DOE contract.

19.) Information about the program(s)/project(s) under review was provided sufficiently prior to the review session.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
2	2	1	11	6
9%	9%	5%	50%	27%

9 Comment(s)

The assignments, arrangements, and presentations were all provided with sufficient time to review.

There was no confidentiality in the review process. Reviewers were fully identified to the presenters, and evaluations were done online with the audience in full view of our computer screens. Both practices are inappropriate.

It would have been preferred to have the information in advance to review, consider, and prepare appropriate questions and comments.

The organizers were highly proficient and gave full access to the presentations and descriptions well before the event.

One participant’s assignments were not received until a week before the review.

It was difficult to get the password since one participant’s secretary was not regarded as being authorized to claim it. Hence, this participant could claim it only on-site, which was too late to print the presentations for review. This might be a particular issue for reviewers from overseas.

The schedule for projects assigned to each reviewer should be sent out at least 30 days in advance (rather than about 14 days) so that travel can be scheduled accordingly.

It would have been helpful to receive the assignments earlier. The website was useful, however.

Initially, one reviewer was asked to review, but one week before the review was informed that his/her services were “no longer required.” Then, at the review itself, he/she was again asked to review. Some other colleagues did not receive their reviewer assignments until the weekend before the review.

20.) Review instructions were provided in a timely manner.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
1	2	0	12	7
5%	9%	0%	55%	32%

4 Comment(s)

All were provided in time. This participant has done this for several years, so not much coaching was required. Overall though, good effort was made to provide reviewers instructional sessions (online and in person) at several occasions. Keep up the good work.

This was all done well. As a returning reviewer who more or less knew the drill, the instructions were clear.

The Webinar training was useful.

The DOE has a list of research targets for fuel cells, such as durability, cost, etc. It would be helpful to distribute this shortlist with the instructions. A search for them on the Internet was required to finally find them.

21.) The information provided in the presentations was adequate for a meaningful review of the projects.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
1	2	6	10	3
5%	9%	27%	45%	14%

10 Comment(s)

Some presentations were able to convey complex information a layman could understand, yet other presentations were so abstract that only someone with an extensive background in the field could follow the information. It is suggested that they are given clear instructions and that each presentation must stand on its own, tell a complete story, and be understandable by a congressional staffer.

The reviewers should have access to additional materials, because presented (perceived!) state-of-the-art information on the materials are being presented, as well as metrics describing the final goal(s) of the research and the Gantt chart. Only then can we appreciate whether the project is on track.

This is very presentation-specific. Most presentations were good and have gradually improved over previous years. Presenters are getting better at delivering the right amount of slides, as there was never too much or too little. In general, most presentations could still benefit from putting one-bullet takeaway messages on each slide. That simple but small effort goes a long way, especially when reviewing in absence of the presenter (either as preparation before the presentation or post-presentation).

The projects are becoming larger and more complex. Obviously, only a small fraction of results can be presented. There is no way out of this situation. The question of value for money also seems off the table, which is again a difficult thing to approach.

Some presentations were lacking in technical details and results due to intellectual property issues, which made it difficult to give a meaningful review.

APPENDIX E: SURVEY RESULTS

Most presenters followed the required format, but not all. It is certainly easier to review a project that had all the information in the appropriate slides, since it is generally really difficult to review as one is hearing the presentation for the first time. This is especially true when little time is available to look at the materials before the meeting.

In most cases, the presentations provided enough material to review the projects. In one particular case, one company provided no data and very little information about their approach. The lack of information made it impossible to review their project.

The PIs need more time to do an effective job of communicating their work. Having 20 minutes to present a year's worth of work is too little.

Economics is a fundamentally important aspect of evaluation for feasibility of each technology being developed. Most programs reviewed did not do an adequate job of presenting current achievements, as well as targeting economics, including providing comparisons to current state-of-the-art technologies.

The poster's printed information was not sufficient. Some discussion with the presenter was needed.

22.) The evaluation criteria were adequately addressed in the presentations.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

	Highly Disagree	Disagree	Neutral	Agree	Highly Agree
Relevance	1	1	3	12	4
	5%	5%	14%	57%	19%
Approach	0	1	4	13	3
	0%	5%	19%	62%	14%
Accomplishments & Progress	0	2	4	10	5
	0%	10%	19%	48%	24%
Collaboration & Coordination	0	0	6	12	3
	0%	0%	29%	57%	14%
Proposed Future Work	0	2	5	12	3
	0%	5%	24%	57%	14%

4 Comment(s)

Technical accomplishments and progress need to be stated more clearly and related directly to program goals. Accomplishments need to include a discussion of economics for the proposed technology. Proposed future research was universally obtuse. This also should be clarified with, perhaps, a bulleted list with connection to the goals.

Some presentations adequately addressed the evaluation criteria; others did not.

Some presentations were better than others, of course.

Some presentations were well organized and addressed the criteria adequately, while others were poorly written and some had sections completely missing, such as future plans.

23.) During the Annual Merit Review, reviewers had adequate access to the Principal Investigators.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
0	1	1	15	4
0%	5%	5%	71%	19%

4 Comment(s)

There were not enough places reserved for reviewers to sit. There should be two rows of seats for them and one row of seats for presenters.

Most everyone was available to speak with as needed. The poster sessions were better than in years past. The increased space improved accessibility to poster presenters and the availability of food in the same room relaxed the environment substantially. Previously, Crystal City poster sessions were “brutally” claustrophobic.

There was not enough time, and I’m not sure there will ever be! I advocate having two, meetings a year. The AMR jams too much into one meeting, and there’s a lot of information and people. It is preferable to have smaller meetings separating electrochemical storage devices and two or three smaller meetings a year where the presentations can be staggered. For example, include half of the PIs in the first meeting and the other half in the second meeting.

One participant reviewed two poster sessions for a total of four hours of presentations and was assigned 38 presentations to review. This amounted to reviewing about 10 presentations per hour, or having six minutes per presentation review. It was not possible to cover all of the reviews, especially considering there were more in the second evening than the first. It would have been helpful to have some of the food served, particularly to reviewers and presenters, before the sessions, as it was quite tiring to do the work without food until 8:30 p.m. or 9 p.m..

24.) Information on the location and timing of the projects was adequate and easy to find.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
0	0	1	13	8
0%	0%	5%	59%	36%

3 Comment(s)

It was a well-organized review.

It wasn’t clear from the materials which reviews were presentations and which were poster sessions. It was necessary to ask the review helpers, and they had to look into it for a bit before they figured it out. Maybe a different number series would help to differentiate between the two.

It was organized, except for the obvious need to move the Fuel Cells session. Some planning should be put into room size in the future.

25.) The number of projects I was expected to review was:

	Number of Responses	Response Ratio
Too many	5	3.5%
Too few	1	<1%
About right	16	11.2%
No Responses	120	84.5%
Total	142	100%

5 Comment(s)

Twelve projects were adequate. It allowed time to review other sessions and dedicate appropriate time and effort to the write-up of each without being overly daunting.

Twenty eight reviews are a bit much. There is no thought given to the overlapping assignments given to reviewers with multiple areas of expertise.

One participant could have reviewed projects on Thursday since he/she was there all week.

One participant selected the ones he/she could handle given time constraints and interests.

There were too many reviews for the time allowed.

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

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
0	0	1	16	5
0%	0%	5%	73%	23%

4 Comment(s)

From a reviewer standpoint, the relevant and critical information was missing. There is a need to depart from the presentation format for the reviewers to provide the DOE with better insight as to the value of the project.

Many presenters went “overboard” on the presentation, which truncated Q&A sessions. But generally, they went well.

In general, yes. However, some projects did not have adequate information on the technical approaches due to intellectual property issues. Any government-funded programs or work done at the national labs should not be restricted for general disclosure.

This answer does not mean it cannot and should not improve. A lot of PIs seemed to spend their time on the materials and concepts of the past rather than sharpening their focus on the future.

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

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
0	1	4	27	18
0%	2%	8%	54%	36%

7 Comment(s)

There needs to be more advanced warning of the AMR presentation deadline.

There was a problem receiving the original e-mail but I was able to get it in sufficient time. One reviewer’s company’s spam filter rejected it.

The request to provide a presentation could have been sent earlier. Three weeks was not sufficient.

The deadline should be strictly enforced. Not meeting the deadline should disqualify PIs from presenting at the AMR.

Communication for the event and the power point templates worked just fine.

Our issue was internal to our company. All directors, principal investigators, and program managers who are listed on documentation should receive announcements.

The company representatives were not aware of the annual meeting, as this was their first DOE activity. It seemed like a short window, especially for an inexperienced project team.

28.) Instructions for preparing the presentation were sufficient.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
0	0	2	22	26
0%	0%	4%	44%	52%

6 Comment(s)

The posters were very available, with some containing far more material than requested. Either give all more latitude or enforce your guidelines.

There are too many slides and a lot of redundant information required. It would be better to have required information, rather than a strict requirement on slide format.

The instructions were very clear, and the example templates were nice and provided several format options.

Every aspect was clearly communicated. After attending the first one, the next one should be better as the expectations are now known.

APPENDIX E: SURVEY RESULTS

It is recommended that all notices specifically state that the approved format be used and include a hyperlink to the format. This participant’s contract administrator did not know about the required information.

Rich Bechtold was very helpful with suggestions.

29.) The audio and visual equipment worked properly and were adequate.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

Highly Disagree	Disagree	Neutral	Agree	Highly Agree
0	0	3	23	23
0%	0%	6%	47%	47%

4 Comment(s)

Many presenters had difficulty with the projection equipment or microphones.

This is not applicable for posters. For oral presentations, there were some glitches.

At times, one reviewer couldn't hear the speakers. Perhaps a collar mike could have been provided.

There were no issues during one participant’s presentation, but there was an interruption in power which disabled the microphones during one of the sessions. Also, a projector stopped working for a presenter during a session.

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

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

	Highly Disagree	Disagree	Neutral	Agree	Highly Agree
Relevance	1	2	3	26	15
	2%	4%	6%	55%	32%
Approach	1	1	2	27	16
	2%	2%	4%	57%	34%
Accomplishments & Progress	1	1	2	28	15
	2%	2%	4%	60%	32%
Collaboration & Coordination	1	4	3	27	12
	2%	9%	6%	57%	26%
Proposed Future Work	1	3	4	25	14
	2%	6%	9%	53%	30%

8 Comment(s)

One presenter’s project was a little unique, since they are a proving ground for a fuel cell already designed and being manufactured.

The organization of the presentation made sense. It was the actual review results that were unclear.

There were times when the given evaluation criteria were not sufficient. Perhaps a chart numbered 1-10 for each functional area would be more beneficial.

The technical accomplishments and progress can only be judged appropriately if reviewers have access to the additional information requested above.

Relevance is confusing. Is it relevant to the technology or relevant to the partnership goals? It's supposed to be the partnership goals, but reviewers and presenters have both misinterpreted this. Many of us don't support the plan of cutting H₂ funding, so how can premature termination of a project be marked as being relevant? All the projects are supposed to represent the president's goals. So, what is the point of asking us about relevance if there are no partnership goals being met?

All projects are relevant because that metric is necessary to get funded. They are relevant by design. The transfer and collaboration is very broad and varied. Much of it seems like service work. The transfer often is not meaningful because the work is commercialization, and the intellectual property is not revealed. The future research is also reasonably apparent, except in the rare case where the project is ending. Certainly in a three-year project, the future research is simply the tasks assigned through the next year.

The question about relevance is odd. How could the projects have received funding unless they were relevant? This question should be eliminated from future reviews, as it seems irrelevant.

Relevance at the topical level was right on point. But the PIs didn't quite follow or sometimes even understand the topic. In one instance the PI confused high energy with high capacity on the cathode material and found materials that increased capacity by 20% but dropped the average voltage to 75% with almost no net change in energy!

31.) Explanation of the questions within the criteria was clear and sufficient.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

	Highly Disagree	Disagree	Neutral	Agree	Highly Agree
Relevance	1	1	3	26	12
	2%	2%	7%	60%	28%
Approach	1	1	4	25	12
	2%	2%	9%	58%	28%
Accomplishments & Progress	1	1	3	26	12
	2%	2%	7%	60%	28%
Collaboration & Coordination	0	2	4	26	10
	0%	5%	10%	62%	24%
Proposed Future Work	1	2	3	25	12
	2%	5%	7%	58%	28%

0 Comment(s)

32.) The right criteria and weightings were used to evaluate the project(s)/program(s).

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

	Highly Disagree	Disagree	Neutral	Agree	Highly Agree
Relevance	1	2	2	25	11
	2%	5%	5%	61%	27%
Approach	1	1	3	24	12
	2%	2%	7%	59%	29%
Accomplishments & Progress	1	1	2	25	12
	2%	2%	5%	61%	29%
Collaboration & Coordination	1	2	3	24	11
	2%	5%	7%	59%	27%
Proposed Future Work	1	1	2	27	10
	2%	2%	5%	66%	24%

4 Comment(s)

Research on enabling technologies, like improving materials properties and performance for specific component parts, cannot always be translated into exact efficiency gains. But such work remains an essential component to enabling progress on larger systems. Those formulating review criteria should understand this role more clearly.

By default, the DOE would not fund projects that are not relevant to the DOE’s mission, so relevance should not be a review criterion. Presumably, the approach has also been reviewed during the proposal review process. It should either not have a high weighting or should be eliminated completely as a review topic but included in the presentations as background material.

How can one see the review results from projects?

As stated earlier, relevance is a given. The DOE only funds relevant projects. The approach is also a foregone conclusion. The technology transfer and collaboration patterns vary from project to project. It seems obvious that good collaboration within a large organization can be as useful as good collaboration between two organizations. Basically the question is teaming, getting the right talents on board for success. The future research in most multi-year projects is to do the next year’s tasks.

33.) Please provide additional comments:

38 Response(s)

As a PI, this was his/her first time at the AMR. All in all, this is a very well-organized event. The venue, the agenda, and presentation format were all communicated to the presenters well ahead of schedule. Very well done!

The venue was AWFUL. It was outrageously expensive and the quality of service was very poor. The Internet was poor (at \$15 a day!!) and the rooms were noisy (toilet and shower use of neighbors was very clear).

It is essential in future reviews to have, say, a 30-minute poster session with just the reviewers and those being reviewed, then open up to all.

The inflexible presentation format asks for similar information on more than one slide. For example, there is no need for a summary slide since it repeats just-presented information. Allow more flexibility as long as the required items are covered. The early deadline (60 days!) excludes key progress. That especially hurts new projects. Can it be shortened to 30 days?

This process is fine as is.

The presentations are too short (approximately 20 minutes), and the reviewers do not obtain all the information from such a short time. One participant attended presentations from three topics, and it was very common to catch reviewers that were not aware about the work done previously in the project.

The presentations are requested too far ahead. More recent and important data obtained after the presentation is sent in is left out. The review meeting is too large, and this handicaps its scientific value. Discussions with reviewers are limited and diluted by the presence of outsiders.

Very few posters and presentations included references from other work. There were several presentations with claims of novel work that were simply not true. This was not a single instance, but was observed repeatedly throughout the meeting. This must be corrected as other researchers were not acknowledged. It was especially obvious for HSECoE (Hydrogen Storage Engineering Center of Excellence) presentations.

It was disappointing that the hotel did not have free wireless Internet service. This would have helped one reviewer to provide input into the system during the week. Also, the cell phone service (for Sprint phones) was poor in the hotel. These small items can make a significant impact on the productivity of and convenience for those attending.

The room for balcony IX was very far away and hard to find.

The space allocated for breaks was crowded, and because of the crowds, it was difficult to locate participants for meetings. Also, supplies of food and/or coffee often ran out.

Please make sure the AMR is at the same location next year. The venue is far better than in previous years.

This is a very informative and useful event to see how industry peers are doing and also see that there is vision on this project outside of our company.

It was very well organized. Thank you for the meals as well!

In a "world of hype and outright deception," the AMR stands in stark contrast. The peer review function assures honest data and serious evaluation. Overseas colleagues commented with admiration on the entire meeting. Congratulations for creating such a valuable venue.

It was excellent and very informative.

This is a very well-organized event, and thank you very much for holding it and allowing attendees not directly involved with the process to participate.

APPENDIX E: SURVEY RESULTS

The presentation room was too hot and not air conditioned. There were problems with the sound system sometimes. The reviews of the industry on Thursday were poor.

Some of the research presented was not “grounded in the real world.” I suggest having some real-world, non-technical people as reviewers.

Argonne National Laboratory (ANL) seemed to have a disproportionate share of the presentations.

The process works for the presenters and reviewers, but it does not work very well for the audience.

The overall process is okay.

The service at lunch on Tuesday was excellent. The hotel employees were numerous and engaged.

I suggest that all assistance (i.e., providing meeting space and logistic support) provided for side meetings should be cancelled, and the practice of scheduling them in conjunction with AMR should be discouraged. The actual review becomes a secondary priority to the side meetings.

Please try to get the plenary session presenters more focused. These “high-level” staff members at the DOE and other agencies really do not have an understanding of the programs being reviewed. Some of their commentary was not useful at all.

It was appreciated that the diligence of the session chairs kept the program moving along and on time. There was a lot of information in a short period of time, but it was worth the trip.

There were too many parallel sessions.

Overall, the review process was very smooth this year.

Too much time is wasted in presenting the standard material that is required. More time should be spent by the presenters on the research and substance of the project with more technical details.

It's a good process.

AMR improves every year. It is incredibly well organized, and the location was outstanding and far more relaxing than the Crystal City location. Please continue at this facility despite presumably higher costs.

This meeting has grown huge. It is hard to see why the two programs are combined into the same time and place. There should be some thought given to making it possible for one person to attend both conferences, and that means a different time and maybe a different place.

The splitting of the fuel cell session into two parallel sessions on Friday morning was not good. This reviewer was the only representative from one particular company (an auto OEM), and would have liked to have seen the projects in both sessions.

It would be very helpful to the reviewers to have three to five minutes at the end of each presentation Q&A session to complete our reviews before the next presentation. This is a great event which helps to raise the quality level of the research activities.

We need to elevate the energy level in the cell to substantially higher values to make EVs and even PHEVs a market reality. There are PIs who are still working on NCA, LFP, etc., which are commercial materials today and are best left up to the industry to perfect.

Of the six projects reviewed by this particular reviewer, two should have never been funded, but given that they were, the funding should be terminated since there is no logical reason to believe they will be successful. One was too expensive. It has been funded for the last three years and it's a wonder why attention was not directed to the economics of it earlier.

It would be helpful to follow more rigorous milestones and go/no-go decision points.