

Solar Desalination Prize

Rules



U.S. DEPARTMENT *of* ENERGY

U.S. Department of Energy (DOE) Office of Critical Minerals and Energy Innovation (CMEI)

Integrated Energy Systems Office (IESO)

Application due: August 10, 2027, at 5 p.m. Eastern Time, and August 10, 2028, at 5 p.m. Eastern Time.

Modifications

Mod. No.	Date	Description of Modification
1	August 1, 2024	Updated timeline to reflect a two-month review period from submission date to final decision in the Design and Test contests.
2	August 1, 2024	Clarified that the submission opportunity for the Test Contest occurs annually on the second Monday of April.

3	August 1, 2024	Specified that each competitor is entitled to submit at any one of the three annual submission opportunities immediately following the announcement of their winning the Design Contest.
4	August 1, 2024	Clarified the requirements and options related to the U.S. Department of Energy (DOE) site visit of each competitor's facility in the Test Contest.
5	August 1, 2024	Specified that if a competitor's submission package for the Design Contest did not contain the expected water quality or performance metrics of the prototype unit being built as part of the Test Contest, that the competitor has the obligation to provide such metrics no later than the time of notification of the DOE visit to the site.
6	September 17, 2026	Defined submission deadlines for the Test Contest (August 10, 2027, for Design Phase winners announced in 2023 or 2024; and August 10, 2028 for Design Phase winners announced in 2026)
7	September 17, 2026	The timeline for winner announcements was finalized. A winner announcement for competitors will be made by or before November 14, 2028. Additional updates were made to align the prize with DOE and administration priorities, clarify standard requirements, and improve readability.

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I. Preface

The United States (U.S.) Department of Energy's Solar Desalination Prize will be governed by 15 U.S.C. § 3719 and this official rules document. This is not a procurement under the Federal Acquisition Regulation 48 CFR 1-99 and will not result in a grant or cooperative agreement under Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Award 2 CFR 200. The U.S. Department of Energy reserves the right to modify this official rules document if necessary and will publicly post any such notifications as well as notify registered prize participants.

The following table describes changes that will be implemented in this rules document:

Date	Modification(s)
August 1, 2024	Updated timeline to reflect a two-month review period from the submission date to the final decision in the Design and Test Contests.
August 1, 2024	Clarified that the submission opportunity for the Test Contest occurs annually on the second Monday of April.
August 1, 2024	Specified that each competitor is entitled to submit at any one of the three annual submission opportunities immediately following the announcement of their winning the Design Contest.
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September 17, 2026	The timeline for winner announcements was finalized. A winner announcement will be made by or before November 14, 2028. Additional updates were made to align the prize with DOE and administration priorities, clarify standard requirements, and improve readability.

I. Basic Information

A. Key Dates

Issuing Agency	U.S. Department of Energy Office of Critical Minerals and Energy Innovation, Integrated Energy Systems Office
Prize Title	Solar Desalination Prize
Prize Issue Date	April 6, 2020
Expected Total Available Funding	\$11,700,000
Prize Description	The DOE Office of Critical Minerals and Energy Innovation (CMEI) Integrated Energy Systems Office (IESO) launched the American-Made Challenge: Solar Desalination Prize in 2020 as a \$10 million four-contest program to accelerate the commercial development of thermal desalination systems powered by low-cost solar-thermal energy. In 2021, due to high interest and continued opportunities for technology development, IESO launched a second round of the Solar Desal Prize as a \$5 million competition.
Prize Goals and Objectives	The goals of this prize are to expand the availability of fresh water by cost-effectively treating challenging saline water using solar-thermal energy, with minimal electricity and conventional energy resources. This prize program seeks to fund innovations that address a broad range of process parameters, including throughput, scale, product-water purity, and the ability to handle feed water with high salt content of greater than 30,000 parts per million (ppm). In Round 2, IESO particularly encourages the development of solar collector and thermal energy storage technologies that can provide low-cost heat to thermal desalination systems. Competitors will utilize collaborative pathways to rapidly develop ideas into operational desalination facilities in the next few years.
Phases	• Phases 1-3: Innovation, Teaming, and Design (these contests were all run and completed between 2020 and 2025) • Phase 4: Test (Competitors will build their prototype systems and demonstrate its consistent and repeatable operation)
Key Dates: Phase 4 <i>All deadlines are 5:00 p.m. Eastern Time unless indicated otherwise</i>	Phase 4 Submission Opens: Open on a rolling basis with 60 days advance notice given Phase 4 Submission Closes: August 10, 2027, for Design Phase winners announced in 2023 or 2024; and August 10, 2028, for Design Phase winners announced in 2026. Phase 4 Winners Announced: All Phase 4 winners will be announced on or before November 14, 2028.
Eligible Competitors	The submission must be made by an entity (nonprofit, for-profit, or academic institution) that is formed in and maintains a primary place of business in the U.S. with majority domestic ownership and control.

**HeroX URL and
Helpdesk**<https://www.herox.com/SolarDesalination>

B. Executive Summary

The U.S. Department of Energy (DOE) Office of Critical Minerals and Energy Innovation (CMEI) Integrated Energy Systems Office (IESO) is launching the Solar Desalination Prize. This prize aims to accelerate the commercial development of thermal desalination systems powered by low-cost solar-thermal energy. The Solar Desalination Prize gives innovators a pathway from initial concept to a field-tested system that provides clean, accessible water.

C. Prize Overview

The Solar Desalination Prize consists of four consecutive contests that accelerate efforts to develop innovative solar desalination concepts into commercially viable products. Each contest includes a period during which competitors will work to rapidly advance their solutions, culminating in an operational prototype demonstration of their technology at a test facility using high-saline water. The competitors' performance is reviewed using the criteria described in this rules document. The best-performing competitors are awarded prizes and advance to the next contest through all four phases of the competition.

The Solar Desalination Prize offers a total prize pool of \$11,700,000 in cash and \$2,000,000 in vouchers across four prize phases. Three phases of the prize (Innovation, Teaming, and Design) have already been run and completed between 2020 and 2025. Successful competitors were awarded \$50,000 each for winning the Innovation Phase, \$250,000 each for winning the Teaming Phase (plus a \$100,000 voucher), and \$750,000 each for winning the Design Phase (plus a \$100,000 voucher). A total of six competitors have advanced through each of these phases and are eligible to compete in the fourth and final contest of the prize, the Test Phase.

Up to two of the remaining six competitors will receive \$1,000,000 each in cash if they are selected as winners in the Test Phase. In the Test Phase, competitors will build their prototype system to serve a market they have identified. Competitors will then demonstrate the consistent and repeatable operation of their prototype system. The demonstration must cover the full range of modes and input water conditions that they expect the commercial market to require, including transient conditions and start-up and shut-down procedures. Test Phase competitors may submit their results only once, and they must submit within a prescribed time window based upon when they were selected as a winner of the Design Phase. Winners of the Test Phase will be selected based on their ability to meet or exceed their innovation's technical and cost goals, and their ability to identify a commercial customer that has committed to implementing the next logical stage of development of the desalination technology.

Phase	Winners	Prizes
Innovation (concluded)	34	\$50,000 each
Teaming (concluded)	14	\$250,000 each (plus \$100,000 voucher)
Design (concluded)	6	\$750,000 each (plus \$100,000 voucher)

Phase	Winners	Prizes
Test	2	\$1,000,000 each

D. Eligibility

All-Phase Eligibility

This competition is open only to entities (nonprofit, for-profit, or academic institutions) that are formed in and maintain a primary place of business in the United States (U.S.) with majority domestic ownership and control, subject to the following requirements:

- The holder of the online registration account submitting on behalf of a team must be incorporated in and maintain a primary place of business in the U.S.
- Individuals competing as part of a team must be legally authorized to work in the US.
- Private entities must be incorporated in and maintain a primary place of business in the U.S.
- Academic institutions must be based in the U.S. and have federally recognized accreditation.
- DOE employees and DOE support service contractors, employees of sponsoring organizations, members of their immediate families (e.g., spouses, children, siblings, or parents), and persons living in the same household as such persons, whether or not related, are not eligible to compete in the prize.
- Individuals who worked at DOE (federal employees or support service contractors) within six months prior to the submission deadline of any prize competition are not eligible to compete in the prize.
- Federal entities and federal employees are not eligible to compete in any portion of the prize.
- DOE National Laboratory employees cannot compete in the prize.
- 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.
- Individuals participating in a Malign Foreign Talent Recruitment Program (MFTRP)¹ and teams that include such individuals are not eligible to compete. If the competitor passes the first phase/round of the prize competition, they must exercise ongoing due diligence to reasonably ensure that no individuals participating on the prize team are participating in an MFTRP. Consequences for violations of this prohibition will be determined according to applicable law, regulations, and policy. Further, the authorized representative of the prize team must notify DOE within five business days upon learning that an individual on the prize team is or is believed to be participating in an MFTRP. DOE may modify and add requirements related to this prohibition to the extent required by law.
- Entities owned by, controlled by, or subject to the jurisdiction or direction of a

¹Malign foreign talent recruitment program is defined in P.L. 117-167, section 10638(4).

government of a foreign country of concern² are not eligible to compete.

- Entities and individuals identified on one of the following Prohibited Entity lists are not eligible to complete.
 - The list published in the Federal Register by the U.S. Department of War of Chinese military companies (CMC) operating in the U.S. pursuant to section 1260H of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (10 U.S.C. 113 note) (commonly known as the “DoW 1260H list” or the “1260H CMC List”);
 - The list maintained by the U.S. Department of Homeland Security pursuant to the Uyghur Forced Labor Prevention Act (Public Law 117-78); or
 - The Entity List maintained by the Bureau of Industry and Security of the U.S. Department of Commerce and set forth in Supplement No. 4 to part 744 of title 15, Code of Federal Regulations.
 - The list of telecommunications companies of the People’s Republic of China designated under section 889 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115– 232; 41 U.S.C. note prec. 3901) as posing national security risks to the U.S.
- Proposals where the concept will use equipment from any entity named on any of the Prohibited Entity Lists identified above.
- To be eligible, an individual authorized to represent the competitor must agree to and sign the following statement upon registration with HeroX:

I am providing this submission package as part of my participation in this prize. I understand that the information contained in this submission will be relied on by the Federal government to determine whether to issue a prize to the named competitor. 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, complete, and accurate. I understand that any false, fictitious, or fraudulent information, misrepresentations, half-truths, or omissions of any material fact, Federal may subject me to criminal, civil, or administrative penalties or fraud, false statements, false claims or otherwise. (18 U.S.C. § 1001 and § 287, and 31 U.S.C. §§ 3729-3733 and 3801-3812).

I further certify that the team members have been made aware of the Malign Foreign Talent Recruitment Program prohibition [During RTES Office review of the Prize Rules, the RTES Office will recommend whether to include this section or not: and the team

² The term "foreign country of concern" means the People's Republic of China, the Democratic People's Republic of Korea, the Russian Federation, the Islamic Republic of Iran, the Republic of Belarus, or any other country determined to be a country of concern by the Secretary of State, and including countries of risk designated by the U.S. Department of Energy. This list is subject to change. Foreign countries of concern are not the same as Countries of Particular Concern. Countries of Particular Concern is a designation by the Secretary of State, which refers to countries that have engaged in or tolerated “particularly severe violations of religious freedom” as outlined in the International Religious Freedom Act (IRFA) of 1998.

members have complied with their responsibilities to certify they are not party to a Malign Foreign Talent Recruitment Program].

In keeping with the goal of growing a community of innovators, competitors are encouraged to form 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 competition.

Phase 4 Eligibility

- Please see eligibility requirements provided earlier.
- Competitors are only eligible for the Test Phase if they have been selected as winners of the previous Innovation, Teaming, and Design Phases.

II. Background

A. Prize Background

The Solar Desalination Prize is part of the American-Made Program, which is your fast track to energy innovation. Powered by the U.S. Department of Energy, American-Made transforms innovative ideas into real energy solutions through prizes, collegiate competitions, technical assistance vouchers, and opportunities to work with a network of experts.

The goals of this prize are to expand the availability of fresh water by cost-effectively treating challenging saline water using solar-thermal energy, with minimal electricity and conventional energy resources. This prize program seeks to fund innovations that address a broad range of process parameters, including throughput, scale, product-water purity, and the ability to handle feed water with high salt content of greater than 30,000 parts per million (ppm). Competitors will utilize collaborative pathways to rapidly develop ideas into operational desalination facilities over the course of the four phases of the prize competition.

Water purification technologies are an essential part of U.S. infrastructure, providing a critical resource for human health, economic growth, and agricultural productivity. The United States (U.S.) has historically benefited from access to low-cost water supplies, but challenges for freshwater supplies could threaten U.S. economic competitiveness and water security. Expanding the use of nontraditional water sources can help ensure water security in the U.S. and improve the resilience of American infrastructure.³

Many of the largest water resources in the U.S. and around the world cannot be used cost-effectively for municipal or industrial use because they contain high concentrations of dissolved salts. The White House created an interagency framework to support cost-effective, energy-efficient desalination through Executive Order 13956⁴, focusing on technology innovation, infrastructure planning, and workforce development. The White House Office of Science and Technology Policy has identified desalination, or removal of these salts, as part of a national strategy to enhance water security. Current standard technologies, like reverse osmosis are relatively efficient when salt concentrations are comparable to that of seawater and when

³ [The Water-Energy Nexus: Challenges and Opportunities | Department of Energy](#)

⁴ <https://www.govinfo.gov/content/pkg/DCPD-202000775/pdf/DCPD-202000775.pdf>

electricity is readily available, but they cannot handle high-salt water produced from oil and gas wells, concentrated brines, and some industrial and agricultural wastewaters. For pressure-based systems like RO, the higher the salt concentration, the more energy is needed for desalination. Thermal desalination technologies are much more tolerant of high salt concentrations because there is a much weaker relationship between salt concentration and energy required. Thermal desalination is particularly valuable for inland applications where disposing of brine produced through RO is difficult or costly and where zero-liquid discharge may be needed. The purified water can be used for municipal drinking water systems, for agricultural or industrial uses, or to clean contaminated wastewater to allow for low-cost surface discharge.

Many locations in the U.S. that have a high degree of water stress—meaning they come close to draining their annual water store in a typical year—also have abundant solar resources. For example, sunny areas including much of the southwest region of the U.S., Texas, and Florida are at high risk of being unable to maintain sustainable water supplies.⁵

Concentrated solar-thermal energy has been used primarily in concentrating solar-thermal power plants that deliver high-temperature heat—approximately 400°–565° Celsius (C)—to drive steam turbines for electricity generation. Lower-temperature heat from solar energy (below 200°C) can directly drive thermal industrial processes, including systems that separate salt from water through thermally driven processes. Because it is relatively easy to store thermal energy (by storing hot fluids or other materials), solar-thermal energy can provide renewable energy on demand at any time of day. Additionally, solar-thermal power could advance water security at various scales—from small, modular systems easily deployed in remote areas to large, industrial-scale systems that provide communities with reliable water supplies.

The Solar Desalination Prize is designed to accelerate technology innovation through a series of contests to design, develop, and demonstrate desalination systems that use the sun’s power to generate fresh water from salt water. The Solar Desalination Prize seeks to identify the most promising technology concepts; facilitate the formation of collaborative, interdisciplinary teams to advance these technologies; and identify test facilities where competitors can build and validate commercially relevant, operational prototypes of solar-thermal desalination systems.

The program will make it faster and easier for our nation to transform innovative research and ideas into early-stage concepts and then build prototypes for validation. Competitors will not only be working to win cash prizes and other benefits; they also will be connected with mentoring, training, and other services from the American-Made Network to support U.S. water security and widespread, commercial use of solar-thermal desalination facilities.

B. Prize Phases

The Solar Desalination Prize contains four phases—Innovation, Teaming, Design, and Test—to accelerate efforts to develop innovative solar desalination concepts into commercially viable products. Each contest includes a period during which competitors will work to rapidly advance their solutions, culminating in an operational prototype demonstration of their technology at a test facility using high-saline water. The best-performing competitors will be awarded prizes and advance to the next contest. The Innovation, Teaming, and Design Phases were run and completed between 2020 and 2025, and current prize competitors are all currently

⁵ <https://pubs.usgs.gov/pp/1833/pp1833.pdf>

engaged in the Test Phase.

1. Phase 1 – Innovation

In this phase, competitors demonstrated that they identified a novel and feasible concept for a technology that can deliver desalinated water using solar-thermal energy. The innovation can be a solar-thermal desalination system component or an entire system. Successful competitors took steps to determine the technical feasibility, scalability, and other potential benefits of the proposed solution and articulated a credible pathway to commercialization. The competitors who were selected to advance each received \$50,000 and became eligible to compete in the Teaming Phase.

2. Phase 2 – Teaming

In this phase, competitors worked to establish and solidify a complete cross-functional project team that can take a preliminary innovative desalination concept into a fully operational prototype. Successful competitors included innovative technology developers, establish business relationships with key vendors and end users, and identified a possible testing location. The testing location must be capable of hosting a solar-thermal desalination prototype at a scale compatible with the competitor's identified market and relevant water conditions. The competitors who were selected to advance each received \$250,000 in cash and a \$100,000 voucher that could be redeemed at National Laboratories and/or qualified partner facilities in the American-Made Network to further develop their solution.

3. Phase 3 – Design

In this phase, competitors worked to complete a detailed design of their proposed prototype of a solar-thermal desalination facility to the point that they are "shovel-ready" for a site located in the U.S. To advance to the final contest in this competition, competitors were required to prove they have obtained all required documentation and approvals needed to begin construction, and construction can begin almost immediately after receipt of the prize. The competitors who were selected to advance each receive \$750,000 in cash and a \$100,000 voucher that could be redeemed at National Laboratories and/or qualified partner facilities in the American-Made Network to further develop its solution.

4. Phase 4 – Test

In this phase, competitors will build their prototype system that meets the needs of the target market they have identified. Competitors will then demonstrate the consistent and repeatable operation of their prototype system. The demonstration must cover the full range of modes and input water conditions that they expect the commercial market to require, including transient conditions and start-up and shut-down procedures. Test Phase competitors may submit their results only once, and they must submit within a prescribed time window based upon when they were selected as a winner of the Design Phase. Winners of the Test Phase will be selected based on their ability to meet or exceed their innovation's technical and cost goals, and their ability to identify a commercial customer that has committed to implementing the next logical stage of development of the desalination technology.

C. Prize Goal Requirements

Only submissions relevant to the goals of this program are eligible to compete. The prize administrator must conclude that all the following statements are true when applied to your submission:

- The proposed solution is related to the desalination industry.
- Most activities that are described in and support the submission package are performed in the U.S. and have the potential to benefit the U.S.
- The proposed solution represents an innovation that will move the industry or current practices beyond the current state.
- The proposed solution is not dependent on new, pending, or proposed federal, state, or local government legislation, regulation, 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 fundamental technical principles and applicable economic principles.
- The submission content sufficiently confirms the competitor's intent to commercialize early-stage technology and establish a viable U.S.-based business in the near future with revenues that do not solely depend on licensing fees of intellectual property.

Target Markets and Performance Metrics

The purpose of this prize program is to develop solar-thermal desalination systems that advance the state of the art in the desalination market categories listed in the following table.

Enabling cost-effective solar-thermal desalination systems requires more than just improving the efficiency and capital costs of thermal desalination technologies. A low levelized cost of heat (LCOH), derived from the solar collectors and thermal energy storage (TES), is strongly correlated with a low levelized cost of water (LCOW). Additionally, desalination systems are typically on a much smaller scale than systems for other, traditional power generation markets for energy. TES and solar collectors for power generation systems generally support a facility designed for a 30-year life in a permanent location, whereas modular, mobile solar systems may be more beneficial for desalination markets. The TES system, in particular, has a very significant effect on the LCOW, LCOH, and other key performance metrics due to the need, in many potential markets, for desalination systems to operate continuously.

Competitors should identify one or more markets where their proposed innovation has the potential to outperform state-of-the-art technologies and reduce their costs. Competitors in the Innovation Phase who have not yet defined their full system but have identified only an innovative desalination, solar collector, or TES technology should explicitly identify the other components that will need to be integrated during the Teaming Phase, and what cost and performance metrics they expect those systems to meet. All solutions that make it to the Test Phase will be evaluated at each team's identified test site. Competitors are strongly encouraged to use a real solar input for testing but may test with alternative heat sources. If direct solar input is not used, competitors should demonstrate key technologies—like heat exchangers and TES—

that are necessary to integrate solar-thermal energy with desalination. Competitors should be able to simulate the full range of thermal input relevant for a solar-thermal desalination system.

The Solar Desalination Prize seeks innovations relevant to all desalination-related end uses, including generating both potable and nonpotable water while minimizing concentrated brine generation from a variety of inputs, such as seawater, inland brackish water, agricultural drainage, and oil/gas extraction-produced water. Solutions may be located on or off the coastline, be on or off grid, and have a small, medium, or large throughput. All competitors should clearly identify the market and application they are targeting as summarized in the following bullets. For additional information, please refer to the Technical Appendix. Competitors should specifically consider the following factors:

- **Solar Collectors and Thermal Energy Storage:** The efficient collection of solar flux and the ability to store heat on demand should be considered when designing a complete solar-thermal desalination system. Competitors should understand and justify the relevant metrics, and the technical targets that need to be met, to cost-effectively deliver heat in temperature ranges relevant to thermal desalination processes, typically lower than 200°C. For collectors, relevant technical targets may include optical error, concentration ratio, and optical efficiency while minimizing the capital cost of the systems. For TES, competitors should evaluate the efficacy of the heat-transfer fluid and storage medium while also minimizing the direct cost of storage. The ability to store heat and use it on demand optimizes the performance of the desalination system, resulting in lower operational costs and reduced environmental impact.

- **Input Water Quality:** This refers to the quality of the saline or brackish water source that needs to be purified by the proposed desalination technology. When designing their system, competitors should consider all components and contaminants of the raw water input, based on their targeted end use. As part of the Teaming Phase, competitors were encouraged to replace these initial water qualities with more specific water analyses applicable to a specific end use and test location.

- **Product Water Quality:** This refers to the quality of the water produced by the proposed desalination technology. When designing their system, competitors should consider the water-quality criteria for the produced water's intended end use, as defined by relevant regulations, as appropriate. Once a prototype facility site has been identified, the initial water-quality criteria can be replaced with appropriate product-water qualities specific to the end use.

- **Performance Metrics:** Since the performance metrics may vary widely, based on the targeted desalination end use, each competitor must justify its innovation's performance metrics that will be validated in its operational prototype of a solar-thermal desalination system. Successful competitors are likely to consider calculations for LCOW, thermal energy consumption, capital costs, operational costs, recovery ratio, annualized solar-to-desalination thermal efficiency, and impact on the environment, and make a comparison to the state of the art.

A solar-thermal desalination system's design is highly dependent on the type of water it will be used to treat, the available solar resource, and the required quality of the fresh water produced. The following table summarizes the key conditions competitors should consider when designing their prototype. The reviewers will also consider proposed alternative markets and identified commercial opportunities not shown in this table.

For each of these scenarios, competitors must make reasonable assumptions for solar resource, throughput, and grid connectivity.

Proposals for seawater applications must explain how they will be competitive with reverse osmosis, which is relatively inexpensive and energy efficient, and where concentrate minimization is typically not important. The plan for disposing the concentrate that results from the desalination process is extremely important.

Note: As specified in the program goal requirements, the prize does not target desalination technologies that are primarily electrically powered. For example, photovoltaic-powered RO is not of interest.

Potential Markets and Key Design Criteria for Solar-Thermal Desalination Systems

	Input Water Quality	Output Water Quality Standard	Managing Concentrate (Salt and Particles)	Solar Resource
Oil/Gas Product Water	Often very high saline, up to 300,000 ppm	Usable for potable systems; U.S. Environmental Protection Agency requirements for surface discharge	High value for zero-liquid discharge or minimizing concentrate to reduce disposal costs	Potentially high, particularly in California, New Mexico, and Texas
Seawater for Potable Water Systems	30–40,000 ppm	Municipal drinking water	Minimization typically not important	Typically lower than inland applications but potentially high in states like California, Texas, and Florida
Seawater for Industrial Applications	30–40,000 ppm	Not restricted by municipal drinking water requirements, but may have unique requirements depending on industrial process	Minimization typically not important	Typically lower than inland applications, but potentially high in states like California, Texas, and Florida
Brackish Water for Municipal Use: Managing RO Concentrate for Inland Applications	~60,000 ppm (rejected brine from RO)	Municipal drinking water	Minimization extremely important; solar-thermal desalination will probably be used after an initial RO process to minimize disposal costs	Potentially high, particularly in the Southwest
Inland Brackish Water for Industrial Applications	~60,000 ppm (rejected brine from RO)	Not restricted by municipal drinking water requirements, but may have unique requirements depending on industrial process	Minimization extremely important; solar-thermal desalination will probably be used after an initial RO process to minimize disposal costs	Potentially high, particularly in the Southwest

D. Find Help: The American-Made Network

The American-Made Network cultivates resources and builds connections that enhance, accelerate, and amplify competitors' efforts. The objective is to link participants with the people, resources, financing, perspectives, and industry expertise necessary for long-term success.

The network is composed of the following elements:

1. **Prize and network administrator:** National Laboratory of the Rockies (NLR). DOE is administering the Solar Desalination Prize through NLR. NLR will help competitors locate and leverage the vast array of National Laboratories and program resources available to competitors within the Solar Desalination Prize. NLR will also provide opportunities for elements of the network to connect with the competitors, as described in the table below.
2. **Network members:** Network members may provide support with prize challenges. Support may include participant recruitment, event hosting, and more. Network members may engage with prize participants through the American-Made Network and can receive payment for their support as described in the following table. Prize competitors cannot include Network members.
 - o Entities interested in participating as network members can visit the following site for details: <https://americanmadeprogram.org/network>.

Network Recognition	Anticipated Number	Dollar Amounts	Details
Partner	Total of four available	\$25,000 each	Distributed to network members who find a commercial partner and/or private funding that is incorporated into a winning Test Phase submission.
* National Laboratories are ineligible to receive recognition awards.			

3. **Vouchers:** Winning competitors in the Teaming and Design contests will receive vouchers that they may use to fund work at National Laboratories and other approved facilities to accelerate the production, improvement, or validation of prototypes.

III. Phase 4: Test Phase

A. Phase 4 Goal

The Test Phase is the fourth and final contest in the four-contest Solar Desalination Prize. In this contest, competitors will compete on commercial viability (LCOW, financial merits, etc.), performance (efficiency, capacity, water quality, etc.), and other direct and indirect benefits (environmental benefits, wastewater reduction, technology development to address niche markets, etc.). The competitors' real-world results will be evaluated against the plans they developed as part of the Innovation, Teaming, and Design Phases as well as the performance of

their prototype. Additionally, competitors will secure a binding agreement with a partner to fund the ongoing commercial development of the technology validated by the prototype.

B. Phase 4 Prizes

Up to two winners will receive \$1,000,000 each in cash.

C. How to Enter

Submissions to the Test Phase will be accepted on a phased basis with a final deadline to submit based upon when the competitors were announced as winners of the Design Phase. Competitors who were announced as winners of the Design Phase in 2023 or 2024 must submit by August 10, 2027, and competitors announced as winners of the Design Contest in 2026 must submit by August 10, 2028.

Please note that these dates refer to the final deadline to provide all submission materials. To be eligible, competitors must also provide notice of intent to submit at least 60 days in advance of their submission date. The application requirements are discussed in greater detail in Section D.

D. Process Overview

The Test Phase consists of the following steps:

1. **Submit a Letter of Intent:** At least sixty (60) days prior to the date a competitor submits a final submission as specified in paragraph 2, a competitor must submit a letter of intent to the prize administrator indicating their intent to submit for review. Failure to submit a timely letter of intent disqualifies a competitor from further consideration.
2. **Complete an Operational Prototype and Submit:** Competitors complete the installation of their solar-thermal desalination prototype. Competitors will then make their final submission to be considered for the Test Phase prize based upon when they were selected as a winner of the Design Phase (for more details, see Section C). To be eligible, the competitor must also provide DOE and NLR a window during which DOE and NLR may visit the competitor's test site. A visit to a test site is solely within DOE's and NLR's discretion. The competitor must notify DOE and NLR of the opportunity to visit the test site at least 30 days prior to the beginning of the identified window. Reasonable and justifiable schedule changes after notice from the competitor will be accommodated to the extent practicable. Accommodation of changes is solely at the discretion of DOE.
3. **Assessment:** DOE and NLR will attend a test demonstration of the operational prototype and determine whether water samples met or exceeded the validated technical specifications from the Design Contest. If DOE and NLR are unable to attend a test demonstration, DOE will provide the competitor with instruction for an alternate demonstration to replace the site visit assessment. Submissions will be assessed, scored, and selected based on the following concepts:
 - a. **Successful Testing:** Meet or exceed the testing plan from the Design Phase and explain any variances.

- b. **On-Site (or Alternate) Demonstration:** Operate the solar-thermal desalination prototype in the presence of representatives from DOE, NLR, and the committed commercialization partner(s).
- c. **Committed Commercialization Partner:** Demonstrate a firm commitment from a partner to help continue the advancement of your prototype desalination system to the next logical stage of development, with the eventual goal of commercial sales. This could be financial backing for the next stage of technology development, commitment to purchase a product, or investment in the competitor's organization.

The water quality and performance metrics should justify the expected performance of a full-scale unit that might be built in the future. DOE will consider the performance of the prototype unit against these metrics as part of the assessment of the competitor's Test Phase submission package. DOE does not require consolidated test data to support its evaluation while at site, although such data should be provided to DOE to the extent feasible during the site visit. If a competitor's target market has changed from the market described in their Design Phase submission package, the new market and its expected water quality and performance metrics should be thoroughly described in the team's Test Phase submission package.

4. **Winner Notification:** The prize administrator will notify all competitors with the results of the review and request the necessary information to distribute cash prizes to the winner. The prize administrator will then publicly announce the winner. A winner announcement will be made by or before November 14, 2028.

E. What to Submit

A complete submission package for Phase 4 should include the following items:

- 180-second video (publicly accessible)
- Cover page
- Technical narrative providing answers to three questions related to *successful testing, on-site demonstration, and committed commercialization partner*
- Summary PowerPoint slide (publicly accessible)
- Letter of commitment (mandatory)
- Letters of support (optional)
- Final technical report
- Current resumes for all team members
- Transparency of Foreign Connections Disclosure (for Private Entities and Academic Institutions only).

Online Public Video – What is your innovation, in 180 seconds?

Suggested content:

- The real-world problem you have solved that has prevented this solution’s existence
- Show your facility operating and provide a summary of the important technical results
- Discuss your commercial partner and the next steps you plan to pursue after winning the Test Phase.

Post your publicly accessible video online (e.g., YouTube, Vimeo). Be creative and produce a video that conveys the required information in exciting and interesting ways, but do not focus on time-consuming elements that improve only production values (e.g., décor, lighting, and cinematic techniques).

Cover Page – List basic information about your submission

- | | |
|--|--|
| <ul style="list-style-type: none"> • Project title • Short description • Link to your 180-second video online • Key project members (names, contacts, and, if possible, links to their LinkedIn profiles). | <ul style="list-style-type: none"> • Keywords that best describe your solution • (e.g., <i>heat exchanger, heat transfer fluid, solar collector design</i>) • Your city, state, and 9-digit ZIP Code • If applicable, up to three network members that significantly helped you advance your solution and the major items with which they helped. Include a short description of the assistance provided. • Committed commercial partner and other partners (if any). |
|--|--|

Technical Narrative

You should answer each of the three questions detailed in Section F. This is the only scored portion of the Test Contest submission. The content bullets are only suggestions to guide your responses; you decide where to focus your answers. Responses to these three questions must not exceed 10,000 words in total. You may also include supporting images, figures, or graphs integrated into the narrative. The reviewers will score the questions based on the content you have provided in your narrative and your video submission. Content that is over the word or time limit will not be reviewed.

PowerPoint Summary Slide (to be made public)

Create a public-facing, one-slide submission summary that contains technically specific details but can be understood by a nontechnical audience. There is no template, so feel free to present the information as you see fit. Please make any text readable for a standard printout and conference-room projection.

Letters of Commitment (mandatory) and Support (optional)

Competitors must attach letters of commitment in support of Question 3: Committed Commercialization Partner from relevant entities (i.e., end users of the proposed solution or investors in the competitor) as an appendix.

Competitors may also attach one-page letters of support or intent from other relevant entities (e.g., potential users of the proposed innovation). Although they are not scored, letters of support from partners or others that are critical to the success of your proposed solution will provide additional evidence that judges may take into account. Please do not submit multipage support letters.

Final Technical Report

Provide a final report detailing the technical progress made and the key lessons learned for the effort being considered for the Test Phase prize. In addition to summarizing technical milestones and the engineering knowledge that has been gained, competitors should describe the remaining cost and performance challenges that must be retired for commercial acceptance of their technology. If proprietary information is included, the competitor should also provide a redacted version of the report for public release.

All submission materials, except the online public video, should be submitted as a PDF.

If the competitor is unable to submit the water quality or performance metrics of the prototype (or if there are changes between the submission and site visit) the water quality and performance metrics must be submitted no later than the time of notification of the opportunity for the site visit.

F. How We Determine and Award Winners

The prize administrator screens all submissions to determine they are complete and the competitors are eligible. Subject-matter-expert reviewers are assigned to independently score the content of each submission. The reviewers may be composed of Federal and non-Federal subject-matter experts and with expertise in areas relevant to the competition. They will review the competitor's submission package according to the following criteria.

1. Reviewer Scoring

Reviewers will score submissions as follows:

Each bullet listed in the Technical Narrative review criteria for the three questions will receive a score from 0 to 6. The bullet points have equal weight, so questions that have more bullets have a greater influence on the final score. The final score from an individual reviewer equals the sum of the scores for all the bullets. All reviewers' scores will be averaged for a final reviewer score for the submission package. The prize judge will consider reviewer scores when deciding the winners of the contest.

0	1	2	3	4	5	6
strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree

Technical Narrative	
Question 1: <i>Successful Testing</i> – Does the competitor show they have met or exceeded their testing plan from the Design Phase, and did they include a detailed explanation of any variances?	
Suggested content: • Include a detailed description of the results of the testing plan that was provided as part of your Design Contest submission. Explain and justify any process changes or performance deviations from the original performance targets and testing plan. • Compare the performance of the hypothetical full-scale effort (e.g., levelized cost of water, thermal energy consumption in kWh/m³, capital costs, operating costs, recovery ratio, annualized solar-to-desalination	Each statement is scored on a 0-6 scale. • The competitor has met or exceeded the testing plan from the Design Phase. • Deviations from the original performance targets and testing plan are justified and show relevance to a high-impact commercial end use targeted by the competitor.

Technical Narrative	
thermal efficiency) against the full-scale estimate, after considering test results. Justify that the validated performance of the developed technology will have a high impact on U.S. water security challenges.	

Technical Narrative	
Question 2: <i>On-Site Demonstration</i> – Does the operation of the solar-thermal desalination prototype in the presence of representatives from the prize administrator, DOE, and the committed partner(s) show the facility meets or exceeds all critically technical goals?	
Suggested content: - Provide a detailed overview of testing taking place at the site in a manner that will allow DOE staff to observe the critical aspects and performance of the prototype solar-thermal desalination facility. - Provide an update on the status and outcomes of the work funded by the voucher awarded in the Teaming and Design phases.	Each statement is scored on a 0-6 scale. - The site visit agenda allowed the prize administrator and expert reviewers to observe the critical aspects and performance of the prototype solar-thermal desalination facility. - Observations made during the site visit demonstrated all required functions and uses of the team's technology successfully under field operating conditions. - The performance metrics observed during the site visit, such as temperature and flow rates, are in good agreement with the claims made in the submission package.

Technical Narrative

Question 3: *Committed Commercialization Partner* – Has the competitor demonstrated a firm commitment from a partner to advance the prototype solar-thermal desalination system to the next logical stage of development?

Suggested content:

- Describe the path forward from prototype solar-thermal desalination facility to commercially viable product, producing water at market costs. Specifically, detail: a business plan for how the preliminary results shown by the operational prototype solar-thermal desalination facility will be leveraged to move the technology forward, the schedule containing planned key technical milestones with one or more commercial partner(s), and the level of commitment of the commercialization partner(s) as evidenced by letters of commitment or similar.
- Provide details and documentation on the extent of funding in place to continue the commercial development of the prototype solar-thermal desalination facility.
- Provide preliminary designs for the next iteration of the solar-thermal desalination facility that will be pursued in collaboration with the committed partner.

Each statement is scored on a 0-6 scale.

- The competitor has demonstrated a firm commitment from a partner to pursue the next logical step required for the commercial development of the prototype solar-thermal desalination system.

Expert reviewers will also provide comments on the submissions. The prize administrator intends to provide comments to competitors after the winners are announced. These comments are intended to help competitors continue to improve and iterate on their submissions and continued efforts. The comments are the opinions of the expert reviewers and do not represent the opinions of DOE.

2. Interviews

DOE may decide to interview a subset of competitors. The interviews would be held prior to the notification of the winners and would help clarify questions DOE may have. Participating in interviews is not required, and interviews are not an indication of a competitor's likelihood of winning.

3. Final Determination

DOE will designate a federal employee as the judge. The judge will determine the winner(s), taking into account the reviewers' scores and comments (if applicable), application of program policy factors, and the interview findings (if applicable). The judge may determine no competitor is a winner.

4. Winner Notification

Approximately 60 days after the prize competition closes, the prize administrator will notify the winners and request the necessary information to distribute the prize(s).

G. Additional Terms and Conditions

See [Additional Terms and Conditions](#) for additional requirements.

COMPETITORS THAT DO NOT COMPLY WITH THE ADDITIONAL REQUIREMENTS IN APPENDIX A MAY BE DISQUALIFIED.

IV. Additional Terms and Conditions

A. Requirements

Your submission for the prize is subject to the following terms and conditions:

- You must post the final content of your submission or upload the submission form online by 5 p.m. Eastern Time on the prize submission deadline date. Late submissions or any other form of submission may be rejected.
- You must include all the required elements in your submission. The prize administrator may disqualify your submission after an initial screening if you fail to provide all required submission elements. At the sole discretion of DOE, competitors may be given an opportunity to rectify submission errors due to technical challenges.
- Your submission must be in English and in a format readable by Microsoft Word or Adobe PDF. Scanned handwritten submissions will be disqualified.
- Submissions will be disqualified if they contain any matter that, in the sole discretion of DOE is indecent, obscene, defamatory, libelous, and/or lacking in professionalism.
- If you click "Accept" on the HeroX platform and proceed to register for any of the prizes described in this document, these rules will form a valid and binding agreement between you and DOE and are in addition to the existing HeroX Terms of Use for all purposes relating to these prize competitions. You should print and keep a copy of these rules.
- The provisions in the Official Rules document only apply to the prize described here and no other prize on the HeroX platform or anywhere else.
- At the sole discretion of DOE, competitors may be provided an opportunity to fix non-substantive mistakes or errors in their submission packages.
- As part of your submission to this prize, you 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 the information contained in this submission will be relied on by the

Federal government to determine whether to issue a prize to the named competitor. 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, complete, and accurate. I understand that any false, fictitious, or fraudulent information, misrepresentations, half-truths, or omissions of any material fact, may subject me to criminal, civil, or administrative penalties or fraud, false statements, false claims, or otherwise. (18 U.S.C. § 1001 and § 287, and 31 U.S.C. §§ 3729-3733 and 3801-3812).

I further certify that the team and/or organization members have been made aware of the Malign Foreign Talent Recruitment Program prohibition [During RTES Office review of the Prize Rules, the RTES Office will recommend whether to include this section or not: and the team and/or organization members have complied with their responsibilities to certify they are not party to a Malign Foreign Talent Recruitment Program].

B. Federal Verification for Payments

The prize administrator will verify the identity and role of competitors before distributing any prizes. Receiving a prize payment is contingent upon fulfilling all requirements contained herein. The prize administrator will notify winning competitors using provided email contact information for the individual or entity that was responsible for the submission. Each competitor will be required to sign and return to the prize administrator, within 30 days of the date on the notice, a completed Request for ACH Banking Information form and a completed W-9 form (<https://www.irs.gov/pub/irs-pdf/fw9.pdf>). In the sole discretion of the prize administrator, a winning competitor will be disqualified from the competition and receive no prize funds if: (i) the person/entity does not respond to notifications, (ii) the person/entity fails to sign and return the required documentation within the required time period, (iii) the notification is returned as undeliverable, (iv) the submission or person/entity is disqualified for any other reason.

In the event of a dispute as to any registration, 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. All competitors may be required to show proof of being the authorized account holder.

C. Teams and Single-Entity Awards

The prize administrator will disburse a single dollar amount to the designated main point of contact, whether the competitor consists of a single entity or multiple entities. The main point of contact is solely responsible for allocating any prize funds among its member competitors or teammates as they deem appropriate. Neither DOE nor the prize administrator will not arbitrate, intervene, advise on, or resolve any matters or disputes between team members or competitors.

D. Treatment of Submission Materials

The elements of the submission that are designated as public will become publicly available as part of this prize. Therefore, these elements must not include trade secrets or business-sensitive, proprietary, or otherwise confidential information.

If it is necessary to share trade secrets or business-sensitive, proprietary, or otherwise confidential information, it should only be done in an element that is NOT designated as public. Any confidential, proprietary, or privileged information must be marked as described below. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under the Freedom of Information Act or any applicable Federal law or regulation.

The submission must be marked as follows and identify the specific pages containing trade secrets or confidential, proprietary, or privileged information:

“Notice of Restriction on Disclosure and Use of Data: Pages [list applicable pages] of this document may contain trade secrets or confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes. [End of Notice]”

The header and footer of every page that contains confidential, proprietary, or privileged information must be marked as follows: “Contains Trade Secrets or Confidential, Proprietary, or Privileged Information Exempt from Public Disclosure.” In addition, each line or paragraph containing proprietary, privileged, or trade secret information must be clearly marked with double brackets.

DOE, the prize administrator, and any other third-party supporting DOE in the prize competition assume no liability for the public disclosure of any information in the elements designated public and for any unmarked information NOT designated as public.

The entire submission may be viewed by DOE, prize administrator, and judges and reviewers for purposes of the prize competition. By making a submission and consenting to the rules of the prize competition, each competitor grants to DOE, the prize administrator, and any other third parties supporting DOE in the prize competition, an unlimited license to display publicly and to use any part(s) of the submission that are designated as “public” in the Official Rules and any unmarked information in the elements of the submission that are NOT designated as public for any government purpose. This license includes posting or linking to the public portions of the submission on the prize administrator or HeroX submissions, including the prize competition website, DOE websites, and partner websites, and the inclusion of the submission in any other media worldwide. The competitor grants to DOE, the Prize Administrator, and other third parties supporting DOE in the prize competition a limited license to use or disclose any properly marked information, provided that such information is held in confidence and used solely for evaluation purposes.

E. Representation and Warranties

By entering, the competitor represents and warrants that:

1. The competitor’s entire submission is an original work by the competitor but may have used artificial intelligence (AI) to generate parts of the submission in accordance with

article A.15, “Use of Artificial Intelligence.” The competitor has not included third-party content (such as writing, text, graphics, artwork, logos, photographs, likeness of any third party, musical recordings, clips of videos, television programs, or motion pictures) in or in connection with the submission, unless (i) otherwise requested by the Prize Administrator or disclosed by the competitor in the submission, and (ii) the competitor has acquired the necessary rights to use and to authorize others, including DOE, to use the submission, as specified throughout the rules.

2. To the best of the competitor’s knowledge, the use of the submission in the prize, including any use by DOE or the prize administrator, does not and will not infringe upon or violate any rights of any third party or entity, including, without limitation, patent, copyright, trademark, trade secret, defamation, privacy, publicity, false light, misappropriation, intentional or negligent infliction of emotional distress, confidentiality, or any contractual or other rights.
3. All persons who were engaged by the competitor to work on the submission or who appear in the submission in any manner have:
 - A. Provided the competitor their express written consent to submit the submission for exhibition and other exploitation in any manner and in any and all media, whether now existing or hereafter discovered, throughout the world;
 - B. Provided written permission to include their name, image, or pictures in or with the submission (or, if a minor who is not the competitor’s child, the competitor must have the permission of the minor’s parent or legal guardian) and the competitor may be asked by the prize administrator to provide permission in writing; and
 - C. Not been and are not currently under any union or guild agreement that results in any ongoing obligations resulting from the use, exhibition, or other exploitation of the submission.
4. The submission is free of malware.

F. Prize Subject to Applicable Law

All prizes are subject to all applicable Federal laws and regulations. Participation constitutes each competitor’s full and unconditional agreement to these official 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 award is contingent upon the availability of appropriations.

G. Resolution of Disputes

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

Neither DOE nor the prize administrator will arbitrate, intervene, advise on, or resolve any matters between team members or among competitors.

H. Publicity

By making a submission and consenting to the rules of the contest, each competitor grants DOE, the prize administrator, and third parties supporting DOE in the contest the right to publicize the name of the competitor, including the individuals and organizations that make up the competitor.

Winners of these prizes (collectively, “winners”) will be featured on DOE websites.

Except where prohibited by law, winning competitors grant DOE, the prize administrator, and third parties supporting DOE in the prize competition the right to use the competitor, including the individuals and organizations that make up the competitor, names, likeness, photograph, voice, opinions, hometown, and state for promotional purposes across any media worldwide, without further permission, payment, or consideration. Additionally, upon request by the prize administrator, winning competitors agree to provide a written publicity release to document this consent.

I. Liability

Upon registration, all participants agree to assume all risks of injury or loss in connection with or in any way arising from participation in this prize competition. Upon registration, except in the case of willful misconduct, all participants agree to and waive and release 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 competition, whether the claim or cause of action arises under contract or tort.

In accordance with the authority of the judge to run this prize the judge has determined that no liability insurance naming DOE as an insured will be required of competitors to compete in this competition per 15 U.S.C. § 3719(i)(2). It is the responsibility of the competitors to assess the risks associated with their proposed activities and adequately insure themselves against possible losses. Competitors shall indemnify the Federal Government against third-party claims for damages arising from or related to prize competition activities.

J. Records Retention and Freedom of Information Act

All materials submitted to DOE as part of a submission become DOE records and are subject to the Freedom of Information Act. Where necessary, materials should be marked as noted in the [Treatment of Submission Materials](#). Such information will be withheld from public disclosure to the extent permitted by law. Without assuming any liability for inadvertent disclosure, DOE will seek to limit disclosure of such information to its employees and to outside reviewers when necessary for review of the application or as otherwise authorized by law. This restriction does not limit the Government’s right to use the information obtained from another source.

Competitors will be notified of any Freedom of Information Act requests for their submissions in accordance with 10 C.F.R.1004. Competitors may then have the opportunity to

review materials and work with a Freedom of Information Act representative prior to the release of materials. DOE does intend to keep all submission materials private except for those materials designated as “will be made public.”

However, as outlined in [Requirements](#) and [Records Retention and Freedom of Information Act](#), DOE has unlimited rights in unmarked or improperly marked information and has limited rights to use properly marked information for evaluation purposes only.

K. 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 competition unless you choose to receive updates or notifications about other prize competitions or programs from DOE on an opt-in basis. DOE is not collecting any information for commercial marketing.

L. 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 failure, or any other factor beyond DOE’s reasonable control impairs the integrity or proper functioning of the prize, as determined by DOE in its sole discretion, DOE may cancel the prize. Any performance toward prize goals is conducted entirely at the risk of the competitor, and DOE shall not compensate any competitors for any activities performed in furtherance of this prize.

Although DOE may indicate that it will select up to several winners for each prize, DOE reserves the right to only select competitors 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 competitors to be winners and will award no prize money.

All applications submitted to DOE are subject to a due diligence review.

DOE may conduct a research, technology, and economic security (RTES) due diligence review, using government resources, of the competitor and project personnel for potential risks of undue foreign government influence. DOE may contact the competitor and/or proposed project team members for additional information to inform the review. This review is conducted separately from the technical merit review. The RTES due diligence review may result in the submission being disqualified from the prize competition. This RTES due diligence review, and potential disqualification, can occur at any time during the prize competition. Consistent with section 4(e) of the Presidential Memorandum on United States Government-Supported Research and Development National Security Policy-33 (NSPM-33), DOE may share information regarding the risks identified as part of the RTES due diligence review process or monitoring with other Federal agencies. A disqualification based on an RTES due diligence review is not appealable.

M. Program Policy Factors

While the scores of the expert reviewers will be carefully considered, it is the role of the prize judge to maximize the impact of prize funds. Some factors outside the control of

competitors and beyond the independent expert reviewer scope of review may need to be considered 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 winners:

- The extent to which a project demonstrably advances the policy priorities of DOE and the administration
- The project's geographic diversity and potential economic impact
- Whether the use of additional DOE funds and provided resources are nonduplicative and compatible with the stated goals of this program and the DOE 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 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 supports complementary DOE-funded efforts or projects, which, when taken together, will best achieve the goals and objectives of DOE
- The degree to which the submission expands DOE's funding to new competitors and recipients who have not been supported by DOE in the past
- The degree to which the submission enables new and expanding market segments.

N. National Environmental Policy Act Compliance

DOE's administration of this prize may be subject to the National Environmental Policy Act (NEPA) (42 U.S.C. § 4321, et seq.). NEPA requires Federal agencies to consider the environmental effects of certain proposed actions as part of an agency's decision-making processes. NEPA applies when a proposed action constitutes a "major Federal action"; actions with no or minimal Federal involvement, e.g., where a Federal agency cannot control the outcome of the action, are not considered "major Federal actions" (42 U.S.C. § 4336e(10)(B)(i)). For additional background on NEPA, please see DOE's NEPA website at <http://nepa.energy.gov/>.

While NEPA compliance is a Federal agency responsibility and the ultimate decisions remain with the Federal agency, if DOE determines that this prize is subject to NEPA, all participants in this prize will be required to assist in the timely and effective completion of the NEPA process in the manner most pertinent to their participation in the prize competition. Participants may be asked to provide DOE with information on their planned activities such that DOE can conduct a meaningful evaluation of the potential environmental impacts.

O. Use of Artificial Intelligence

Use of generative artificial intelligence (AI) technology in the development of a competitor's prize submission is not prohibited. Competitors must indicate in the submission (not included in the word count) the extent to which, if any, generative AI technology was used and how it was used to develop their submission (including all submission elements described in [What to Submit](#)). Competitors are responsible for the accuracy, authenticity, and authorship representations of their submission, including content developed with the assistance of

generative AI tools. Reliance on generative AI may introduce significant risks, including, but not limited to, research misconduct resulting from fabrication, falsification, or plagiarism when proposing, performing, or reviewing research, or in reporting research results.

P. Definitions

Prize administrator – The prize administrator means both NLR and IESO. When the prize administrator is referenced in this document, it refers to staff from both NLR and IESO. Ultimate decision-making authority regarding prize matters rests with the Director of the Office of Critical Minerals and Energy Innovation.

Voucher Funding – Vouchers are part of the prize and may only be used at DOE National Laboratories or with American-Made Network members. 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 competitor.

Q. Return of Funds

As a condition of receiving a prize, competitors agree that if the prize was made in error, or 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 noncash prizes be returned to the government.

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