

Over 700 Student Teams Designing Buildings of the Future

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Research Vision

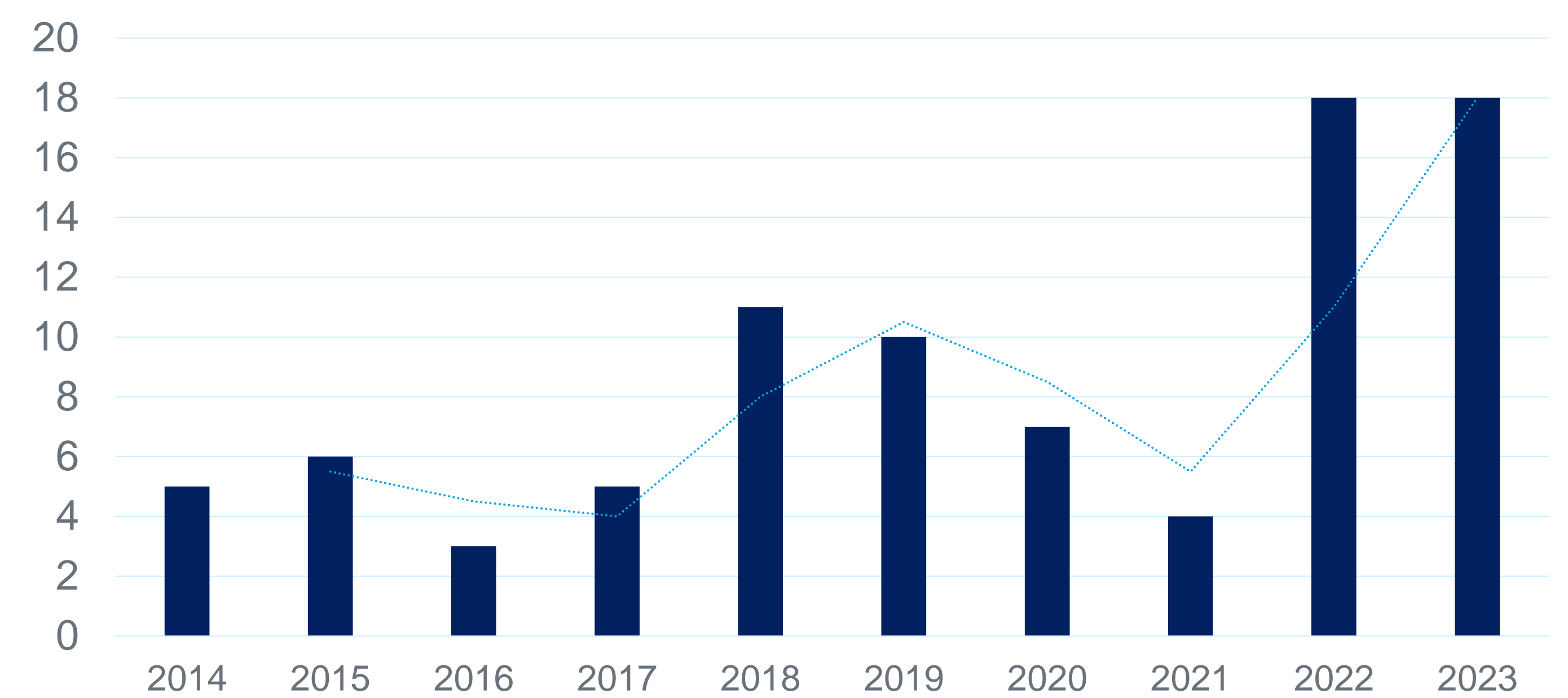
The U.S. Department of Energy Solar Decathlon® prepares innovators to design high-performance, low-carbon buildings through hands-on collegiate competitions, professional continuing education, and high school programs. Teams that compete in the annual Solar Decathlon Design Challenge create residential or commercial building designs over one or two semesters.



Photo by Werner Slocum



Number of Participating Minority-Serving Institutions: 2014 – 2023



Project Objective

The U.S. Department of Energy (DOE) Solar Decathlon® Design Challenge focuses to support educational programs in training the next generation of building design professionals.

Solar Decathlon's 10 Contests aim to transform the building industry by challenging student teams to think beyond a zero energy ready building and address complex real-world issues like:

- energy insecurity, food systems, waste streams, climate change, carbon emissions, inequity, and social inequality

Design Challenge Competition

- ✓ Inspired over **5,000 students**
- ✓ Involved 218 **collegiate institutions** from **32 countries** and **47 U.S. states**
- ✓ Over **300% growth** in participation since program inception
- ✓ A network of more than **1,000 industry partners**
- ✓ Provided student effective **building science curriculum** enhancement
- ✓ 25% of Design Challenge projects focused on **retrofit or renovation** of existing buildings

“This hands-on experience is the best kind of learning and has advanced our capabilities across all of the planning, design, and construction fields in our college.”

Dean David Ferguson,
R. Wayne Estopinal
College of Architecture
and Planning, Ball State
University



On June 9, 2022, the Solar Decathlon was awarded with the **Malcolm Lewis IMPACT! Award from the U.S. Green Building Council** and was named a *“transformational industry program”*.

Design Challenge Solar Technology Highlights

On-site photovoltaics (PV) and community solar for residential home in native Alaskan village



On-site PV and solar water heating on floating cabins at a girl scout camp



Bifacial PV in multifamily building



Building-integrated photovoltaics (BIPV) on office building



Solar Decathlon—Building Impact for 20 Years

1,186 views Jan 19, 2022 The U.S. Department of Energy Solar Decathlon® turns 20 in ...more



U.S. DEPARTMENT OF ENERGY

Solar Decathlon
Design Challenge

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