H-Prize: Hydrogen Shot Incubator

AMERICAN MADE HYDROGEN PRIZE

U.S. DEPARTMENT OF ENERGY

OFFICIAL RULES

JUNE 2022

Modified 5/20/24

ENERGY earthshots U.S. DEPARTMENT OF ENERGY | Hydrogen

MODIFICATIONS

Date	Description
2/8/2023	• The product safety plan was removed from the rules. This will no longer need to be reviewed by HFTO in Phase 2. • The review period was extended from one month to two months for Phase 2. • Teams are now asked to submit a voucher work slide for phase 2 of the submission.
5/15/2023	• Extended the ***Prove! Phase*** deadline to 10 months from the beginning of the phase. The ***Prove! Phase*** deadline is now August 1, 2023.
5/20/2024	• Update voucher guidance on page 30 allowing teams to utilize their voucher up to 18 months after the team is able to begin work on the CRADA.

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PRIZE PROGRAM SUMMARY

1. INTRODUCTION

The ***H-Prize: Hydrogen Shot Incubator*** is a $2.6M program that seeks to award funding to novel technologies that show potential to produce affordable clean hydrogen.[1] The Department of Energy (DOE) Hydrogen and Fuel Cell Technologies Office (HFTO) is launching this prize is in support of the Hydrogen Program's efforts to quickly identify, develop, and test disruptive technologies to decrease the cost of clean hydrogen production and meet the Hydrogen Energy Earthshot (Hydrogen Shot) goal of $1/kg of clean hydrogen in one decade. For this prize, DOE invites competitors to present new, pre-commercial, innovative technology approaches that the DOE is not actively funding.

DOE currently funds new, clean hydrogen production technologies at the research, development, and demonstration (RD&D) level to enable future demonstrations and deployment to reach the $1/kg target within a decade. These technologies include water electrolysis, gasification, and reforming of fossil and waste feedstocks with carbon abatement, thermochemical and photoelectrochemical water splitting, and biological processing of biomass and waste streams. For more information on current projects funded by the Hydrogen Program, visit the 2021 Annual Merit Review Proceedings website.[2]

This prize consists of two phases, ***Propose! & Prove!*** A summary of the cash and voucher awards available through this prize in each phase is found in Table 1. This prize also seeks to attract new talent and expertise to the hydrogen industry and engage entities that have not previously engaged with DOE before. Entrepreneurs and inventors compete for cash prizes, vouchers, and an opportunity to work with experts to help accelerate the development of their novel concepts and improve the opportunities for transformative and disruptive technologies.

[1] Clean hydrogen means hydrogen produced with a carbon intensity equal to or less than 2 kilograms of carbon dioxide-equivalent produced at the site of production per 1 kilogram of hydrogen produced, as defined in Section 40315 of the Bipartisan Infrastructure Law. Applicants should also see Submission requirements section on life cycle (well to gate) emissions to be considered for the prize.

[2] Please see the June 2021 Annual Merit Review Presentations for a list of projects currently funded by the DOE Hydrogen Program. Viewers may also search the project database using keywords of interest.

Table 1. Summary of prizes available in each phase.

Phase	Winners	Prize
Propose!	Up to 10	$10,000 cash, $50,000 in vouchers
Prove!	Up to 5	$100,000 cash, $300,000 in vouchers

2. PRIZE PHASES: PROPOSE! & PROVE!

Entrepreneurs, inventors, and researchers can compete for prize winnings and opportunities to work with national laboratory experts to help accelerate the development of their novel and potentially transformative technologies. The two-phase prize culminates in an opportunity for ***Prove! Phase*** winners to pitch their concept to companies and investors. DOE invites anyone who meets the eligibility requirements to compete and transform a conceptual idea into a proof-of-concept demonstration. Table 2 lists the important milestones for this prize. Please see the HeroX website for exact dates for these important deadlines.

The Two Phases:

At the ***Propose! Phase*** deadline competitors will need to submit:

- Estimated assessment of life cycle emissions.
- A brief explanation of the technology, with details on how the concept would be transformative in the cost of producing clean hydrogen.
- A proposed path to validate the concept.

DOE will select up to 10 ***Propose! Phase*** winners and award them each $10,000 in cash and $50,000 in vouchers to be used at a national laboratory of their choice to further refine and develop their technology. Winners from the ***Propose! Phase*** will also be invited to compete in the ***Prove! Phase.***

At the ***Prove! Phase*** deadline, competitors will need to submit the following:

- Description of the concept, with details on the work completed in the ***Propose! Phase***.
- A plan or preliminary design for a laboratory-scale proof-of-concept, including a validation strategy.

- Initial best projections for cost and emissions based on the current understanding of the technology.

Prove! Phase winners will receive $100,000 in cash and $300,000 in vouchers.

Eighteen months after the ***Prove! Phase,*** winners will be invited to a Pitch Day event to showcase their work and technology to a group of investors. More details on this event will be provided closer to Pitch Day.

3. VOUCHERS

Vouchers will allow winners of the two phases to access tools, equipment, and expertise at the national laboratories so that they may develop, test, and validate their technologies. More details on vouchers will be provided in the Voucher Guidelines. At the ***Prove! Phase*** submission deadline, competitors must submit a Voucher work slide (see Table 13).

4. BACKGROUND

The DOE Hydrogen Program, coordinated by HFTO within the Office of Energy Efficiency and Renewable Energy (EERE), is committed to clean and equitable energy through research, development, demonstration, and deployment of hydrogen technologies.[3] In support of the Hydrogen Program's mission and addressing goals set by the Hydrogen Shot,[4] DOE is launching the ***H-Prize: Hydrogen Shot Incubator.***

Approximately ten million metric tons of hydrogen are produced in the U.S. every year, mostly through steam methane reforming of natural gas, which produces more than one hundred million metric tons of CO_2 emissions. Innovations in hydrogen production could significantly reduce CO_2 emissions. Further, the use of clean hydrogen in industries such as metals production and refining, chemical production, energy storage, and transportation will lead to decarbonization.

The prize supports the Biden-Harris Administration's goals, including net-zero emissions by 2050 and a carbon pollution-free power sector by 2035, in addition to enabling an equitable, resilient, and sustainable clean energy future. The prize is designed to incentivize breakthrough clean hydrogen

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[3] The DOE Hydrogen Program is a coordinated Departmental effort to advance the affordable production, transport, storage, and use of hydrogen across different sectors of the economy. The Hydrogen Program involves participation from the Offices of Energy Efficiency and Renewable Energy, Fossil Energy and Carbon Management, Nuclear Energy, Electricity, Science, and the Advanced Research Projects Agency–Energy. See https://www.hydrogen.energy.gov/pdfs/hydrogen-program-plan-2020.pdf

[4] The first Energy Earthshot, launched June 7, 2021—Hydrogen Shot—seeks to reduce the cost of clean H_2 by 80% to **$1** per **1 kilogram** in **1 decade** ("**1 1 1**"). See Hydrogen Shot | Department of Energy

production technologies with the potential to meet the ambitious Hydrogen Shot goal of $1/kg of clean hydrogen within one decade. The prize supports teams as they develop transformative concepts into early-stage prototypes ready for lab-scale demonstration. This prize will drive the accelerated development of the most promising ideas and provides a steppingstone for American entrepreneurs to additional investment.

It is the policy of the Biden Administration that:

The Federal Government should pursue a comprehensive approach to advancing equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality. Affirmatively advancing equity, civil rights, racial justice, and equal opportunity is the responsibility of the whole of our Government. Because advancing equity requires a systematic approach to embedding fairness in decision-making processes, executive departments and agencies must recognize and work to redress inequities in their policies and programs that serve as barriers to equal opportunity.

By advancing equity across the Federal Government, we can create opportunities for the improvement of communities that have been historically underserved, which benefits everyone.

As part of this whole of government approach, this prize seeks to encourage the participation of underserved communities and underrepresented groups. Competitors are highly encouraged to include individuals from groups historically underrepresented, in STEM, on their project teams. As part of the submission, competitors are required to describe how diversity, equity, and inclusion (DEI) objectives will be incorporated in the project.

In addition to the Federal Government's initiative to achieve greater participation from underserved communities and underrepresented groups, the Justice40 Initiative was established. This initiative directs 40% of the overall benefits of certain Federal investments – including investments in clean energy and energy efficiency; clean transit; affordable and sustainable housing; training and workforce development; the remediation and reduction of legacy pollution; and the development of clean water infrastructure – to flow to disadvantaged communities (DACs). Justice40 benefits include (but are not limited to) measurable direct or indirect investments or positive project outcomes that achieve or contribute to the following in DACs: (1) a decrease in energy burden; (2) a decrease in environmental exposure and burdens; (3) an increase in access to low-cost capital; (4) an increase in the clean energy job pipeline and job training for individuals; (5) increases in clean energy enterprise creation (e.g., minority-owned or diverse business enterprises); (6) increases in energy democracy, including community ownership; (7) increased parity in clean energy technology access and adoption; and (8) an increase in energy resilience.

5. IMPORTANT DATES

Table 2. Important dates and deadlines for the H-Prize: Hydrogen Shot Incubator.

Phase	Date	Prize Milestone
Propose! Phase	April 22, 2022	Prize announcement
	June 6, 2022	Prize Opens
	1 month after the prize opens	Informational webinar
	2 months after the prize opens	Deadline for ***Propose! Phase*** submission
	2 months after the submission deadline	***Propose! Phase*** winners are announced, and prize funds disbursed to winners
Prove! Phase	Estimated to be October 2022	***Prove! Phase*** opens: Competitors begin preparing their submission materials for the ***Prove! Phase***
	10 months from the beginning of ***Prove! Phase***	Deadline for ***Prove! Phase*** submission
	2 months from ***Prove! Phase*** submission deadline	***Prove! Phase*** winners are announced, and prize funds disbursed
Prepare for Pitch Day	Estimated to be October 2023	Pitch Day Preparation begins: ***Prove! Phase*** winners begin preparing for Pitch Day
	18 months from the ***Prove! Phase*** Deadline	Pitch Materials Due
Pitch Day!	TBD	Opportunity for competitors to pitch their concepts to private investors.

6. TECHNOLOGY AREAS NOT OF INTEREST

The overall goal of the ***H-Prize: Hydrogen Shot Incubator*** is to catalyze breakthrough solutions—that may not already be supported through the current DOE Hydrogen Program—to meet the Hydrogen Shot goal of $1/kg of clean hydrogen in one decade. All of the following statements must be true for each submission:

- The proposed solution is related to clean hydrogen production.

- Technologies proposed for producing hydrogen must not include steam methane reforming, autothermal reforming, coal gasification, or partial oxidation.
- Activities described in the submission package will develop clean hydrogen production in the U.S.
- The proposed solution is not dependent on new, pending, or proposed federal, state, or local government legislation, resolutions, appropriations, measures, or policies.
- The proposed solution does not involve the lobbying of any federal, state, or local government office.
- The proposed solution is based on sound scientific and technical principles.
- The proposed solution demonstrates a basic understanding of the U.S. market economy, including financial analysis relevant to hydrogen cost.
- The proposed solution has the potential for demonstration and validation during the ***Prove! Phase.***

7. GENERAL ELIGIBILITY REQUIREMENTS

Competitors in the ***H-Prize: Hydrogen Shot Incubator*** must comply with the general eligibility requirements below.

A single team may submit a maximum of three submissions. Submissions should not be substantially similar. If DOE receives more than three submissions from a single team, DOE will only consider the three most recently provided submissions.

All Phases Eligibility

Private entities (for-profits and nonprofits) and nonfederal government entities (such as states, counties, tribes, municipalities, and academic institutions) are subject to the following requirements:

- Individuals or teams of individuals must be part of or represent a legally formed entity to compete. This restriction exists for the use of voucher funds. Only legally formed entities (not individuals) may enter into research agreements with national laboratories to use voucher funds. Individuals can form an LLC in the U.S. to fulfill this requirement.
- Individuals competing as part of a team may participate if they are legally authorized to work in the United States, provided that the entity is a U.S.-based company or university.

- Private entities must be incorporated in and maintain a primary place of business in the United States with majority domestic ownership and control.
- Academic institutions must be based in the United States.
- Federal entities and federal employees are not eligible to win any prize phases in this program.
- Employees of an organization that co-sponsors this program with DOE are not eligible to participate in any prize phases in this program.
- Individuals who worked at DOE (federal employees or support service contractors) within six months prior to the submission deadline of any phase are not eligible to participate in any prize phases in this program. Additionally, members of their immediate families (i.e., spouses, children, siblings, or parents) and anyone who lives in their household, regardless of relation, are not eligible to participate in the Prize.
- Entities cannot propose a concept that is already receiving DOE funding.
- National laboratory employees are not eligible to participate in any prize phase.
- Entities and individuals publicly banned from doing business with the U.S. government, such as entities and individuals debarred, suspended, or otherwise excluded from or ineligible for participating in federal programs, are not eligible to compete.
- Entities identified by the Department of Homeland Security (DHS), Binding Operational Directives (BOD) as an entity publicly banned from doing business with the United States government are not eligible to compete. See https://cyber.dhs.gov/directives/.
- Entities and individuals identified as a restricted party on one or more screening lists of the Department of Commerce, State, and the Treasury are not eligible to compete. See the Consolidated Screening List: https://www.trade.gov/consolidated-screening-list.
- DOE expects this prize competition to positively impact U.S. economic competitiveness. Participation in a foreign government talent recruitment program could conflict with this objective by resulting in the unauthorized transfer of scientific and technical information to foreign government entities. Therefore, individuals participating in foreign government talent

recruitment programs of foreign countries of risk are not eligible to compete.[5] Further, teams that include individuals participating in foreign government talent recruitment programs of foreign countries of risk are not eligible to compete.[6]

- By uploading a submission package either during registration or to any phase, a competitor certifies that it complies with these eligibility requirements. Eligibility is subject to verification before prizes are awarded. As soon as the prize administrator becomes aware that a competitor is not eligible for the ***Propose! or Prove! Phase,*** the competitor will be disqualified. The registered competitor is the entity that registers in HeroX to compete.
- As part of the submission to this prize program, competitors will be required to sign the following statement:
    - *I am providing this submission package as part of my participation in this prize. I understand that in providing this submission to the Federal Government, I certify under penalty of perjury that the named competitor meets the eligibility requirements for this prize competition and complies with all other rules contained in the Official Rules document. I further represent that the information contained in the submission is true and contains no misrepresentations. I understand false statements or misrepresentations to the Federal Government may result in civil and/or criminal penalties under 18 U.S.C. § 1001 and § 287.*

In keeping with the goal of growing a community of innovators, competitors are encouraged to form diverse, multidisciplinary teams while developing their concepts. The HeroX platform provides a space where parties interested in collaboration can post information about themselves and learn about others who are also interested in competing in this prize.

Propose! Phase Eligibility

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[5] A foreign government talent recruitment program is defined as an effort directly or indirectly organized, managed, or funded by a foreign government to recruit science and technology professionals or students (regardless of citizenship or national origin, and whether having a full-time or part-time position). Some foreign government-sponsored talent recruitment programs operate with the intent to import or otherwise acquire from abroad, sometimes through illicit means, proprietary technology or software, unpublished data and methods, and intellectual property to further the military modernization goals and/or economic goals of a foreign government. Many, but not all, programs aim to incentivize the targeted individual to physically relocate to the foreign state for the above purpose. Some programs allow for or encourage continued employment at U.S. research facilities or receipt of federal research funds while concurrently working at and/or receiving compensation from a foreign institution, and some direct participants not to disclose their participation to U.S. entities. Compensation could take many forms, including cash, research funding, complimentary foreign travel, honorific titles, career advancement opportunities, promised future compensation, or other types of remuneration or consideration, including in-kind compensation.

[6] Currently, the list of countries of risk includes Russia, Iran, North Korea, and China.

No other restrictions outside of those outlined above.

Prove! Phase Eligibility

Only ***Propose! Phase*** winners are eligible to compete in the ***Prove! Phase***.[7]

8. ADDITIONAL REQUIREMENTS

Please read and comply with the additional requirements in Appendix 1.

COMPETITORS WHO DO NOT COMPLY WITH THESE REQUIREMENTS MAY BE DISQUALIFIED.

[7] Competitors are defined as the key project members listed on the cover page of the team's Prove! submission package.

PROPOSE! PHASE DETAILS

1. INTRODUCTION

The ***H-Prize: Hydrogen Shot Incubator*** is a two-phase challenge providing vouchers and cash prizes. It is designed to incentivize novel technologies for clean hydrogen production by supporting teams as they develop transformative concepts into early-stage prototypes ready for lab-scale demonstration. The ***Propose! & Prove!*** phases provide access to the resources and environments to foster new concepts and develop them into early-stage prototypes in rapid learning cycles.

Propose! Phase Prize Awards
• Up to 10 winners • Each winner receives a $10,000 cash prize and a voucher for $50,000.

The ***Propose! Phase*** is the first in this two-phase series with up to $600,000 in prizes. Anyone meeting the eligibility requirements can compete in the ***Propose! Phase***, but only winners from this phase are eligible to compete in the subsequent ***Prove! Phase*****. The following information and rules are provided for competitors in the *Propose! Phase*.**

2. PROPOSE! PHASE GOALS

The first phase of the ***H-Prize: Hydrogen Shot Incubator*** seeks novel concepts which have the potential to meet the Hydrogen Shot goal of $1/kg clean hydrogen. Submissions should describe the work already completed toward defining and/or exploring the novel concept. Submissions should include enough detail for reviewers to be able to rate the concept based upon design and/or experimental work that has already been accomplished. Submissions should detail the assumptions made and address the system boundary conditions, mass and energy balance, preliminary levelized cost of hydrogen, and CO_2 emissions estimates, as applicable.[8] Submissions should include quantitative information on all necessary feedstocks, an estimated yield of hydrogen (or conversion rate from a feedstock and energy source to hydrogen), identification of any expected byproducts or waste products, as well as the expected hydrogen purity. Competitors should also provide their vision for a lab-scale demonstration. A panel of expert reviewers will evaluate submissions. DOE

[8] The levelized cost of hydrogen must includes capital and operating costs over the life of the plant. Details can be viewed at H2A: Hydrogen Analysis Production Models | Hydrogen and Fuel Cells | NREL

selects the ***Propose! Phase*** award winners, based on the reviewer assessment (outlined below) and program policy factors outlined in Appendix 1.

3. PRIZES TO WIN

The ***Propose! Phase*** offers $10,000 in cash and $50,000 in vouchers to winners. More details on vouchers can be found in the Voucher Guidelines.

4. HOW TO ENTER

To compete for ***Propose! Phase*** award, a team must complete a submission package online at https://www.herox.com/HydrogenShotPrize before the phase closing date.

5. PROPOSE! PHASE PROCESS

The ***Propose! Phase*** process consists of four stages:

- **Prepare** – Competitors prepare submission packages that highlight a concept for clean hydrogen production focusing on lowering the hydrogen production cost. Submissions should include details of the technology used, any modeling and/or test results, and a vision for demonstrating and validating their concept.
- **Submit** – Competitors complete their submission packages and submit them online before the ***Propose! Phase*** closes (Table 2).
- **Review** – The Prize Administrator reviews submission packages for compliance and eligibility and verifies that all required materials have been submitted. Subject matter expert reviewers will independently score the content of each submission that passes the initial compliance review.
- **Award** – DOE selects up to 10 winners based on the written submission, expert reviewer feedback, and the program policy factors outlined in Appendix 1.

6. WHAT TO SUBMIT

A complete submission package for the ***Propose! Phase*** should include the items listed in Table 3.

Table 3. *Propose! Phase* submission package.

Item	Content
Submission Package	• 90-second video (public, see • Table 5) • Cover page content (see Table 4) • Concept narrative that answers four questions about the *innovation, potential, team, and DEI plan* (see Table 6) • One summary PowerPoint slide (public, see Table 8) • Letters of commitment or support (optional, see Table 9).

***Note**: Portions of the submission package are made available to the public. These have been noted as such, and DOE does not intend to release the remaining parts of the submission to the public. See Appendix 1 for additional details.*

The Cover Page and Letters of Commitment must be uploaded to HeroX as PDF files, the Summary slide must be uploaded to HeroX as a PowerPoint file, and the video file must be posted online (e.g., YouTube, Vimeo).

Table 4. Contents to include on the cover page.

Cover Page – List basic information about your submission
• Project name • Innovation tagline (e.g., your mission in a few words) • Key project members (names, contacts, and links to their LinkedIn profiles) • Keywords that best describe your solution • Your city, state, and nine-digit zip code • Link to public video.

Table 5. Public Video Content.

Online public video – What is your innovation in 90 seconds?
Suggested Content • The concept you are developing • Describe why your innovation has the potential to be transformational and achieve the Hydrogen Shot goal • Describe your team and facilities and your ability to safely carry out this project.

Be creative and produce a video that conveys the required information in exciting and interesting ways, but do not focus on time-consuming activities that only improve production values (i.e., technical elements such as décor, lighting, and cinematic techniques).

Table 6. Concept narrative Content

Concept narrative **Max 1,500 Words and Supporting Images or Figures** (PDF)	
Question 1: *Innovation* – What is the innovation, and what is its potential to drive down the cost of clean hydrogen production?	
Suggested Content • Describe the innovation, quantifying its significance with metrics. Be specific regarding the potential to drive down the cost of clean hydrogen production (CAPEX, OPEX, etc.).[9]	**Review Criteria** • The competitor describes an innovation using relevant metrics • The competitor provides sufficient detail to describe their innovation • The solution represents an innovative approach built on reasonable assumptions, valid technical foundations, and lessons learned from other notable efforts in this space

[9] Avoid providing general background on clean hydrogen production; the reviewers are experts.

• Describe the innovation in as much detail as possible, including boundary conditions, assumptions made, safety considerations, as well as any cost-benefit expected from the sale of co-products or cost penalties in the handling of waste products • Justify how the innovation could be scaled up to clean hydrogen production volumes relevant to the Hydrogen Shot • Describe where this work will be completed and where you will source materials for this work. If any work is sourced outside the U.S., you must submit a waiver (Table 7).	• The competitor provides compelling reasoning as to why the innovation has the potential to drive down the cost of clean hydrogen production at relevant scales in a safe manner • The work and material sourcing will occur entirely in the U.S., or an adequate waiver has been provided.
Question 2: *Potential* – Why will your innovation be successful?	
Suggested Content • Describe how the innovation has the potential to improve on the state-of-the-art in existing products or provide benefits over other emerging solutions • Describe the CO_2 produced at the site of hydrogen production and from the feedstock or energy source needed for production (if any) • Describe your plan to reach clean hydrogen production goals (as applicable) • Provide an estimated spend plan showing how you would leverage program resources toward meeting overall goals.	**Review Criteria** • The competitor's assessment of current clean hydrogen production technologies and their pros and cons shows a comprehensive understanding of the space • The competitor provides sufficient technical detail to justify how this innovation improves upon other technologies • The competitor either has a credible plan for managing CO_2 produced at the site of production or already produces hydrogen in a manner that meets clean hydrogen goals • The proposed plan effectively uses the resources available in this program to advance the innovation.

Question 3: *Accomplishments and Team* – What have you done to date, and what qualities give you a competitive edge?	
Suggested Content • Describe your efforts to advance your concept both prior to and since the announcement of the Prize; highlight key milestones achieved • Explain why winning the ***Propose! Phase*** will substantively change the outcome of the proposed innovation • Introduce your team, explain how it came together, and highlight the knowledge and skills that make it uniquely capable of achieving success • Highlight your team's diversity, experience, and track record that makes it likely to succeed in the prize competition. What experience do you have trying new things, solving difficult problems, and overcoming barriers to bring ideas to reality? • Describe the facilities available to you and their ability to carry out the work you propose safely.	**Review Criteria** • The extent to which winning the ***Propose! Phase*** would build on prior efforts and accomplishments and significantly increase the team's chances of taking a novel concept and developing it into a lab-scale demonstration • The team's track record demonstrates notable qualities such as adaptability, creativity, decisiveness, and resourcefulness. This team is diverse and has the knowledge, experience, and determination to transform their proposed innovation into a demonstration in the near future • The facilities described are adequate to safely carry out the research proposed.
Question 4: *DEI Plan*	
Suggested Content • Describe the actions the team will take to foster a welcoming and inclusive environment, support people from groups underrepresented in STEM, advance equity, and encourage the inclusion of individuals from these groups in the project	**Review Criteria** • The actions the team plans to take to foster their team environment as inclusive • The proposed technology will have a positive impact on underserved communities • The DEI plan is sound and executable.

• Describe the impacts of the proposed project on underserved communities, including social and environmental impacts • Describe how DEI objectives will be incorporated into the project.	

You should answer each of the narrative questions in Table 6. The content bullets are only suggestions to guide your responses. You decide where to focus your answers. The individual answers to the questions do not have a word limit; however, **the aggregate response to these four questions must not exceed 1,500 words**, not including captions, figures/graphs, or references. You must include a word count at the end of your submission. You may also include **up to five supporting images, figures, or graphs**. The reviewers will score the questions based on the content you have provided.

Table 7. Outside the U.S. waiver.

Waiver (PDF)
Describe the work or sourced material(s) from outside the U.S., and justify why this cannot be done inside the U.S.

Table 8. Submission summary slide content.

Submission Summary Slide (a PowerPoint slide will be made public)
Make your own public-facing, one-slide summary that contains technically specific details but can be understood by most people. There is no template, so feel free to present the information as you see fit. Please make any text readable in a standard printout and conference room projection.

Table 9. Letters of commitment or support.

Letters of Commitment or Support (optional)

Attach one-page letters (of support, intent, or commitment) from other relevant entities (e.g., potential users of the proposed innovation or strategic manufacturing partners), particularly from entities included as part of the development plan for your concept. Letters of support from partners or others that are critical to the success of your proposed innovation will likely increase your score. General letters of support from parties that are not critical to the execution of your solution will likely not factor into your score. Please do not submit multi-page letters.

Please read and comply with additional requirements about your submission in Appendix 1.

COMPETITORS WHO DO NOT COMPLY WITH THESE REQUIREMENTS MAY BE DISQUALIFIED.

7. SCORING SUBMISSIONS

An expert panel of reviewers organized by DOE and the Prize Administrator will review proposals and provide numeric assessments for each submission element considering the review criteria for that element. The reviewers cannot have personal or financial interests in, or be an employee, officer, director, or agent of any entity that is a registered competitor in this phase; or have a familial or financial relationship with an individual who is part of a registered team.

The reviewers read, score, and comment on the content from each submission. Each reviewer scores content from the video submission and content from each narrative question on a scale of 1 to 6 (Table 10). The final score from an individual reviewer for a submission package equals the total sum of the scores. All reviewers' final scores are then averaged for the final total score for the submission package.

Table 10. Scoring scale.

1	2	3	4	5	6
strongly disagree	disagree	slightly disagree	slightly agree	agree	strongly agree

Expert reviewers will also provide comments to the Prize Administrator on the submissions they review.

The Prize Administrator, at its sole discretion, may decide to hold a short interview with a subset of the ***Propose! Phase*** competitors. Interviews would be held prior to the announcement of winners

and would serve to help clarify questions the judge may have. Attending interviews is not required, but participation may influence the final decision. Interviews are not an indication of winning.

DOE, in consultation with the Prize Administrator, considers reviewer scores, program policy factors outlined in Appendix 1, and interviews (if applicable) when selecting ***Propose! Phase*** winners. DOE is the judge and final decision maker and may elect to award all, none, or some of the prize funds and vouchers to competitors at each submission deadline.

8. ADDITIONAL REQUIREMENTS

Please read and comply with the additional requirements in Appendix 1.

COMPETITORS WHO DO NOT COMPLY WITH THESE REQUIREMENTS MAY BE DISQUALIFIED.

PROVE! PHASE DETAILS

1. INTRODUCTION

The ***Prove! Phase*** is the second phase of the ***H-Prize: Hydrogen Shot Incubator*** challenge and offers up to $2,000,000 in vouchers and cash prizes. ***Propose! Phase*** winners use their resources to further develop their concepts and are eligible to compete in the ***Prove! Phase*** which can be used to develop laboratory demonstrations.

Prove! Phase Prize Awards

- Up to 5 winners
- Each winner receives a cash prize of $100,000 and $300,000 in vouchers.

Submissions must be provided to HeroX by the ***Prove! Phase*** deadline shown in Table 2. **The following information and rules are provided for competitors applying for *Prove! Phase* awards.**

2. PROVE! PHASE GOALS

Leveraging concept development through the ***Propose! Phase***, a team can develop a submission to the ***Prove! Phase*** that should include a plan with preliminary designs for a laboratory-scale demonstration to validate the proposed idea. ***Prove! Phase*** award winners receive $100,000 in cash and $300,000 in vouchers to help advance their concept toward demonstration and validation. After 18 months, teams can submit pitch materials based on the work performed and, upon submission, are eligible to participate in a Pitch Day event.

Prove! Phase winners are expected to use the resources to demonstrate and validate their technology. Validation includes detailed technoeconomic analyses (TEAs) and emissions analyses. You may use publicly available models such as H2A[10] and GREET[11], but other appropriate models are also acceptable as long as assumptions are provided for independent validation by DOE. These can be developed with the help of national laboratory experts using vouchers.

[10] https://www.nrel.gov/hydrogen/h2a-production-models.html
[11] https://greet.es.anl.gov/

3. PRIZES TO WIN

The ***Prove! Phase*** offers up to 5 prizes of $100,000 in cash plus $300,000 in vouchers. Winners will negotiate the scope of work to be performed under a voucher with the national laboratory identified to conduct the work.

4. HOW TO ENTER

Propose! Phase award winners are eligible to compete for the ***Prove! Phase*** award and must submit online at www.herox.com/HydrogenShotPrize on or before the phase closing date shown in Table 2.

5. PROVE! PHASE PROCESS

The ***Prove! Phase*** process consists of four stages:

- **Prepare** – Leveraging the concept development work through the ***Propose! Phase*** award, competitors should prepare a plan with preliminary designs for a safe and effective laboratory-scale demonstration to validate the proposed idea along with updated TEAs and emissions analyses. These analyses do not need to be complete at the time of submission.
- **Submit** – Submit your ***Prove! Phase*** submission package on or before the phase close date shown in Table 2.
- **Review** – After submission, the Prize Administrator reviews submission packages for compliance and eligibility and verifies all required materials have been submitted. Subject matter expert reviewers will independently score the content of each submission that passes the initial compliance review.
- **Award** – DOE selects up to 5 winners based on the written submission, expert reviewer feedback, and program policy factors outlined in Appendix 1. The Prize Administrator announces the winners.

6. WHAT TO SUBMIT

A complete submission for the ***Prove! Phase*** award must include the items in

Table 11 and must be updated from the ***Propose! Phase*** (the cover page content may not change).

Table 11. *Prove! Phase* submission package.

Item	Content
Submission Package	• 3-minute pitch video (public, see Table 12) • Cover page content (refer back to Table 4) • Voucher Work Slide (see Table 13) • Proof-of-concept narrative that answers questions about the *innovation, team, plan, and DEI plan* (see Table 14) • Summary PowerPoint slide (public, refer back to Table 8) • Letters of commitment or support (optional, refer back to Table 9).

***Note**: Portions of the submission package are made available to the public. These have been denoted as such, and DOE does not intend to release the remaining parts of the submission to the public. See Appendix 1 for additional details.*

The Cover Page and Letters of Commitment must be uploaded to HeroX as PDF files, the Summary slide and Voucher Work Slide must be uploaded to HeroX as a PowerPoint file, and the video file must be posted online (e.g., YouTube, Vimeo).

Table 12. Public video content.

Video – 3-minute pitch on your innovation and proof of concept demonstration (public)
Suggested Content • Describe the real-world problem you are solving • Describe your innovation and why it is transformational as compared to existing or other emerging solutions • Explain the features of your proof-of-concept demonstration and how it addresses technology validation in a safe and effective manner • Describe progress made over the competition period • Describe your team and facilities and your ability to safely carry out this project.

Be creative and produce a video that conveys the required information in exciting and interesting ways, but do not focus on time-consuming activities that only improve production values (i.e., technical elements such as décor, lighting, and cinematic techniques).

Table 13. Voucher work slide.

Voucher Work Slide – Single PowerPoint slide describing the work you plan to do with your voucher funds.
Suggested Content • Identify the team and the team point of contact for voucher work • Identify up to three national laboratories that you would like to work with and rank them • Briefly describe your innovation • Describe your proposed scope of work • Describe progress made over the competition period, including national labs you worked with previously

Table 14. Proof-of-concept narrative Content

Proof-of-concept narrative **Max 3,000 Words and Supporting Images or Figures (PDF)**	
Question 1: *Innovation* – What progress have you made to prove your solution will be successful?	
Suggested Content • High-level summary of your proposed concept and what will be needed for a viable laboratory-scale demonstration • Describe your plan to demonstrate your technology, its technical specifications,	**Review Criteria** • Sufficient technical detail was provided on the underlying principles of operation of the innovation to adequately describe the proposed process

and sufficient underlying details on how it will safely demonstrate and facilitate external validation of the performance claims you make[12] • Provide a safety plan on how you will carry out the demonstration of your technology [13] • Provide a preliminary TEA and emissions analysis based on current understanding of your technology • Describe your approach to reaching clean hydrogen cost and emission targets.	• The proof-of-concept is grounded in real-world assumptions and resolves critical technical risks • The plan to demonstrate your technology is safe and will be effective in advancing the innovation • The planned proof-of-concept is reasonably ambitious and validates the critical assumptions necessary to advance the technology innovation • The TEA and emissions analysis approaches are reasonable • The proof-of-concept approach provides sufficient attention to safety details.
Question 2: *Accomplishments and Team* – What qualities give you a competitive edge, and how have you grown?	
Suggested Content	**Review Criteria**
• Introduce your team and highlight the diversity, knowledge, and skills that make the team uniquely capable of achieving success • Describe how your team has evolved during the competition, including any strategic hires or partnerships • Explain why winning the ***Prove! Phase*** will substantively change the likelihood of your success • Describe the facilities available to you and their ability to safely carry out the work you propose.	• The team's drive, diversity, knowledge, and complementary skill sets provide a strong competitive edge toward realizing this solution in the near future • The team identified skill gaps and brought in the right people or partners to fill those gaps • The extent to which winning the ***Prove! Phase*** will increase the team's chances of experimentally validating their innovation • The facilities described are adequate to safely carry out the research proposed.

[12] Avoid characterizing core innovations as proprietary and thus preventing independent evaluation by the expert judges. It is the intent of the Prize Administrator that, unless otherwise noted, no parts of the submitted materials be released to the public (see Appendix 1 for more details).

Question 3: *Plan* – What is your plan to achieve your goals? ***See special instructions**	
Suggested Content • Describe who gave relevant feedback on your proof-of-concept approach and any modifications you made as a result • Provide quantitative SMART goals that you hope to meet in the next 18 months • Describe risks to the development plan and mitigation strategies • Provide a high-level spending plan, including how you will leverage vouchers to meet your goals • Describe where this work will be completed and where you will source materials for this work. If any work is sourced outside the U.S., you must submit a waiver (Table 7).	**Review Criteria** • Competitors have provided ambitious, relevant goals for this phase and show a commitment to an accelerated solution development cycle • The competitor has sufficiently identified key risks associated with the development plan and provided reasonable risk mitigation strategies • The competitors' approach to completing their proposed proof-of-concept is well-reasoned and makes good use of the voucher available to them • The work and material sourcing will occur entirely in the U.S., or an adequate waiver has been provided.
Question 4: *DEI Plan*	
Suggested Content • Describe the actions the team will take to foster a welcoming and inclusive environment, support people from groups underrepresented in STEM, advance equity, and encourage the inclusion of individuals from these groups in the project • Describe the impacts of the proposed project on underserved communities, including social and environmental impacts • Describe how DEI objectives will be incorporated into the project.	**Review Criteria** • The actions the team plans to take to foster their team environment as inclusive • The proposed technology will have a positive impact on underserved communities • The DEI plan is sound and executable.

You should answer each of the narrative questions in Table 13. The content bullets are only suggestions to guide your responses. You decide where to focus your answers. The individual

answers to the questions do not have a word limit; however, **the aggregate response to these questions must not exceed 3,000 words**, not including captions, figures/graphs, or references. A word count must be included at the end of your submission. You may also include **up to five supporting images, figures, or graphs**. The reviewers will score the questions based on the content you have provided.

Special instructions for Question 3

- Use only specific, measurable, achievable, relevant, and timely (SMART) outcome-based goals, not activity-based, so that a neutral third party can validate them (if possible).
    - For example: Demonstrate a definitive achievement of progress (e.g., "X letters of interest signed" or "achieve Y% efficiency"); do **not** describe how you spent your time (e.g., "provide a report," "talk to customers," or "perform experiments").
- SMART goals for the ***Prove! Phase*** should include demonstrating a functional lab-scale demonstration based on learning throughout the competition and at least one committed pilot test partner.
- When defining your SMART goals, include quantified, risk-reducing, meaningful, practical, and testable interim milestones.
- SMART goals should include assessment and feedback from many relevant stakeholders (e.g., possible investors, customers, and experts in the solution space).
- Members of the American-Made Network may be able to help you to formulate your SMART goals.

Please read and comply with additional requirements about your submission in Appendix 1.

COMPETITORS WHO DO NOT COMPLY WITH THESE REQUIREMENTS MAY BE DISQUALIFIED.

7. SCORING SUBMISSIONS

An expert panel of reviewers organized by the DOE and Prize Administrator will review proposals in the ***Prove! Phase*** and provide numeric assessments for each submission element considering the review criteria for that element. The reviewers cannot have personal or financial interests in, or be an

employee, officer, director, or agent of any entity that is a registered competitor in this phase; or have a familial or financial relationship with an individual who is part of a registered team.

The reviewers read, score, and comment on the content from each submission. Each reviewer scores content from each narrative question on a scale of 1 to 6 (Table 10). The final score from an individual reviewer for a submission package equals the total sum of the scores. All reviewers' final scores are then averaged for the final total score for the submission package.

Expert reviewers will also provide comments to the Prize Administrator on the submissions they review. The Prize Administrator will provide comments to competitors after the winners are announced to help all teams to continue to improve and iterate on their innovations. The comments are the opinions of the expert reviewers and do not represent the opinions of DOE.

The Prize Administrator, at its sole discretion, may decide to hold a short interview with a subset of the ***Prove! Phase*** competitors. Interviews would be held prior to the announcement of winners and would serve to help clarify questions the judge may have. Attending interviews is not required, but participation may influence the final decision. Interviews are not an indication of winning.

DOE, in coordination with the Prize Administrator, will consider reviewer scores, program policy factors outlined in Appendix 1, and interviews (if applicable) when selecting ***Prove! Phase*** winners. DOE is the judge and final decision maker and may elect to award all, none, or some of the submissions accepted at each submission deadline.

8. VOUCHERS

Winning teams of the Prove! Phase will receive a $300K to utilize at up to two national laboratories. Teams will have 18 months from the time that they can begin voucher work with their chosen laboratory to utilize their voucher funds.

9. PITCH PRESENTATION

Eighteen months after the ***Prove! Phase*** funds are awarded, participants will submit a recording of their Pitch Day presentation. Table 14 contains suggested content for this presentation. Following submission of the presentation, entities are eligible to participate in the Pitch Day. **The Pitch video must not exceed 10 minutes**.

The Pitch Presentation must be submitted to HeroX as a video and associated slide deck (PowerPoint).

Table 15. Pitch Presentation content.

Suggested Content
• Describe your technology in detail

- Describe the model(s) you used to project the cost of the hydrogen production technology along with all relevant assumptions on feedstocks, capital and operations and maintenance expenses, as well as management of any co-products or waste-product streams
- Describe any co-products that could be monetized, as well as any waste streams that must be managed with associated costs
- Describe the emissions analysis performed along with all relevant assumptions and how this validates the technology's potential to meet clean hydrogen standards
- Describe the progress made over the course of the competition and highlight key engagements, relationships, and milestones.

10. PITCH DAY

The American-Made Network will host a Pitch Day event where ***Prove! Phase*** winners can present their technology to potential investors and commercial partners. In addition, winners would be encouraged to apply to funding opportunity announcements from DOE. More details on the Pitch Day will be released as the date approaches.

11. ADDITIONAL REQUIREMENTS

Please read and comply with the additional requirements in Appendix 1.

COMPETITORS WHO DO NOT COMPLY WITH THESE REQUIREMENTS MAY BE DISQUALIFIED.

APPENDIX 1: ADDITIONAL TERMS AND CONDITIONS

1. UNIVERSAL REQUIREMENTS

Your submission or submissions for the ***Propose! & Prove! Phase*** awards are subject to the following terms and conditions:

- If any team member is actively receiving funding from the DOE at the registration deadline, DOE will review any potential prize awards, as well as other DOE funding, and make a decision as to whether to award a prize to individuals or entities already receiving funding is in line with the program policy factors stated later in these rules (Section V.14).
- You must post the final content of your submission or upload the submission form online at www.herox.com/HydrogenShotPrize before the ***Propose! & Prove! Phases*** close. Late submissions or any other form of submission do not qualify.
- The video submission and summary slide will be made public.
- DOE does not intend to make the cover page, narrative, voucher work slide, and letters of commitment/support public; however, see Section V.11 regarding the Freedom of Information Act (FOIA).
- You agree to release your submission video under a Creative Commons Attribution 4.0 International License (see http://creativecommons.org/licenses/by/4.0/).
- You must include all the required submission elements. The Prize Administrator may disqualify your submission after an initial screening if you fail to provide all required submission elements. Competitors may be given an opportunity to rectify submission errors due to technical challenges.
- Your submission must be in English and in a PDF readable and searchable format. Scanned handwritten submissions will be disqualified.
- Competitors will be disqualified if during any engagement with the ***H-Prize: Hydrogen Shot Incubator***, including but not limited to the submission, the online forum, emails to the Prize Administrator, or other forms of communication, contain any matter that, in the discretion of DOE, is indecent, lacking in professionalism, or demonstrates a lack of respect for people or life on this planet.

- If you click "Accept" on the HeroX platform and proceed to register for any of the phases described in this document, these rules will form a valid and binding agreement between you and DOE and is in addition to the existing HeroX Terms of Use for all purposes relating to these phases. You should print and keep a copy of these rules. These provisions only apply to the phases described here and no other phases on the HeroX platform or anywhere else.
- The Prize Administrator, when feasible, may give competitors an opportunity to fix non-substantive mistakes or errors in their submission packages.

2. VERIFICATION FOR PAYMENTS

The Prize Administrator will verify the identity and the role of a competitor potentially qualified to receive the prizes. Receiving a prize payment is contingent upon fulfilling all requirements contained herein. The Prize Administrator will notify winners using provided email contact information after the date that the results are announced. Each winning team (or parent/guardian if under 18 years of age) will be required to sign and return to the Prize Administrator, within 30 days of the date the notice is sent, a completed National Renewable Energy Laboratory Request for ACH Banking Information form and a completed W9 form (https://www.irs.gov/pub/irs-pdf/fw4.pdf). At the sole discretion of the Prize Administrator, a winner will be disqualified from the competition and receive no prize funds if: (i) the entity cannot be contacted; (ii) the entity fails to sign and return the required documentation within the required time period; (iii) the notification is returned as undeliverable; or (iv) the submission or entity is disqualified for any other reason.

3. TEAMS AND SINGLE-ENTITY AWARDS

The Prize Administrator will award a single dollar amount to the designated primary submitter, whether consisting of a single or multiple entities. The primary submitter is solely responsible for allocating any prize funds among team members as they deem appropriate.

4. SUBMISSION RIGHTS

The public videos in this prize must be submitted and released to the public under a Creative Commons Attribution 4.0 International License (see http://creativecommons.org/licenses/by/4.0/).

By making a submission and consenting to the rules of the prize, a competitor is granting to DOE, the Prize Administrator, and any other third parties supporting DOE in the prize, a license to display publicly and use the parts of the submission that are designated as “public” for government purpose. This license includes posting or linking to the public portions of the submission on the Prize Administrator’s or HeroX’s submissions, on the prize website, DOE websites, and partner websites,

and the inclusion of the submission in any other media, worldwide. The submission may be viewed by DOE, the Prize Administrator, and judges for purposes of the phases, including, but not limited to, reviewing and evaluation purposes. The Prize Administrator and any third parties acting on their behalf will also have the right to publicize the competitors' names and, as applicable, the names of competitors' team members and organizations, which participated in the submission on the prize website indefinitely.

By entering, competitor represents and warrants that:

The competitor is the sole, original author, and copyright owner of the submission or that the competitor has acquired sufficient rights to use and to authorize others, including DOE, to use the submission as specified throughout the rules; that the submission does not infringe upon any copyright, trade secret, trademark, nondisclosure agreement, patent, or upon any other third-party rights; and that the submission is free of malware.

5. COPYRIGHT

Each competitor represents and warrants that the competitor is the sole author and copyright owner of the submission; that the submission is an original work of the competitor, or that the competitor has acquired sufficient rights to use and to authorize others, including DOE, to use the submission, as specified throughout the rules; that the submission does not infringe upon any copyright or upon any other third-party rights of which the competitor is aware; and that the submission is free of malware.

6. PRIZE SUBJECT TO APPLICABLE LAW

All phases are subject to all applicable federal laws and regulations. Participation constitutes each competitor's full and unconditional agreement to these Official Prize Rules and administrative decisions, which are final and binding in all matters related to the prize. This notice is not an obligation of funds; the final awards are contingent upon the availability of appropriations.

7. RESOLUTION OF DISPUTES

DOE is solely responsible for administrative decisions, which are final and binding in all matters related to the prize.

In the event of a dispute, the authorized account holder of the email address used to register will be deemed to be the competitor. The "authorized account holder" is the natural person or legal entity assigned an email address by an Internet access provider, online service provider, or other

organization responsible for assigning email addresses for the domain associated with the submitted address. Competitors may be required to show proof of being the authorized account holder.

The Prize Administrator will not arbitrate, intervene, advise on, or resolve any matters between team members or any disputes between teams.

8. PUBLICITY

The phase winners (collectively, "winners") will be featured on DOE and NREL websites.

Except where prohibited, participation in the prize constitutes each winner's consent to DOE's and its agents' use of each winner's name, likeness, photograph, voice, opinions, and/or hometown and state information for promotional purposes through any form of media, worldwide, without further permission, payment, or consideration.

9. LIABILITY

Upon registration, all competitors agree to assume and, thereby, have assumed any and all risks of injury or loss in connection with or in any way arising from participation in this prize or development of any submission. Upon registration, except in the case of willful misconduct, all competitors agree to and, thereby, do waive and release any and all claims or causes of action against the federal government and its officers, employees, and agents for any and all injury and damage of any nature whatsoever (whether existing or thereafter arising, whether direct, indirect, or consequential; and whether foreseeable or not), arising from their participation in the prize, whether the claim or cause of action arises under contract or tort.

In accordance with the delegation of authority to run this prize delegated to the Director of HFTO, the Director has determined that no liability insurance will be required of competitors to compete in this competition, per 15 USC 3719(i)(2).

10. RECORDS RETENTION AND FREEDOM OF INFORMATION ACT (FOIA)

All materials submitted to DOE as part of a submission become DOE records. Any confidential commercial information contained in a submission should be designated at the time of submission.

Competitors are encouraged to employ protective markings in the following manner:

- The cover sheet of the submission must be marked as follows and identify the specific pages containing trade secrets or commercial or financial information that is privileged or confidential:

Notice of Restriction on Disclosure and Use of Data:

Pages [list applicable pages] of this document may contain trade secrets or commercial or financial information that is privileged or confidential and is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source. [End of Notice]

- The header and footer of every page that contains trade secrets or privileged commercial or financial information must be marked as follows: “May contain trade secrets or commercial or financial information that is privileged or confidential and exempt from public disclosure.”
- In addition, each line or paragraph containing trade secrets or commercial or financial information that is privileged or confidential must be enclosed in brackets.

Competitors will be notified of any FOIA requests for their submissions in accordance with 29 C.F.R. § 70.26. Competitors may then have the opportunity to review materials and work with a FOIA representative prior to the release of materials.

11. PRIVACY

If you choose to provide HeroX with personal information by registering or completing the submission package through the prize website, you understand that such information will be transmitted to DOE and may be kept in a system of records. Such information will be used only to respond to you in matters regarding your submission and/or the prize unless you choose to receive updates or notifications about other phases or programs from DOE on an opt-in basis. DOE and NREL are not collecting any information for commercial marketing.

12. GENERAL CONDITIONS

DOE reserves the right to cancel, suspend, and/or modify the prize, or any part of it, at any time. If any fraud, technical failures, or any other factor beyond DOE's reasonable control impairs the integrity or proper functioning of the phases, as determined by DOE in its sole discretion, DOE may cancel the prize.

Although DOE indicates in the ***Propose! & Prove! Phases*** that it will select up to several winners for each phase, DOE reserves the right to only select winners that are likely to achieve the goals of the program. If, in DOE’s determination, no competitors are likely to achieve the goals of the program, DOE will select no winners and will award no prize money.

ALL DECISIONS BY DOE ARE FINAL AND BINDING IN ALL MATTERS RELATED TO THE PRIZE.

13. PROGRAM POLICY FACTORS

While the scores of the expert reviewers will be carefully considered, it is the role of the Prize Administrator to maximize the impact of prize funds. DOE may need to consider some factors outside the control of competitors and beyond the independent expert reviewer's scope to accomplish this goal. The following is a list of such factors. In addition to the reviewers' scores, the below program policy factors may be considered in determining phase competitors:

- Geographic diversity and potential economic impact of projects in a variety of hydrogen markets.
- The degree to which the submission exhibits team member diversity and the inclusion of underrepresented groups, with competitors including but not limited to graduates and students of historically black colleges and universities (HBCUs) and other minority-serving institutions (MSIs) or members operating within Qualified Opportunity Zones or other underserved communities.
- Whether the use of additional DOE funds and provided resources continue to be non-duplicative and compatible with the stated goals of this program and DOE's mission generally.
- The degree to which the submission exhibits technological or programmatic diversity when compared to the existing DOE project portfolio and other competitors.
- The level of industry involvement and demonstrated ability to accelerate commercialization and overcome key market barriers.
- The degree to which the submission is likely to lead to increased employment and manufacturing in the United States or provide other economic benefits to U.S. taxpayers.
- The degree to which the submission will accelerate transformational technological, financial, or workforce advances in areas that industry by itself is not likely to undertake because of technical or financial uncertainty.
- The degree to which the submission expands DOE's funding to new competitors and recipients that have not been supported by DOE in the past.

- The degree to which the submission describes a novel technology, component, or integration that has not been funded by the DOE in the past.
- The degree to which the submission enables new and expanding market segments.
- Whether the project promotes increased coordination with nongovernmental entities for the demonstration of technologies and research applications to facilitate technology transfer.

14. DEFINITIONS

Prize Administrator means both the Alliance for Sustainable Energy operating in its capacity under the Management and Operating Contract for NREL and HFTO. When the Prize Administrator is referenced in this document, it refers to staff from both the Alliance for Sustainable Energy and HFTO staff. Ultimate decision-making authority regarding prize matters rests with the Director of HFTO.

Voucher Funding – Vouchers are part of the prize and may only be used at national laboratories. The funds will be provided directly to the laboratory on behalf of the winner to conduct a mutually agreed upon scope of work between the laboratory and the team.

15. RETURN OF FUNDS

As a condition of receiving a prize, competitors agree that if the prize was made based on fraudulent or inaccurate information provided by the competitor to DOE, DOE has the right to demand that any prize funds or the value of other non-cash prizes be returned to the government.

ALL DECISIONS BY DOE ARE FINAL AND BINDING IN ALL MATTERS RELATED TO THE PRIZE.

This is the end of the rules document, thank you for reading.