## Appendix C: Project Evaluation Forms

### General Project Evaluation Form

This evaluation form is for use with the following Hydrogen Program review panels/projects: Hydrogen Technologies (Hydrogen Production, 1 Delivery/Infrastructure, and Storage); Fuel Cell Technologies; Technology Acceleration; Safety, Codes and Standards; and Systems Analysis.<sup>2</sup>

> Evaluation Criteria: U.S. Department of Energy (DOE) 2021 Hydrogen Program Annual Merit Review

Please provide specific, concise comments to support your evaluation. It is important that you write in full sentences and clearly convey your meaning to prevent incorrect interpretation.

## 1. Approach to Performing the Work

The degree to which project objectives and critical barriers have been clearly identified and are being addressed, and the extent to which the project is well-designed, feasible, and integrated with other relevant efforts. (Weight = 20%)

- **4.0 Outstanding.** Sharply focused on overcoming critical barriers; difficult to improve significantly.
- **3.5 Excellent.** Effective; contributes to overcoming most barriers.
- 3.0 Good. Generally effective but could be improved; contributes to overcoming some barriers.
- 2.5 Satisfactory. Has some weaknesses; contributes to overcoming some barriers.
- 2.0 Fair. Has significant weaknesses; may have some impact on overcoming barriers.
- 1.5 Poor. Minimally responsive to project objectives; unlikely to contribute to overcoming the barriers.
- 1.0 Unsatisfactory. Not responsive to project objectives; unlikely to contribute to overcoming the barriers.

4.0 – Outstanding
3.5 - Excellent
3.0 - Good
2.5 – Satisfactory
2.0 – Fair
1.5 – Poor
1.0 – Unsatisfactory

**Comments on Approach to Performing the Work:** 

<sup>&</sup>lt;sup>1</sup> HydroGEN seedling projects use Form B.

<sup>&</sup>lt;sup>2</sup> Newly awarded projects will be evaluated using the same criteria as this General Project form, but with a lower scoring weight on Accomplishments (5%) and a higher weight on Approach (40%) and Proposed Future Work (25%).

## 2. Accomplishments and Progress Toward Overall Project and DOE Goals

The degree to which progress toward project objectives has been made and measured against well-defined performance indicators, and the degree to which the project has demonstrated progress toward addressing critical barriers to achieving DOE goals. (Weight = 35%)

- **4.0 Outstanding.** Outstanding progress toward project objectives is demonstrated through clear and measurable performance indicators; results have directly led to overcoming one or more critical barriers.
- 3.5 Excellent. Excellent progress toward project objectives is demonstrated through clear and measurable performance indicators; results suggest that one or more critical barriers will be overcome.
- 3.0 Good. Significant progress has been made, but there are weaknesses that need to be addressed to improve the rate of progress or improve the clarity of the project's objectives and performance indicators; contributes to overcoming some barriers.
- 2.5 Satisfactory. Moderate progress has been made, but there are weaknesses that need to be addressed to improve the rate of progress or improve the clarity of the project's objectives and performance indicators; contributes to overcoming some barriers.
- 2.0 Fair. Modest progress—rate of progress has been slow; may have some impact on overcoming barriers.
- 1.5 Poor. Minimal progress toward project objectives and poorly defined performance indicators; unlikely to contribute to overcoming the barriers.
- 1.0 Unsatisfactory. Little to no demonstrated progress toward project objectives; unlikely to contribute to overcoming the barriers. 4.0 – Outstanding 3.5 – Excellent 3.0 - Good
  - 2.0 Fair

  - 1.5 Poor
  - 1.0 Unsatisfactory

2.5 – Satisfactory

Comments on Accomplishments and Progress Toward Overall Project and DOE Goals:

### 3. Collaboration and Coordination with Other Institutions

The degree to which the project effectively engages and coordinates project partners and interacts with other entities and projects to accelerate project progress and improve the likelihood of the project's success and impact. (Weight = 10%)

- 4.0 Outstanding. Close, appropriate collaboration with other institutions; partners are full participants and wellcoordinated.
- 3.5 Excellent. Good collaboration; partners participate and are well-coordinated.
- **3.0 Good**. Collaboration exists; partners are fairly well-coordinated.
- 2.5 Satisfactory. Some collaboration exists; coordination between partners could be significantly improved.
- 2.0 Fair. A little collaboration exists; coordination between partners could be significantly improved.
- 1.5 Poor. Most work is done at the sponsoring organization with little outside collaboration; little or no apparent coordination with partners.

<b>.0</b> – <b>Unsatisfactory.</b> No apparent coordination with partners.	
	4.0 – Outstanding
	3.5 – Excellent
	3.0 - Good
	2.5 – Satisfactory
	2.0 – Fair
	1.5 – Poor

□ 1.0 – Unsatisfactory

Comments on Collaboration and Coordination with Other Institutions:

# 4. Relevance/Potential Impact

The degree to which the project supports and advances progress toward the Hydrogen Program goals and objectives, as delineated in the Hydrogen and Fuel Cell Technologies Office Multi-Year RD&D plan and/or the Program and subprogram overview presentations given during the plenary session of the AMR. (Weight = 20%)

- **4.0 Outstanding.** Project is critical to the Hydrogen Program and has potential to significantly advance progress toward DOE RD&D goals and objectives.
- 3.5 Excellent. The project aligns well with the Hydrogen Program and DOE RD&D objectives and has the potential to advance progress toward DOE RD&D goals and objectives.
- 3.0 Good. Most project aspects align with the Hydrogen Program and DOE RD&D objectives.
- 2.5 Satisfactory. Project aspects align with some of the Hydrogen Program and DOE RD&D objectives.
- 2.0 Fair. Project partially supports the Hydrogen Program and DOE RD&D objectives.
- 1.5 Poor. Project has little potential impact on advancing progress toward the Hydrogen Program and DOE RD&D goals and objectives.
- 1.0 Unsatisfactory. Project has little to no potential impact on advancing progress toward the Hydrogen Program and DOE RD&D goals and objectives.

4.0 – Outstanding
3.5 - Excellent
3.0 - Good
2.5 – Satisfactory
2.0 – Fair
1.5 – Poor
1.0 – Unsatisfactory

**Comments on Relevance/Potential Impact:** 

# 5. Proposed Future Work

The degree to which the project has effectively planned its future in a logical manner by incorporating appropriate decision points, considering barriers to its goals and, when sensible, mitigating risk by providing alternate pathways. Note: if a project has ended, please leave blank. (Weight = 15%)

- 4.0 Outstanding. Plans clearly build on past progress and are sharply focused on critical barriers to project goals; difficult to improve significantly.
- **3.5 Excellent.** Effective; contributes to overcoming most barriers.
- 3.0 Good. Plans generally build on past progress and should contribute to overcoming some barriers.
- ave
- te to

2.5 – Sat	istactory. Has some weaknesses; contributes to overcoming some barriers.
	ir. Plans may lead to improvements, but need better focus on addressing project weaknesses; may he pact on overcoming barriers.
	or. Minimally responsive to project objectives; unlikely to resolve project weaknesses and contributing barriers.
1.0 – Uns	satisfactory. Not responsive to project objectives; unlikely to contribute to overcoming barriers.
□ 4.0	0 – Outstanding
□ 3.5	5 – Excellent
□ 3.0	0-Good
□ 2.5	5 – Satisfactory
□ 2.0	0 – Fair
□ 1.5	5 – Poor
□ 1.0	0 – Unsatisfactory
Comments on Proposed Future Work:	
Project St	trengths:
Project W	/eaknesses:

Recommendations for Additions/Deletions to Project Scope:

#### HydroGEN Seedling Project Evaluation Form

This evaluation form is for use with HydroGEN seedling projects.

Evaluation Criteria: U.S. Department of Energy (DOE) 2021 Hydrogen Program Annual Merit Review

Please provide specific, concise comments to support your evaluation. It is important that you write in full sentences and clearly convey your meaning to prevent incorrect interpretation.

## 1. Approach to Performing the Work

The degree to which barriers have been clearly identified, and are being addressed through project innovation; and the extent to which the project is well-designed, feasible, and integrated with the HydroGEN Consortium network. A strong emphasis should be placed on the appropriateness of the scope of work toward validation of the project's technology innovation. (Weight = 20%)

- 4.0 Outstanding. Sharply focused on critical barriers and validating technology innovation; difficult to improve significantly.
- 3.5 Excellent. Effective; contributes to overcoming most barriers and validating technology innovation.
- 3.0 Good. Generally effective but could be improved; contributes to overcoming some barriers and validating technology innovation.
- 2.5 Satisfactory. Has some weaknesses; contributes to overcoming some barriers and validating technology innovation.
- 2.0 Fair. Has significant weaknesses; may have some impact on overcoming barriers and/or validating technology innovation.
- 1.5 Poor. Minimally responsive to project objectives; unlikely to contribute to overcoming the barriers or validating technology innovation.
- 1.0 Unsatisfactory. Not responsive to project objectives; unlikely to contribute to overcoming the barriers or validating technology innovation.

4.0 – Outstanding
3.5 – Excellent
3.0 - Good
2.5 – Satisfactory
2.0 – Fair
1.5 – Poor
1.0 – Unsatisfactor

**Comments on Approach to Performing the Work:** 

## 2. Accomplishments and Progress Toward Overall Project and DOE Goals

The degree to which progress has been made and measured against performance indicators, and the degree to which the project has demonstrated progress toward DOE goals as well as the HydroGEN Consortium mission. A particular emphasis should be placed on the strength of the data presented by the accomplishments (including data from the HydroGEN nodes leveraged by the project) in terms of supporting accomplishments. An additional emphasis should be placed on the strength of the project's current budget period's Go/No-Go Criteria if applicable and on project progress toward meeting these criteria. (Weight = 30%)

- 4.0 Outstanding. Sharply focused on critical barriers with significant and convincing data to support the accomplishments toward ambitious Go/No-Go Criteria; difficult to improve significantly.
- 3.5 Excellent. Effective; contributes to overcoming most barriers and provides data that considerably supports the accomplishments toward impactful Go/No-Go Criteria.
- 3.0 Good. Generally effective but could be improved; contributes to overcoming some barriers and provides adequate data to support accomplishments toward meaningful Go/No-Go Criteria.
- 2.5 Satisfactory. Has some weaknesses; contributes to overcoming some barriers and provides some data to support accomplishments toward adequate Go/No-Go Criteria.
- 2.0 Fair. Has significant weaknesses; may have some impact on overcoming barriers and has limited data and accomplishments to support the Go/No-Go Criteria; Go/No-Go Criteria may be weak.
- 1.5 Poor. Minimally responsive to project objectives; unlikely to contribute to overcoming the barriers and meet the Go/No-Go Criteria; Go/No-Go criteria are not adequate or missing.

<b>1.0</b> – <b>Unsatisfactory.</b> Not responsive to project objectives; unlikely to contribute to overcoming the barriers and meet the Go/No-Go Criteria; Go/No-Go criteria are not adequate or missing.	
4.0 – Outstanding	
3.5 – Excellent	
3.0-Good	
2.5 – Satisfactory	
2.0 – Fair	
1.5 – Poor	
1.0 – Unsatisfactory	

Comments on Accomplishments and Progress Toward Overall Project and DOE Goals:

# 3. Collaboration Effectiveness with HydroGEN and, if Applicable, Other Research Entities

The degree to which the project has engaged with the HydroGEN EMN and has effectively used nodes to accelerate materials development and improve the likelihood of the project's success and impact. This also includes the effectiveness of project engagement with the broader materials research community, including work with HydroGEN's cross-cutting benchmarking/protocols (2b) project team, the HydroGEN Data Team, pathway-specific Working Groups, and others. An additional factor is the broader value and impact of the project's data sharing through the HydroGEN Data Hub. (Weight = 25%)

- **4.0 Outstanding.** Close, appropriate collaboration with other institutions, specifically the HydroGEN Consortium with appropriate use of nodes, contributions to the benchmarking/protocols (2b) project and the HydroGEN Data Hub; partners are full participants and well-coordinated.
- 3.5 Excellent. Good collaboration, specifically the HydroGEN Consortium with appropriate use of nodes, contributions to the benchmarking/protocols (2b) project and the HydroGEN Data Hub; partners participate and are well-coordinated.
- 3.0 Good. Collaboration exists with the HydroGEN Consortium and includes node utilization and engagement with the benchmarking/protocols (2b) project and the HydroGEN Data Hub; partners are fairly well-coordinated.
- 2.5 Satisfactory. Some collaboration exists; coordination between partners could be significantly improved, specifically with respect to the HydroGEN Consortium node utilization activities, and engagement with the benchmarking/protocols (2b) project and the HydroGEN Data Hub.
- 2.0 Fair. A little collaboration exists; coordination between partners could be significantly improved, specifically with respect to the HydroGEN Consortium node utilization activities, and engagement with the benchmarking/protocols (2b) project and the HydroGEN Data Hub.
- 1.5 Poor. Most work is done at the sponsoring organization with little outside collaboration; little or no apparent coordination with partners and HydroGEN Consortium.

<b>1.0</b> – <b>Unsatisfactory.</b> No apparent coordination with partners and HydroGEN Consortium.		
	4.0 – Outstanding	
	3.5 – Excellent	
	3.0-Good	
	2.5 – Satisfactory	
	2.0 – Fair	
	1.5 – Poor	

Comments on Effectiveness with HydroGEN and, if Applicable, Other Research Entities:

1.0 – Unsatisfactory

# 4. Relevance/Potential Impact

The degree to which the project supports and advances progress toward the DOE Hydrogen Program goals and objectives, and also supports the HydroGEN Consortium mission. A strong emphasis should be placed on the project's potential to advance the discovery and development of novel, advanced water splitting materials systems which will enable meeting the DOE ultimate hydrogen production goal of \$2/kg H<sub>2</sub>. An additional factor to consider is how well the project fits into, leverages, and potentially enhances the framework and resources of the HydroGEN Consortium. (Weight = 15%)

- **4.0** Outstanding. Project is critical to the Hydrogen Program and has potential to significantly advance progress toward DOE RD&D goals and objectives and is significantly leveraging and contributing to the resources and framework of the HydroGEN consortium.
- 3.5 Excellent. The project aligns well with the Hydrogen Program and DOE RD&D objectives and has the potential to advance progress toward DOE RD&D goals and objectives and is aptly leveraging and contributing to the resources and framework of the HydroGEN consortium.
- 3.0 Good. Most project aspects align with the Hydrogen Program and DOE RD&D objectives and the project is adequately leveraging and contributing to the resources and framework of the HydroGEN consortium.
- 2.5 Satisfactory. Project aspects align with some of the Hydrogen Program and DOE RD&D objectives and the project is leveraging and contributing to the resources and framework of the HydroGEN consortium to some extent.
- 2.0 Fair. Project partially supports the Hydrogen Program and DOE RD&D objectives and the project is not adequately leveraging and contributing to the resources and framework of the HydroGEN consortium.
- 1.5 Poor. Project has little potential impact on advancing progress toward the Hydrogen Program and DOE RD&D goals and objectives and the project has minimal interaction with HydroGEN to leverage and contribute to the resources and framework of the HydroGEN consortium.
- 1.0 Unsatisfactory. Project has little to no potential impact on advancing progress toward the Hydrogen Program and DOE RD&D goals and objectives and the project is not leveraging and contributing to the resources and framework of the HydroGEN consortium.

4.0 – Outstanding
3.5 – Excellent
3.0 - Good
2.5 – Satisfactory
2.0 – Fair
1.5 – Poor
1.0 – Unsatisfactory

**Comments on Relevance/Potential Impact:** 

### 5. Proposed Future Work

The degree to which the project has effectively planned its potential future work in a logical manner and leverages progress made in previous budget periods toward meeting end-of-project goals and advancing the materials research mission of the HydroGEN Consortium. (Weight = 10%)

- 4.0 Outstanding. Sharply focused on critical barriers, meeting end-of-project goals and advancing the materials research mission of the HydroGEN Consortium; difficult to improve significantly.
- 3.5 Excellent. Effective; contributes to overcoming most barriers, meeting most end-of-project goals and advancing the materials research mission of the HydroGEN Consortium.
- 3.0 Good. Generally effective but could be improved; contributes to overcoming some barriers, meeting some end-of-project goals and has potential to advance the materials research mission of the HydroGEN Consortium.
- 2.5 Satisfactory. Has some weaknesses; contributes to overcoming some barriers, meeting some end-of-project goals and may contribute to advancing the materials research mission of the HydroGEN Consortium.
- 2.0 Fair. Has significant weaknesses; may have some impact on overcoming barriers, makes minimal progress toward end-of project goals and insignificantly contributes to advancing the materials research mission of the HydroGEN Consortium.
- 1.5 Poor. Minimally responsive to project objectives; unlikely to contribute to overcoming the barriers or meet end-of-project goals and will most likely not contribute to advancing the materials research mission of the HydroGEN Consortium.
- 1.0 Unsatisfactory. Not responsive to project objectives; unlikely to contribute to overcoming the barriers or meet end-of-project goals and is unlikely to contribute to advancing the materials research mission of the HydroGEN Consortium.  $\Box$  4.0 – Outstanding 3.5 – Excellent 3.0 - Good
  - 2.5 Satisfactory 2.0 – Fair 1.5 - Poor
  - 1.0 Unsatisfactory

**Comments on Proposed Future Work:** 

**Project Strengths:** 

**Project Weaknesses:** 

**Recommendations for Additions/Deletions to Project Scope:** 

#### New Project Evaluation Form

This evaluation form is for use with newly awarded R&D projects presented at the 2021 AMR.

Evaluation Criteria: U.S. Department of Energy (DOE) 2021 Hydrogen Program Annual Merit Review

Please provide specific, concise comments to support your evaluation. It is important that you write in full sentences and clearly convey your meaning to prevent incorrect interpretation.

## 1. Approach to Performing the Work

The degree to which project objectives and critical barriers have been clearly identified and are being addressed, and the extent to which the project is well-designed, feasible, and integrated with other relevant efforts. (Weight = 40%)

- **4.0 Outstanding.** Sharply focused on overcoming critical barriers; difficult to improve significantly.
- **3.5** Excellent. Effective; contributes to overcoming most barriers.
- **3.0** Good. Generally effective but could be improved; contributes to overcoming some barriers.
- 2.5 Satisfactory. Has some weaknesses; contributes to overcoming some barriers.
- 2.0 Fair. Has significant weaknesses; may have some impact on overcoming barriers.
- 1.5 Poor. Minimally responsive to project objectives; unlikely to contribute to overcoming the barriers.
- 1.0 Unsatisfactory. Not responsive to project objectives; unlikely to contribute to overcoming the barriers.
  - 4.0 Outstanding
  - 3.5 Excellent
- 3.0 Good
- 2.5 Satisfactory
- 2.0 Fair
- 1.5 Poor
- 1.0 Unsatisfactory

Comments on Approach to Performing the Work:

## 2. Accomplishments and Progress Toward Overall Project and DOE Goals

The degree to which progress toward achieving project objectives has been made and measured against well-defined performance indicators, and the degree to which the project has demonstrated progress toward addressing critical barriers to achieving DOE goals. Note: Please evaluate accomplishments/progress made considering the amount of time the project has been underway; if a project has not been underway long enough to have made any progress, you may select "Not Applicable." (Weight = 5%)

- **4.0 Outstanding.** Outstanding progress towards project objectives is demonstrated through clear and measurable performance indicators; results have directly led to overcoming one or more critical barriers.
- 3.5 Excellent. Excellent progress toward project objectives is demonstrated through clear and measurable performance indicators; results suggest that one or more critical barriers will be overcome.
- 3.0 Good. Significant progress has been made, but there are weaknesses that need to be addressed to improve the rate of progress or improve the clarity of the project's objectives and performance indicators; contributes to overcoming some barriers.
- 2.5 Satisfactory. Moderate progress has been made, but there are weaknesses that need to be addressed to improve the rate of progress or improve the clarity of the project's objectives and performance indicators; contributes to overcoming some barriers.
- 2.0 Fair. Modest progress—rate of progress has been slow; may have some impact on overcoming barriers.
- 1.5 Poor. Minimal progress towards project objectives and poorly defined performance indicators; unlikely to contribute to overcoming the barriers.

<b>1.0</b> – <b>Unsatisfactory.</b> Little to no demonstrated progress toward project objectives; unlikely to contribute to overcoming the barriers.		
	4.0 – Outstanding	
	3.5 – Excellent	
	3.0-Good	
	2.5 – Satisfactory	
	2.0 – Fair	

Comments on Accomplishments and Progress Toward Overall Project and DOE Goals:

1.5 - Poor

1.0 – Unsatisfactory

### 3. Collaboration and Coordination with Other Institutions

The degree to which the project effectively engages and coordinates project partners and interacts with other entities and projects to accelerate project progress and improve the likelihood of the project's success and impact. (Weight = 10%)

- 4.0 Outstanding. Close, appropriate collaboration with other institutions; partners are full participants and wellcoordinated.
- 3.5 Excellent. Good collaboration; partners participate and are well-coordinated.
- **3.0 Good**. Collaboration exists; partners are fairly well-coordinated.
- 2.5 Satisfactory. Some collaboration exists; coordination between partners could be significantly improved.
- 2.0 Fair. A little collaboration exists; coordination between partners could be significantly improved.
- 1.5 Poor. Most work is done at the sponsoring organization with little outside collaboration; little or no apparent coordination with partners.

0 –	<b>Unsatisfactory.</b> No apparent coordination with partners.
	4.0 – Outstanding
	3.5 – Excellent
	3.0 – Good
	2.5 – Satisfactory
	2.0 – Fair
	1.5 – Poor

□ 1.0 – Unsatisfactory

Comments on Collaboration and Coordination with Other Institutions:

# 4. Relevance/Potential Impact

The degree to which the project supports and advances progress toward the Hydrogen Program goals and objectives, as delineated in the Hydrogen and Fuel Cell Technologies Office Multi-Year RD&D plan and/or the Program and subprogram overview presentations given during the plenary session of the AMR. (Weight = 20%)

- **4.0 Outstanding.** Project is critical to the Hydrogen Program and has potential to significantly advance progress toward DOE RD&D goals and objectives.
- 3.5 Excellent. The project aligns well with the Hydrogen Program and DOE RD&D objectives and has the potential to advance progress toward DOE RD&D goals and objectives.
- 3.0 Good. Most project aspects align with the Hydrogen Program and DOE RD&D objectives.
- 2.5 Satisfactory. Project aspects align with some of the Hydrogen Program and DOE RD&D objectives.
- 2.0 Fair. Project partially supports the Hydrogen Program and DOE RD&D objectives.
- 1.5 Poor. Project has little potential impact on advancing progress toward the Hydrogen Program and DOE RD&D goals and objectives.
- 1.0 Unsatisfactory. Project has little to no potential impact on advancing progress toward the Hydrogen Program and DOE RD&D goals and objectives.

	4.0 – Outstanding
	3.5 - Excellent
	3.0 - Good
	2.5 – Satisfactory
	2.0 – Fair
	1.5 – Poor
П	1.0 – Unsatisfactor

**Comments on Relevance/Potential Impact:** 

# 5. Proposed Future Work

The degree to which the project has effectively planned its future in a logical manner by incorporating appropriate decision points, considering barriers to its goals and, when sensible, mitigating risk by providing alternate pathways. (Weight = 25%)

- 4.0 Outstanding. Plans clearly build on past progress and are sharply focused on critical barriers to project goals; difficult to improve significantly.
- **3.5 Excellent.** Effective; contributes to overcoming most barriers.
- 3.0 Good. Plans generally build on past progress and should contribute to overcoming some barriers.
- 25 Satisfactory Has some weaknesses; contributes to overcoming some barriers
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- e to

2.5 –	Saustactory. Thas some weaknesses, contributes to overcoming some partiers.
	<b>Fair.</b> Plans may lead to improvements, but need better focus on addressing project weaknesses; may ha impact on overcoming barriers.
	<b>Poor.</b> Minimally responsive to project objectives; unlikely to resolve project weaknesses and contribute oming barriers.
1.0 –	Unsatisfactory. Not responsive to project objectives; unlikely to contribute to overcoming barriers.
	4.0 – Outstanding
	3.5 – Excellent
	3.0 - Good
	2.5 – Satisfactory
	2.0 – Fair
	1.5 – Poor
	1.0 – Unsatisfactory
Comments on Proposed Future Work:	
Project	t Strengths:
Project	t Weaknesses:

**Recommendations for Additions/Deletions to Project Scope:** 

#### 2021 AMR Hydrogen Program Review Questions

1. The Hydrogen Program has a mission and strategy that are clearly articulated and has appropriate goals and milestones as well as quantitative metrics that are SMART (Specific, Measurable, Actionable, Relevant, and Timely).

Please comment on the overall Hydrogen Program (including activities in the U.S. Department of Energy [DOE] Hydrogen and Fuel Cell Technologies Office, Office of Fossil Energy, Office of Science, Office of Nuclear Energy, and ARPA-E), as well as each subprogram/activity area, as appropriate. (Note: The Hydrogen Technologies subprogram comprises three categories: Hydrogen Production (with HydroGEN Seedling as a subcategory), Hydrogen Infrastructure, and Hydrogen Storage.)

Please rate your response on a scale of 1 through 10, with 1 indicating that you strongly disagree and 10 indicating that you strongly agree, or N/A if you have no opinion. Please add any additional comments.

	Strongly [	Disagree			Neu	ıtral					
	1	2	3	4	5	6	7	8	9	10	NA
Hydrogen Program Overall Rating	0	0	0	0	0	0	0	0	0	0	0
Hydrogen Technologies Subprogram Rating	0	0	0	0	0	0	0	0	0	0	0
Fuel Cell Technologies Subprogram Rating	0	0	0	0	0	0	0	0	0	0	0
Technology Acceleration Subprogram Rating	0	0	0	0	0	0	0	0	0	0	0
Safety, Codes and Standards Subprogram Rating	0	0	0	0	0	0	0	0	0	0	0
Systems Analysis Subprogram Rating	0	0	0	0	0	0	0	0	0	0	0

2. The Hydrogen Program is well-focused and well-managed and is effectively fostering research, development, demonstration, and deployment (RDD&D) to enable innovation and advance the state of technology for hydrogen and fuel cell technologies to be competitive and achieve widespread commercialization and adoption by industry.

Please rate your response on a scale of 1 through 10, with 1 indicating that you strongly disagree and 10 indicating that you strongly agree, or NA if you have no opinion. Please add any additional comments.

Strongly [	Neuti	ral			Strongly Agree					
1	2	3	4	5	6	7	8	9	10	NA
0	0	0	0	0	0	0	0	0	0	0

Comments:

3. The Hydrogen Program's portfolio of projects is appropriately balanced across research areas to help achieve the Program's mission and goals.

Please rate your response on a scale of 1 through 10, with 1 indicating that you strongly disagree and 10 indicating that you strongly agree, or NA if you have no opinion. Please add any additional comments.

Strongly [		Ne	utral		Strongly Agree					
1	2	3	4	5	6	7	8	9	10	NA
0	0	0	0	0	0	0	0	0	0	0

#### 4. The Hydrogen Program is collaborating with appropriate groups of stakeholders.

Please rate your response on a scale of 1 through 10, with 1 indicating that you strongly disagree and 10 indicating that you strongly agree, or N/A if you have no opinion. Please add any additional comments.

Strongly [		Ne	utral		Strongly Agree					
1	2	3	4	5	6	7	8	9	10	NA
0	0	0	0	0	0	0	0	0	0	0

Comments:

#### 5. The Hydrogen Program's RDD&D aligns well with industry and stakeholder needs and is appropriate given complementary private-sector, state, and other non-DOE investments.

Please rate your response on a scale of 1 through 10, with 1 indicating that you strongly disagree and 10 indicating that you strongly agree, or N/A if you have no opinion. Please add any additional comments.

Strongly [	Disagree			Ne	utral		Strongly Agree					
1	2	3	4	5	6	7	8	9	10	NA		
0	0	0	0	0	0	0	0	0	0	0		

6. The Hydrogen Program is funding high-impact projects that have the potential to significantly advance the state of technology for the hydrogen and fuel cells industry.

	Strongly [	Disagree			Neu	ıtral		Strongly Agree				
	1	2	3	4	5	6	7	8	9	10	NA	
Hydrogen Program Overall Rating	0	0	0	0	0	0	0	0	0	0	0	
Hydrogen Technologies Subprogram Rating	0	0	0	0	0	0	0	0	0	0	0	
Fuel Cell Technologies Subprogram Rating	0	0	0	0	0	0	0	0	0	0	0	
Technology Acceleration Subprogram Rating	0	0	0	0	0	0	0	0	0	0	0	
Safety, Codes and Standards Subprogram Rating	0	0	0	0	0	0	0	0	0	0	0	
Systems Analysis Subprogram Rating	0	0	0	0	0	0	0	0	0	0	0	

7. Research Consortia Approach (including Energy Materials Network Consortia and others): Do you have any comments or recommendations on the Hydrogen Program's consortia approach for conducting laboratory-supported research (e.g., HydroGEN, H2NEW, HyMARC, ElectroCat, H-Mat, and M2FCT)? Please state what is working effectively and areas that may benefit from further improvement.

Comments:

8. H2@Scale: What are the strengths and weaknesses of the H2@Scale initiative? Do you have any recommendations for other H2@Scale analysis, research topics, or demonstrations to enable the scale-up and value proposition of hydrogen and fuel cell technologies (e.g., a region with low electricity prices, excess curtailment, and hydrogen supply opportunity along with a colocated demand for hydrogen, etc.)? Please provide any other recommendations on H2@Scale.

Comments:

9. International Collaboration: The Hydrogen Program collaborates through a number of international partnerships. For example, the International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE) is an international partnership to coordinate activities on hydrogen and fuel cells across 20 countries and the European Commission. Additional international collaboration initiatives with U.S. participation addressing hydrogen include the Clean Energy and Hydrogen Ministerials, Mission Innovation, the International Energy Agency, and others. Please comment on actions DOE can undertake in conjunction with these international activities that can effectively accelerate progress in hydrogen and fuel cell technologies.

Comments:

10. Prizes: Agencies have shown interest in implementing prizes and competitions as a mechanism to complement the conventional grant process. Examples include the H-Prize (H2Refuel) for a small-scale hydrogen fueling appliance that complements large retail stations. Please provide comments on the prize/competition approach and provide any suggestions for future prizes or competitions that would align with the goal of accelerating the widespread success of hydrogen and fuel cell technologies.

11. Please comment on the overall strengths and weakness of the Hydrogen Program and its portfolio of projects. Please provide strengths and weaknesses for each subprogram as appropriate. On which technology areas should the Hydrogen Program put more or less focus for future activities?

Comments:

12. Do you have any other comments or suggestions to improve the overall effectiveness of the Hydrogen Program or any of its specific subprograms?