AMERICAN-MADE SOLAR PRIZE

Executive Summary

The American-Made Solar Prize is designed to accelerate and sustain American solar innovation through a series of prize competitions and the development of a diverse and powerful support network that leverages national laboratories, energy incubators, and other resources from across the United States.

Please note: This executive summary is not the official rules document for the American-Made Solar Prize. This document makes no promises, warrantys or any other binding agreement to compensate any party for any consideration. This document is informational only in nature.

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INTRODUCTION

New energy technologies have begun to reshape the national and global energy landscape. Advanced electrification, digitization, and deployment of grid-connected distributed energy assets are changing the energy industry. The United States has been at the forefront in this transformation, and as technologies, markets, service, and capital providers have evolved over the past decade, there is a reinvigorated entrepreneurial interest across all facets of the nation's energy system.

However, domestic manufacturing of solar technologies has continued to decline, impeding innovation that has been created in America from being produced in America. This decline has negatively impacted job and economic benefits created by these innovations, while weakening domestic supply chain infrastructure, competitiveness, and national security. U.S.-led energy research and development efforts continue to identify and lay the groundwork for exploring many of the most advanced energy technologies in the world. New and existing efforts that create and support advanced manufacturing solutions must now come together, re-establishing U.S. manufacturing leadership to drive down costs and ensure that the nation leads the world in energy production and innovation.

To meet this challenge, the U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy (EERE) is launching the American-Made Solar Prize.

The prize is a new program structure that is designed to strengthen and scale critical connections that accelerate and sustain American innovation through two intertwined tracks: prize competitions and the establishment of a structured approach to bringing diverse resources, such as DOE's national laboratories, business incubators, and prototype fabrication facilities together under one umbrella: the American-Made Network. This approach is designed to be flexible, scalable, and to include diverse resources extending beyond solar to other technology domains and sectors. Instead of investing in one-of-a-kind solutions or scaling "safe-bet" approaches with dated technologies, this program will apply a resource-multiplying approach that not only invests in multiple new innovations but also creates a foundation for expanding support for future manufacturing growth. This will simultaneously enable the rapid development of technology and strengthen critical connections for commercialization.

This network-reinforcing approach combined with innovation contests will create an ever growing pool of resources and enable multiple pathways to success. Each contest cycle creates an opportunity to advance disruptive solutions. While global competitors are spending their resources scaling legacy technology, this program seeks to develop the next generation of commercially viable solutions, thus planting the seeds for a U.S. manufacturing renaissance.

The American-Made Solar Prize, also referred to as the Solar Prize, will spur innovation addressing tough problems facing the solar energy sector broadly, and technology manufacturing specifically. Spearheaded by the Solar Energy Technologies Office (SETO) within EERE and in partnership with the National Renewable Energy Laboratory (NREL), the Solar Prize

is a series of three progressive competitions that will incentivize the nation's innovators and entrepreneurs to rapidly discover, research, iterate, and deliver new solutions to market that will expand solar manufacturing in the United States. This new, scalable approach to rapid product development not only provides cash prizes, but also activates America's energy incubators, investors, universities, 17 national laboratories, and others to help participants achieve their goals.

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 ready for validation. Competitors will not only be working to win cash prizes and other benefits, they will be connected with mentoring, training, and other services from the American-Made Network community, resulting in long-term success for participants and U.S. manufacturing.

A TWO PRONGED APPROACH:

This program consists of two parallel and integrated features: the ***Ready! Set! Go!*** **Contests** and the **American-Made Network.**

Competitors in the *Ready! Set! Go!* Contests will participate in three escalating challenges. The contests will provide cash prizes and other benefits and will incentivize driving innovations from idea to pilot testing in less than one year through an accelerated schedule.

Development of The American-Made Network grows in parallel with the contests and will amplify competitors' efforts by connecting them with DOE's national laboratories and their world-class research facilities and experts; and a private sector stakeholder community that is already actively assisting entrepreneurs to bring innovative ideas and concepts to market. This community includes incubators, investors, philanthropists, fabrication facilities, experts, and seasoned industry leaders, all of whom will provide technical insight, marketing expertise, product validation, and other support. Throughout the competition, these diverse elements are labeled "Connectors" and will make up the key components of the network.

The contests and the American-Made Network will bring connections, resources, and funding to accelerate the cycles of learning from years to weeks. The program will reenergize innovation in U.S. solar energy and manufacturing and reassert the country's global leadership in next generation technologies.

CONTESTS: *READY! – SET! – GO!*

The ***Ready!***, ***Set!*** and ***Go!*** Contests will fast-track efforts to identify, develop, and test disruptive solutions to solar industry needs. Each stage will have a 90-day performance period when participants work to advance their solutions. DOE invites anyone, individually or as a team, to compete to transform a conceptual solution into product reality.

The three contests:

1. ***Ready!* Contest** – Competitors will demonstrate that they have identified and taken action to develop an impactful idea or solution that will address a critical need for the solar industry. They will also propose a path to develop a proof of concept. Winners will receive up to $50,000 in cash and will then be eligible to compete in the *Set!* Contest and *Go!* Contest.[1] Any person or team can submit a package to compete in the *Ready!* Contest.[2] A panel of expert judges from industry, national labs, and government will evaluate submissions.

2. ***Set!* Contest** – Competitors will work to substantially advance their technology solution toward a viable and promising proof of concept. They must show that not only will their proof of concept solve an important problem in the solar industry, but it will also have significant demand if the concept comes to market. It is also expected that competitors make significant progress toward developing a mechanism that can validate and pilot test their solution. Winners will receive up to $200,000 in cash and up to $75,000 in vouchers that may be redeemed at national labs and qualified fabrication facilities to further develop their solution. Winners of the *Set!* Contest will be selected by a panel of judges during a national demo day event.

3. ***Go!* Contest** – Competitors work to substantially advance their solution from proof of concept to a refined prototype and find a partner to perform a pilot test of the prototype solution. Winners will receive up to $500,000 in cash and up to an additional $75,000 in vouchers redeemable at national labs and qualified fabrication facilities. Winners of the *Ready!* Contest and *Set!* Contest are eligible to compete in the final *Go!* Contest where overall contest winners will be chosen by a panel of judges after a live demo day event.

This set of three contests offers a total of $3 million in cash prizes and $525,000 in vouchers.

Contest Funding:

Contest	Winners	Prizes
1. *Ready!*	20 to 40	$1,000,000 distributed equally with cash prizes ranging from $25,000 to $50,000 per winner
2. *Set!*	5 to 10	$1,000,000 in cash and $375,000 in vouchers distributed within a range of $100,000 to $200,000 in cash and $37,500 to $75,000 in vouchers per winner
3. *Go!*	2	$500,000 in cash and up to $75,000 in vouchers per winner

1 All cash prize amounts are subject to change.
2 Competitors must legally reside in the United States. Further eligibility requirements will be released in the rules document.

AMERICAN-MADE NETWORK

The American-Made Network will cultivate resources and build connections that enhance, accelerate, and amplify the efforts of the competitors. The objective is to link participants with ideas, people, resources, financing, and relevant industry expertise, all of which are necessary for long-term success.

The network is comprised of the following elements:

1. **Prize and Network Administrator: the National Renewable Energy Laboratory** – The DOE has partnered with the National Renewable Energy Laboratory (NREL) to administer the American-Made Solar Prize. NREL, as the administrator, will help competitors locate and leverage the vast array of national lab resources. NREL will also connect elements of the network with the competitors as described below.

2. **Ideation Crowdsourcing Platform**: Through a publicly available online portal, the solar industry will be invited to submit industry-relevant problems and possible solutions. This platform will highlight insights from people with diverse experiences, skills, and perspectives. Anyone can participate in ideation by submitting problem and/or opportunity statements. The solar community can share feedback by commenting on postings. This new platform for open communication will connect stakeholders within the industry in ways that were not previously available to bring new ideas to light. Competitors are encouraged to track posted problems and devise solutions as a basis for framing *Ready!* Contest submissions. Potential competitors are also welcome to use the platform to explore and refine an existing idea.

3. **Facilities**: National laboratories, and other fabrication facilities will work with winning competitors to accelerate the production, improvement, or validation of prototypes through use of facility vouchers. National laboratories and other interested facilities will be invited to sign up for notifications of voucher partnering opportunities.

4. **Connectors**: Connectors are entities capable of helping competitors navigate the innovation process and identify, recruit, and support contest participants. Connectors can be incubators, universities, think tanks, industry groups or any enabler seeking to help competitors win by performing support actives such as:

    - Attracting a diverse range of talented individuals to become contest competitors;
    - Helping competitors refine their innovations, develop business plans, work with mentors, and connect with investors and industry partners;
    - Raising non-federal funding to support this program and its participants;
    - Providing in-kind resources, tools, and facilities to accelerate competitors' abilities to innovate, test, and refine their solutions while reducing technology and business risks;
    - Connecting competitors to regional prototyping and manufacturing expertise, facilities, and experts.

Connectors who support participants that go on to win any of the *Ready! Set!* or *Go!* Contests will be financially rewarded based on the table below.

Connector Funding:

Anticipated Number of Awards	Dollar Amounts	Details
Up to 25	$25,000 pool	Distributed to Connectors to recruit participants through targeted outreach and events leading up to the *Ready!* Contest submission deadline.
Up to 40	$100,000 pool	Distributed to Connectors for recruiting a winning competitor into in the *Ready!* Contest.
Up to 12	$70,000 pool	Distributed to Connectors that mentor competitors and facilitate partnership agreements of *Set!* Contest and *Go!* Contest winners.
3	$200,000 pool	Distributed proportionately to the top three Connectors that raise the most private capital in support of the program.

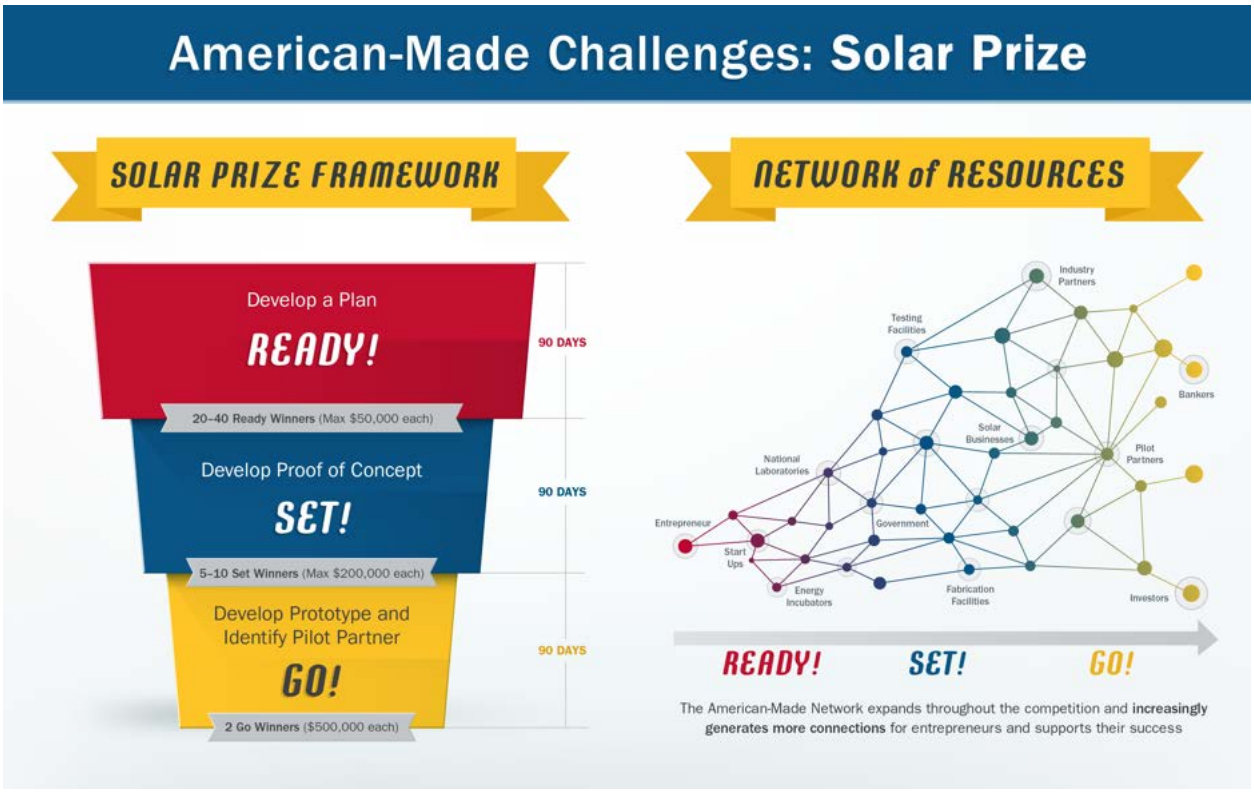
Entities interested in participating as a Connectors will be invited to sign up for notifications of Connector partnering opportunities.

5. **Power Connectors**: A subset of Connectors will be selected to play a more substantial role in the competition and receive funds to expand and amplify DOE and NREL's efforts. Each selected Power Connector will be eligible to receive a contract with NREL valued at up to $100,000 with a supplemental $25,000 if selected to host a national demo day. Not only will these stakeholders work to identify talent and support participants in the *Ready!*, *Set!*, and *Go!* Contests, they will partner with NREL to envision and execute a long-term sustainable strategy for scaling the American-Made Challenges Contests. Power Connectors will be rewarded for efforts that achieve:

    - Increasing the number of new, high-quality competitors;
    - Expanding the network of partners, resources, and tools;
    - Increasing the diverse set of funding sources;
    - Producing engaging and well-attended national demo day showcases;
    - Expanding the scope of manufacturing and technological challenges addressed by the program;
    - Repeated support of contests with an increasingly robust American-Made Network and expanded funding from non-governmental sources.

UP FOR THE CHALLENGE

The American-Made Solar Prize is designed to strengthen and scale critical connections that accelerate and sustain American solar innovation through a series of prize competitions and the development of the American-Made Network. The program will make it faster and easier for our nation's entrepreneurs to transform leading-edge research and ideas into early-stage product concepts and prototypes ready for validation and pilot testing.



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