

APPENDIX B: EVALUATION CRITERIA

Evaluation Criteria – Hydropower Program

Using the following criteria, reviewers are asked to evaluate the Office’s major R&D Programs and significant initiatives at a strategy-level, both numerically and with specific, concise comments to support each evaluation.

DOE Hydropower Program Strategy		
Hydropower Program’s Strategic Approaches		
Big-Data Access and Management		
Environmental R&D and Hydrological Systems Science		
R&D for Low-Impact Hydro Growth	Modernization, Upgrades, and Security	Reliability, Resilience, and Storage

Score Weighting

Program Evaluation Criteria	
Program Strategy and Objectives	25%
Program Portfolio	25%
Program Management Approach	25%
Stakeholder Engagement, Outreach, and Dissemination	25%
Recommendations/Supplemental Questions	0%

1. Program Strategy and Objectives

Please evaluate the degree to which:

- The program’s long-term strategy, strategic approaches, and future direction was effectively conveyed during the peer review.
- The program’s strategy reflects an understanding of the near and long-term challenges facing industry and other stakeholders.
- The program invests in early-stage research to accelerate development of innovative water power technologies, while ensuring that long-term sustainability and environmental issues are addressed.
- The program supports efforts to validate performance and grid-reliability for new technologies, develop and increase accessibility to necessary testing infrastructure, and evaluate systems-level opportunities and risks.
- The program invests taxpayer funds wisely to drive the greatest impact.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

2. Program Portfolio

Please evaluate the degree to which:

- The projects within this program portfolio contribute to meeting the program’s strategy and objectives.
- The projects within this program portfolio are addressing key challenges and reducing barriers to advance water power technologies.
- The rationale for and organization of the funded projects and program approaches has been effectively conveyed during the peer review.
- The program portfolio effectively balances research priorities and allocates resources appropriately.
- The projects within this program portfolio are appropriate for WPTO’s role as a public research and development organization.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

3. Program Management Approach

Please evaluate the degree to which:

- The program team effectively manages and directs the activities needed to meet its objectives.
- The program team focuses on priority research areas that create the greatest impact on new technology and industry advancement.
- The program team effectively communicates priority research areas and the allocation of resources.
- The program team demonstrates the professional and technical capabilities needed to identify, monitor, and guide its portfolio of projects.
- The program team has operations and oversight procedures in place to ensure efficient direction of office activities, both internally and with project awardees.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

4. Stakeholder Engagement, Outreach, and Dissemination

Please evaluate the degree to which:

- The program demonstrates good stewardship of taxpayer funds by persistently and transparently communicating how WPTO funds are being utilized and evaluates project impacts.
- The program gathers feedback from stakeholders to inform and improve WPTO projects and strategy.
 - Provide suggestions for ways WPTO should engage thought leaders and other interested stakeholders to inform the direction of the program.
- The program maximizes the impact of WPTO-supported research by effectively disseminating results of projects and tracking usage of various products.
 - Provide any suggestions for ways WPTO should be disseminating information to thought leaders and other interested stakeholders.
- The program provides access to accurate and objective information and data that can help to accelerate industry development and inform decision-makers.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

5. Recommendations (Not Scored)

Please provide any notable strengths or weaknesses to the program portfolio content or direction that you would like to point out. What recommendations would you like to convey to the manager(s) of this program?

(Maximum 1000 words)

6. Additional Hydropower Program Questions (Not Scored)

- a. Is there language in Vision or Mission statements that you find problematic, or are there issues which you feel are missing or not adequately addressed in the language?

(Maximum 1000 words)

- b. Do you agree with the framing of industry challenges and potential approaches DOE could take in helping to address them? If not, please explain

(Maximum 1000 words)

c. Do you agree with the representation of the relationship between these approaches? Is anything missing or not adequately addressed? Please provide specifics.

(Maximum 1000 words)

Evaluation Criteria – HydroWIRES

Using the following criteria, reviewers are asked to evaluate the Office’s major R&D Programs and significant initiatives at a strategy-level, both numerically and with specific, concise comments to support each evaluation.

Program Evaluation Criteria	
Program Strategy and Objectives	25%
Program Portfolio	25%
Program Management Approach	25%
Stakeholder Engagement, Outreach, and Dissemination	25%
Recommendations/Supplemental Questions	0%

1. Program Strategy and Objectives

Please evaluate the degree to which:

- The program’s long-term strategy, strategic approaches, and future direction was effectively conveyed during the peer review.
- The program’s strategy reflects an understanding of the near and long-term challenges facing industry and other stakeholders.
- The program invests in early-stage research to accelerate development of innovative water power technologies, while ensuring that long-term sustainability and environmental issues are addressed.
- The program supports efforts to validate performance and grid-reliability for new technologies, develop and increase accessibility to necessary testing infrastructure, and evaluate systems-level opportunities and risks.
- The program invests taxpayer funds wisely to drive the greatest impact.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

2. Program Portfolio

Please evaluate the degree to which:

- The projects within this program portfolio contribute to meeting the program’s strategy and objectives.
- The projects within this program portfolio are addressing key challenges and reducing barriers to advance water power technologies.
- The rationale for and organization of the funded projects and program approaches has been effectively conveyed during the peer review.
- The program portfolio effectively balances research priorities and allocates resources appropriately.
- The projects within this program portfolio are appropriate for WPTO’s role as a public research and development organization.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

3. Program Management Approach

Please evaluate the degree to which:

- The program team effectively manages and directs the activities needed to meet its objectives.
- The program team focuses on priority research areas that create the greatest impact on new technology and industry advancement.
- The program team effectively communicates priority research areas and the allocation of resources.
- The program team demonstrates the professional and technical capabilities needed to identify, monitor, and guide its portfolio of projects.
- The program team has operations and oversight procedures in place to ensure efficient direction of office activities, both internally and with project awardees.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

4. Stakeholder Engagement, Outreach, and Dissemination

Please evaluate the degree to which:

- The program demonstrates good stewardship of taxpayer funds by persistently and transparently communicating how WPTO funds are being utilized and evaluates project impacts.
- The program gathers feedback from stakeholders to inform and improve WPTO projects and strategy.
 - Provide suggestions for ways WPTO should engage thought leaders and other interested stakeholders to inform the direction of the program.
- The program maximizes the impact of WPTO-supported research by effectively disseminating results of projects and tracking usage of various products.
 - Provide any suggestions for ways WPTO should be disseminating information to thought leaders and other interested stakeholders.
- The program provides access to accurate and objective information and data that can help to accelerate industry development and inform decision-makers.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

5. Recommendations (Not Scored)

Please provide any notable strengths or weaknesses to the program portfolio content or direction that you would like to point out. What recommendations would you like to convey to the manager(s) of this program?

(Maximum 1000 words)

6. Additional HydroWIRES Questions (Not Scored)

- a. Is there language in the HydroWIRES mission statement that you find problematic, or are there issues which you feel are missing or not adequately addressed in the language?

(Maximum 1000 words)

- b. Do you agree with the way the HydroWIRES initiative frames industry challenges and the opportunities DOE envisions for hydropower and pumped storage to support a rapidly evolving grid? If not, please explain why.

(Maximum 1000 words)

c. Do you agree with the identified research areas and objectives? Are there any key research questions missing or not adequately addressed that you think are within the DOE role? Please provide specifics.

(Maximum 1000 words)

Evaluation Criteria – Marine and Hydrokinetic (MHK) Program

Using the following criteria, reviewers are asked to evaluate the Office’s major R&D Programs and significant initiatives at a strategy-level, both numerically and with specific, concise comments to support each evaluation.

DOE MHK Program Strategy		
MHK Program’s Strategic Approachers		
Foundational and Crosscutting R&D	Technology-Specific Design and Validation	Reducing Barriers to Testing
Data Sharing Analysis		

Score Weighting

Program Evaluation Criteria	
Program Strategy and Objectives	25%
Program Portfolio	25%
Program Management Approach	25%
Stakeholder Engagement, Outreach, and Dissemination	25%
Recommendations/Supplemental Questions	0%

1. Program Strategy and Objectives

Please evaluate the degree to which:

- The program’s long-term strategy, strategic approaches, and future direction was effectively conveyed during the peer review.
- The program’s strategy reflects an understanding of the near and long-term challenges facing industry and other stakeholders.
- The program invests in early-stage research to accelerate development of innovative water power technologies, while ensuring that long-term sustainability and environmental issues are addressed.
- The program supports efforts to validate performance and grid-reliability for new technologies, develop and increase accessibility to necessary testing infrastructure, and evaluate systems-level opportunities and risks.
- The program invests taxpayer funds wisely to drive the greatest impact.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

2. Program Portfolio

Please evaluate the degree to which:

- The projects within this program portfolio contribute to meeting the program’s strategy and objectives.
- The projects within this program portfolio are addressing key challenges and reducing barriers to advance water power technologies.
- The rationale for and organization of the funded projects and program approaches has been effectively conveyed during the peer review.
- The program portfolio effectively balances research priorities and allocates resources appropriately.
- The projects within this program portfolio are appropriate for WPTO’s role as a public research and development organization.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

3. Program Management Approach

Please evaluate the degree to which:

- The program team effectively manages and directs the activities needed to meet its objectives.
- The program team focuses on priority research areas that create the greatest impact on new technology and industry advancement.
- The program team effectively communicates priority research areas and the allocation of resources.
- The program team demonstrates the professional and technical capabilities needed to identify, monitor, and guide its portfolio of projects.
- The program team has operations and oversight procedures in place to ensure efficient direction of office activities, both internally and with project awardees.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

4. Stakeholder Engagement, Outreach, and Dissemination

Please evaluate the degree to which:

- The program demonstrates good stewardship of taxpayer funds by persistently and transparently communicating how WPTO funds are being utilized and evaluates project impacts.
- The program gathers feedback from stakeholders to inform and improve WPTO projects and strategy.
 - Provide suggestions for ways WPTO should engage thought leaders and other interested stakeholders to inform the direction of the program.
- The program maximizes the impact of WPTO-supported research by effectively disseminating results of projects and tracking usage of various products.
 - Provide any suggestions for ways WPTO should be disseminating information to thought leaders and other interested stakeholders.
- The program provides access to accurate and objective information and data that can help to accelerate industry development and inform decision-makers.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

5. Recommendations (Not Scored)

Please provide any notable strengths or weaknesses to the program portfolio content or direction that you would like to point out. What recommendations would you like to convey to the manager(s) of this program?

(Maximum 1000 words)

6. Additional MHK Programs Questions (Not Scored)

- a. Do you agree with the framing of industry challenges and potential approaches DOE could take in helping to address them? If not, please explain why.

(Maximum 1000 words)

- b. Do you agree with the representation of the relationship between these approaches, including the balance of funding? Is anything missing or not adequately addressed? Please provide specifics.

(Maximum 1000 words)

c. Do you agree with the balance between funding mechanisms (FOAs, lab projects, prizes, etc.)? If not, please explain why.

(Maximum 1000 words)

d. Do you agree with the funding balance between MHK resources (wave, current [tidal/river/ocean], ocean thermal, and crosscutting)? If not, please explain why.

(Maximum 1000 words)

Evaluation Criteria – Powering the Blue Economy

Using the following criteria, reviewers are asked to evaluate the Office’s major R&D Programs and significant initiatives at a strategy-level, both numerically and with specific, concise comments to support each evaluation.

Score Weighting

Program Evaluation Criteria	
Program Strategy and Objectives	25%
Program Portfolio	25%
Program Management Approach	25%
Stakeholder Engagement, Outreach, and Dissemination	25%
Recommendations/Supplemental Questions	0%

1. Program Strategy and Objectives

Please evaluate the degree to which:

- The program’s long-term strategy, strategic approaches, and future direction was effectively conveyed during the peer review.
- The program’s strategy reflects an understanding of the near and long-term challenges facing industry and other stakeholders.
- The program invests in early-stage research to accelerate development of innovative water power technologies, while ensuring that long-term sustainability and environmental issues are addressed.
- The program supports efforts to validate performance and grid-reliability for new technologies, develop and increase accessibility to necessary testing infrastructure, and evaluate systems-level opportunities and risks.
- The program invests taxpayer funds wisely to drive the greatest impact.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

2. Program Portfolio

Please evaluate the degree to which:

- The projects within this program portfolio contribute to meeting the program’s strategy and objectives.
- The projects within this program portfolio are addressing key challenges and reducing barriers to advance water power technologies.
- The rationale for and organization of the funded projects and program approaches has been effectively conveyed during the peer review.
- The program portfolio effectively balances research priorities and allocates resources appropriately.
- The projects within this program portfolio are appropriate for WPTO’s role as a public research and development organization.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

3. Program Management Approach

Please evaluate the degree to which:

- The program team effectively manages and directs the activities needed to meet its objectives.
- The program team focuses on priority research areas that create the greatest impact on new technology and industry advancement.
- The program team effectively communicates priority research areas and the allocation of resources.
- The program team demonstrates the professional and technical capabilities needed to identify, monitor, and guide its portfolio of projects.
- The program team has operations and oversight procedures in place to ensure efficient direction of office activities, both internally and with project awardees.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 500 words)

4. Stakeholder Engagement, Outreach, and Dissemination

Please evaluate the degree to which:

- The program demonstrates good stewardship of taxpayer funds by persistently and transparently communicating how WPTO funds are being utilized and evaluates project impacts.
- The program gathers feedback from stakeholders to inform and improve WPTO projects and strategy.
 - Provide suggestions for ways WPTO should engage thought leaders and other interested stakeholders to inform the direction of the program.
 - Provide recommendations for ways WPTO could continue to convene diverse stakeholders to advance energy innovation in the Blue Economy. In particular, can you identify any additional groups (public or private) that WPTO should engage?
- The program maximizes the impact of WPTO-supported research by effectively disseminating results of projects and tracking usage of various products.
 - Provide any suggestions for ways WPTO should be disseminating information to thought leaders and other interested stakeholders.
- The program provides access to accurate and objective information and data that can help to accelerate industry development and inform decision-makers.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 1000 words)

5. Recommendations (Not Scored)

Please provide any notable strengths or weaknesses to the program portfolio content or direction that you would like to point out. What recommendations would you like to convey to the manager(s) of this program?

(Maximum 1000 characters)

6. Additional Powering the Blue Economy Questions (Not Scored)

a. Which Blue Economy market applications and associated R&D challenges should WPTO focus on both in the near and long term?

(Maximum 1000 characters)

- b. Once a particular Blue Economy market has been identified, what would recommend WPTO do to encourage end users and the associated supply chain to be involved in advising the development of a project from the outset?

(Maximum 1000 characters)

- c. From your perspective, what is the right balance between market-specific research versus market-agnostic research that crosses multiple markets and market themes (such as grid, power at sea, and resilient coastal communities)?

(Maximum 1000 characters)

d. Do you have opinions on the best way to fully integrate PBE into the broader WPTO MHK program in order to leverage or complement existing investments (such as TEAMER, PACWAVE, etc.)?

(Maximum 1000 characters)

Evaluation Criteria – Individual Projects

Using the following criteria, reviewers are asked to rate the project work presented in the context of the program objectives, both numerically and with specific, concise comments to support each evaluation.

1. Project Objectives, Impacts, and Alignment with the Program Strategy

Please evaluate the degree to which:

- The project performers have described how the project contributes to the program’s strategy/approaches.
- The project performers have considered and described the use/applications of their expected products and outputs.
- The project performers have presented the relevancy of this project and how successful completion of the project will advance the state of technology, meaningful impacts, and/or the viability of any commercial applications.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 300 words)

2. End-User Engagement and Dissemination Strategy

Please evaluate the degree to which:

- The project performers have identified who will benefit from this project and how the success of the project will advance the industry or meet the needs of specific stakeholder/end-user groups.
- The project performers have explained whether specific industry or end-users were engaged / are planned to be engaged and at which points in the project, (i.e. whether an advisory group was set up, whether end-user needs were surveyed / assessed, if and how progress / preliminary results are communicated).
- The project performers have clearly described the rationale for the stakeholder/end-user engagement strategy and how project results and information have been/are planned to be disseminated.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 300 words)

3. Management and Technical Approach

Please evaluate the degree to which:

- The project performers have implemented technically sound research and development approaches, and have demonstrated/validated the results needed to meet their targets.
- The project performers have identified a project management plan that includes well-defined milestones and adequate methods for addressing potential risks.
- The project performers have clearly described critical success factors which will define technical viability, and have explained and understand the challenges they must overcome to achieve success.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 300 words)

4. Technical Accomplishments and Progress

Please evaluate the degree to which:

- The project performers have made progress in reaching their objectives based on their project management plan.
- The project performers have described their most important accomplishments in achieving milestones, reaching technical targets, and overcoming technical barriers.
- The project performers have clearly described the progress since any last review period.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 300 words)

5. Future Work (New and Ongoing Projects Only)

Please evaluate the degree to which:

- The project performers have outlined adequate plans for future work, including key milestones and go/no go decision points.
- The project performers have communicated key planned milestones and addressed how they plan to deal with upcoming decision points and any remaining issues.

Score: 1–5

Please explain your score by commenting below. Provide both strengths and any weaknesses to support your score. (Maximum 300 words)

6. Recommendations (Not Scored)

Please provide any additional notable comments on the project content or direction that you would like. What, if any, recommendations would you like to convey to the manager(s) of this program or the PI of this project?

(Maximum 300 words)

Project Categories

- **Completed & Sunsetting Projects** – completed projects and projects with a planned end date prior to January 1, 2020
- **Ongoing Projects** – started before October 1, 2017 and continuing after January 1, 2020
- **New Projects** – started after October 1, 2017

Score Weighting

	Completed & Sunsetting Projects	Ongoing Projects	New Projects
Project Objectives, Impacts, and Programmatic Alignment	20%	20%	20%
End-User Engagement and Dissemination Strategy	20%	20%	20%
Management and Technical Approach	20%	20%	20%
Technical Accomplishments and Progress	40%	20%	0%
Future Work	0%	20%	40%

Score Scale

Superior	Good	Satisfactory	Marginal	Unsatisfactory
5	4	3	2	1
All aspects of the criterion are comprehensively addressed. There are significant strengths and no more than a few—easily correctable—weaknesses.	All aspects of the criterion are adequately addressed. There are significant strengths and some weaknesses. The significance of the strengths outweighs most aspects of the weaknesses.	Most aspects of the criterion are adequately addressed. There are strengths and weaknesses. The significance of the strengths slightly outweighs aspects of the weaknesses.	Some aspects of the criterion are not adequately addressed. There are strengths and significant weaknesses. The significance of the weaknesses outweighs most aspects of the strengths.	Most aspects of the criterion are not adequately addressed. There may be strengths, but there are significant weaknesses. The significance of the weaknesses outweighs the strengths.

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DOE/EE-2059 • April 2020