

FY 2023 Fast Facts



• Top NSF-funded Academic Institutions for FY 2023

University of Maine **\$17,742,000**

Bowdoin College \$2,278,000 University of Maine at Farmington \$636,000

• NSF By The Numbers

The U. S. National Science Foundation (NSF) is an <u>\$9.06 billion</u> independent federal agency created by Congress in 1950 to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense. NSF's vital role is to support basic research and researchers who create knowledge that transforms the future.

DID YOU KNOW? NSF has funded the work of **261** Nobel Prize winners over 75 years.





Expanding the Frontiers of Science

STORM is an NSF Research Infrastructure Improvement Track-2 Focused Established Program to Stimulate Competitive Research collaboration award which focuses on data-driven approaches for secure electric grids in communities disproportionately impacted by climate change and related severe weather, such as hurricanes, blizzards, flooding and rapid shifts in temperature. The collaboration involves the jurisdictions of Maine (through the participation of the **University of Maine system**), Alaska, South Dakota and Puerto Rico. Research and workforce development objectives are built around three intersecting themes: (1) engagement of underserved communities in local climate change solutions and knowledge translation for microgrid design; (2) improvement of power grid resilience in underserved communities through accelerated Big Data modeling, estimation and secure control frameworks; and (3) development of regionally relevant cyber-physical research infrastructure for studying the community-engaged, data-driven operation of power grids. Project partners include school districts, Indigenous tribes, municipalities, electrical utilities/cooperatives, nonprofits, start-up and established companies and federal laboratories, including Sandia National Laboratory, Pacific Northwest National Laboratory and the National Renewable Energy Laboratory.

STEM Education and Broadening Participation

According to the U.S. Bureau of Labor Statistics, industries will need to fill nearly 3.5 million science, technology, engineering and mathematics jobs by 2029. In addition, there is a growing disconnect between what STEM students learn in college and what employers expect new graduates to be able to do; some employers find recent graduates lack soft skills like problem solving, critical thinking and written and oral communication, while others find students are unfamiliar with the practical and technical skills needed for their day-to-day work. Through the NSF Enabling Partnerships to Increase Innovation Capacity program-funded project EmpowerEd, the **University of Maine at Farmington** and collaborating institutions are building relationships with industry experts and government agencies to find out what skills and knowledge are needed for STEM jobs. The cohort uses this information to modify and enhance college courses and curricular structure with industry needs in mind to ensure students are prepared for jobs right out of college. The project also provides skills training for faculty to prepare instructors to teach enhanced course content and creates multiple degree pathways to support a diversity of students.



Regional Innovation Engines

U.S. National Science Foundation Regional Innovation Engines (NSF Engines) Development Awards help organizations create connections and develop their local innovation ecosystem within two years to prepare a strong proposal for becoming a future NSF Engine. The program seeks regional teams rooted within industry, academia, government, nonprofits, civil society and communities of practice to catalyze and foster innovation ecosystems across the U.S. to advance critical technologies, address national and societal challenges, promote economic growth and job creation, spur sustainable regional innovation and nurture diverse talent.

To stay in the loop about future funding calls and opportunities to engage, sign up for the NSF Engines newsletter.

EPSCoR

COMPETITIVE RESEARCH | Maine is one of 28 U.S. states or territories under the <u>NSF Established Program to Stimulate</u> <u>Competitive Research (EPSCoR)</u>. **\$7,125,997** in awards have been made to Maine academic institutions through EPSCoR in FY 2023. For more information, visit Maine's EPSCoR state web page.

NCSES

According to the <u>NSF National Center for Science and</u> <u>Engineering Statistics (NCSES)</u>, which is housed in NSF, 44% of science, engineering and health doctorates conferred in Maine are made in life sciences. <u>Visit Maine's science and engineering</u> <u>state profile to learn more!</u>

35.36%	of Maine's higher education degrees are
	concentrated in S&E fields.

- **3.83**^w of Maine's workforce is employed in S&E <u>occupations.</u>
- **4.48**^{*} of Maine's <u>total employment is attributable</u> <u>to knowledge - and technology - intensive</u> <u>industries.</u>

Learn More

CHIPS & SCIENCE – The CHIPS and Science Act's investments in the U.S. National Science Foundation will help the United States remain a global leader in innovation. Implementation of this legislation will be key to ensuring that ideas, talent and prosperity are unleashed across all corners of the nation. For more information, please visit the NSF CHIPS and Science website.

RESEARCH SECURITY – NSF is committed to safeguarding the integrity and security of science and engineering while also keeping fundamental research open and collaborative. NSF seeks to address an age of new threats and challenges through close work with our partners in academia, law enforcement, intelligence and other federal agencies. By fostering transparency, disclosure and other practices that reflect the values of research integrity, NSF is helping to lead the way in ensuring taxpayer-funded research remains secure. To learn more, please visit the NSF Research Security website.

CONNECT WITH NSF – For more information on NSF's impact in your state, please contact the NSF Office of Legislative and Public Affairs at <u>congressionalteam@nsf.gov</u>.