

State News for NSPE Members

Proposed Facility to Make Puerto Rico Leader in Ocean Tech

A major government-led project has been proposed to make Puerto Rico a world leader in ocean thermal energy conversion (OTEC), and to revitalize local economic growth. The Puerto Rico Ocean Technology Complex (PROTech) initiative would focus on OTEC, which utilizes deep ocean waters, and an air conditioning system for the required facility. Additionally, byproducts of the process can be used in manufacturing other products, such as food components, cosmetics, and bottled water.

The OTEC facility would be the world's first large-scale plant of its kind, with a capacity between 5-10MW, according to *Power Engineering International*. This would make Puerto Rico a global leader in the technology. The government projects the project could provide considerable economic and research opportunities.

Puerto Rico's east-southeast coastline and favorable ocean floor conditions off the coast made it the ideal location for the complex. The initiative was prompted by destruction from Hurricanes Irma and Maria in September 2017, according to the project [roadmap](#). The complex would cost an estimated \$120 million, with at least half earmarked for the OTEC facility.

Repairing and Safeguarding the Arecibo Observatory

Engineers have been working to restore the Arecibo Observatory, the world's strongest radio space telescope and an iconic Puerto Rican landmark, which was seriously damaged in August.

A cable securing its radio antenna snapped for unknown reasons, leaving a 100-foot gash in the 18-acre reflector dish. Engineering design and structural repairs are part of the ongoing effort, in addition to cable buckling studies, the creation of a safety assessment plan, forensic analysis, and the installation of a facility

monitoring system.

The observatory, owned by the National Science Foundation and operated by the [University of Central Florida](#), also suffered significant damage from Hurricane Maria in 2017, after which two grants of more than \$14 million covered repairs and upgrading. This incident was unrelated to that damage.

The facility is famous for the discovery of the first Earth-like planet in our solar system and for substantial astronomical research over the years, including a study that led to the 1993 Nobel Prize in physics for the discovery of a binary pulsar and the first evidence of gravitational waves by Russell Hulse and Joseph Taylor.

Are You the Next Federal Engineer of the Year?

Honoring the commitment of federal engineers to innovation and service is the hallmark of the [Federal Engineer of the Year Award](#). Nominations for the award, which attracts participation from more than a dozen federal agencies, are open until **October 31**.

The FEYA ceremony is scheduled for February 18, 2021, at the National Press Club in Washington, D.C. Tickets will be available for sale in January and [sponsorship opportunities](#) are available.

[Apply or nominate a worthy engineer today.](#)

Stay up to date on legislative issues through the [NSPE Advocacy Center](#).

NSPE President Warns Against Broad-Brush Licensing Reform



NSPE President Tricia Hatley, P.E., F.NSPE, recently challenged an opinion piece that advocates making temporary licensing deregulation permanent, measures that were enacted in response to the COVID-19 pandemic.

In a letter to the editor of the *Oklahoman*, Hatley warns that efforts to weaken licensing, however well-intentioned, make no distinction for highly complex, technical professions. This is a critical distinction that broad-brush proposals like those referenced in the article fail to make—and puts thousands of lives at risk in Oklahoma and elsewhere.

She also states that professions like engineering, architecture, accounting,

landscape architecture and surveying are responsible for the safety of our physical spaces and the integrity of our financial systems. Because of this, they are required to meet rigorous standards based on education, experience, and examination to demonstrate a minimum qualification level.

[Read more.](#)

An Adventure to the Moon with Future City

Future City is a project-based learning program where middle school students imagine, research, design, and build cities of the future. This year's Future City theme is "Living on the Moon." Teams will be challenged to design a lunar city and provide examples of how their city uses two moon resources to keep citizens safe and healthy.



Due to COVID-19, Future City [transitioned this year's program into a virtual format](#) to offer impactful volunteer opportunities you can do from the comfort of your home or office.

Inspiring the Next Generation

Kay Bailey is a senior research and development engineer currently working on an innovative mechanical device that relieves back pain and pressure. She knows firsthand the added challenges in academia—and professional settings—when few people look like you. "When I was a middle school student, I didn't see many examples of African Americans doing engineering," she says.



This inspired Kay Bailey to volunteer as a Future City mentor in a predominantly African American school in Milwaukee. "I wanted to do whatever I could to show these students that it's okay to be interested in engineering. Right away I could tell Future City would be a great way to get involved."

Over the last two years, Bailey has loved working with these young scholars. Sometimes she helps them shape their creative ideas or explains STEM concepts, and other times they simply want to hear about what she is working on at her job. "I want these young people to be encouraged to pursue whatever they want."

If, like Kay Bailey, you're interested in inspiring the next generation, you can sign up to be a mentor by [clicking here](#) or email Info@FutureCity.org with any questions. This year, the program (including mentoring) will be virtual.

Upcoming Webinars: Roundabout Design Safety, the Engineering Team



NSPE's **PE Institute** helps members stay current in the profession, earn PDHs, and advance in their careers through webinars on important topics. The webinars are held at 2:00 p.m. – 3:00 p.m. EST at a member price of \$99 (\$129 for nonmembers).

October 28

[Put Me in Coach! The Engineering Team from Concept to Completion](#)

Within the construction industry, engineering-based decisions are made by professional engineers closely engaged with technicians. Working as an efficient team, a project moves smoothly and is successfully completed. A panel of PEs and technicians will share engineering best practices and approaches to overcoming technical challenges.

This webinar is **FREE** for members and non-members.

Presenters: Kent D. Dvorak, P.E., Chip Hollis (moderator), William Kenneth Johnson, Jr., P.G., Shannon Looney P.E., and John W. Quidley S.E.T.

November 2

[Canon 1, NSPE Code of Ethics for Engineers: "Hold paramount the safety, health, and welfare of the public"](#)

This webinar will introduce you to four of the current members of the [NSPE Board of Ethical Review](#) (BER). Discussion will focus on four ethics cases that illuminate multiple aspects of Canon 1, to "hold paramount the safety, health and welfare of the public." These cases are personal favorites selected by each BER member from the more than [600 opinions](#) the BER has published since the late 1950s.

Presenters: Mark Dubbin, PE, FPE, Jeffrey H. Greenfield, Ph.D., P.E., BCEE, F. NSPE, David Kish, Ph.D., P.E., William D. Lawson, P.E., Ph.D., F. NSPE

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