

## State News for NSPE Members

### NG-16 Cygnus Spacecraft Named After Astronaut Ellison Onizuka

Kona's own homegrown hero, the late astronaut Ellison Onizuka, is being honored by having a spacecraft named after him. The S.S. Ellison Onizuka is a NG-16 cargo delivery mission shuttle serving the International Space Station, according to the *West Hawaii Today* article.

Northrop Grumman Corporation announced on July 13 that it was proud to name the NG-16 Cygnus spacecraft after Ellison Onizuka. It is the company's tradition to name each Cygnus spacecraft after an individual who has played a pivotal role in human spaceflight. Onizuka was selected in honor of his status as the first Asian American astronaut to reach space.



(Credit:NASA)

Onizuka's NASA career began in January 1978, when he was selected for the astronaut program. Completing his training in August 1979, he went on to work on orbiter test and checkout teams, as well as launch support crews at the Kennedy Space Center in Florida. His first spaceflight experience came on Jan. 24, 1985, when he flew as a mission specialist aboard the Space Shuttle Discovery for STS 51-C—the first space shuttle mission for the Department of Defense.

Onizuka, who spent nearly his entire life flying in air and in space, lost his life

during the STS 51-L mission when the Space Shuttle *Challenger* exploded 73 seconds after launch on January 28, 1986.

[Read more.](#)

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## **District Court Sides with Plaintiffs in Maui Injection Wells Case**

A US District Court judge has once again sided with environmental groups in a legal battle with Maui County over its use of injection wells in West Maui, according to a *The Maui News* article.

Judge Susan Oki Mollway of the District of Hawaii issued an order on July 15 saying that Maui County "must obtain a permit under the Clean Water Act consistent with the analysis established by the Supreme Court."

The case began when several environment groups filed a lawsuit in 2012 over the injection wells, saying that the effluent from the Lahaina Wastewater Reclamation Facility has been reaching the ocean and impacting coral reefs and sea life.

In 2014, Judge Mollway ruled against the county, which then appealed to the 9th Circuit Court of Appeals. The court agreed with Mollway in its ruling in 2018. The county refused to settle the case and took it to the Supreme Court, which heard arguments in 2019 and issued a ruling in 2020.

The county had argued that the discharge of treated wastewater from injection wells does not require permits under the Clean Water Act because pollutants do not flow directly into the ocean but rather indirectly through groundwater. However, in a 6-3 vote, the Supreme Court said that the discharge of polluted water in the ground, rather than directly into nearby waterways, does not relieve an industry of complying with the Clean Water Act, and remanded the case back to the lower courts.

[Read more.](#)

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## **States' Road Usage Charge Programs May Offer Model for Federal System**

Road usage charge initiatives at the state level can offer models for a federal program, which should be formulated sooner rather than later, according to experts gathered at a transportation funding event.

Several states, including Oregon, Hawaii, Utah and California, have pursued road usage charge programs, according to a *Transport Topics* article. The purpose is to

ensure drivers pay for the miles of road that they use, rather than the gallons of fuel.

The federal fuel tax, which supports the Highway Trust Fund, has held at 24.4 cents a gallon for diesel and 18.4 cents a gallon for gasoline since 1993. Because vehicles are becoming more fuel-efficient and electric vehicles are growing more prevalent, the federal fuel tax does not have the power it did decades ago.

Edward Sniffen, deputy director for highways at the Hawaii Department of Transportation, spoke at the Transportation Investment Advocacy Center's National Workshop for State and Local Transportation Advocates on July 14. HDOT is leading the [Hawaii Road Usage Charge Demonstration](#), which began in 2018 with financial support from the Federal Highway Administration.

"What we're advocating for on the federal side is the federal government takes these individual pilots from different states and sets up a pilot nationally," said Sniffen. "The gas tax has to change federally. There's no way for that to be sustainable in the long term, given not just EVs but higher mileage per gallon that you get on vehicles nowadays. In the end, all of the programs—federal, state and local—will be tied to road usage charge."

[Read more.](#)

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## **Climate Change Commission Issues Guidance on Decision Making & Investment**

The Hawaii Climate Change Mitigation and Adaptation Commission approved a statement to guide climate action in light of the state's climate emergency declaration (SCR 44), and the American Jobs Plan (AJP), which proposes investing in all forms of infrastructure following the economic impact of the COVID-19 pandemic.

The statement provides recommendations to state and county governments on how to translate Hawaii's robust climate policy framework into decision making and investing. The AJP includes a \$50 billion investment in resilient infrastructure, including restoring and protecting nature-based infrastructure—lands, forests, wetlands, and more.

Four "Climate Ready" priorities are:

- The ambitious mitigation of greenhouse gases through elimination and reduction of emissions.
- The preservation of cultural, biological and public resources through adaptation.
- The accelerated sequestration of carbon, production of local foods and

protection of public health and ecosystems.

- The adoption and building of resilience to climate change.

This list is not comprehensive, as the commission recognizes the breadth and depth of work ongoing in the state, including the Hawaii 2050 Sustainability Plan. An updated list of actions will be available online at the commission's [website](#).

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

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## Have You Registered for Virtual PECon 2021?

With sessions on leadership, innovation, diversity, ethics, time management, and more, there is a session for everyone at the [2021 Virtual Professional Engineers Conference](#) (Aug 3-5).

You won't want to miss out on the keynote speakers, networking with your friends and peers in Coffee Chats, solving everyday problems in MasterMind sessions, and [PE Day](#) (August 4). Here's a peek....



- [Managing Up, Out and Within](#) (Stephanie Buckingham and Paula E. Miles, P.E.)
  - [Cyber-attacks and Resilience](#) (James Livermore and Dave Ubert)
  - [NSPE Engineering Excellence Awards](#)
  - [Mars Is a Harsh Mistress \(So is the Moon\)](#) (George Hamilton, P.E., F.NSPE)
  - [Delegation: How to Manage the Monkeys on Your Back](#) (Shelley Rowe, P.E.)
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## Iowa Approves PE Exam Before Experience

PE license candidates in Iowa will have the opportunity to take the PE exam prior to meeting the four years of experience requirement.

Legislation (H.F. 284) signed by Governor Kim Reynolds in April eliminates the requirement that applicants for a professional engineer license must show necessary practical experience in engineering work prior to taking the PE exam. The bill does not alter other experience requirements for applicants.

Individuals applying for licensure in Iowa should access the Iowa Engineering and

Land Surveying Examining Board [website](#) for updates on implementation of the rule change.

In states that have “decoupled” the experience and examination requirements, applicants are still required to complete all education, examination, and experience requirements before being granted a PE license.

NSPE believes that licensing boards should provide the option of taking the PE exam as soon as applicants for licensure believe they are prepared to take the exam and have passed the FE exam. Applicants, upon passing the exam, should not be eligible for licensure before meeting all other jurisdictional requirements.

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## Can the Engineering Profession Achieve Racial Equity?

Engineering occupations are some of the highest-paying and most prestigious in the US labor market, but they are also some of the least diverse. A [new report](#) from the Georgetown University Center on Education and the Workforce finds that between 1990 and 2019, the total number of Black/African American and Latinx students who graduated with a bachelor’s degree in engineering increased nearly fourfold, but there is still far from equitable representation.



Over the same time period, the Latinx share of bachelor’s degrees in engineering increased from 3% to 13%, while the Black/African American share held steady at 4%. At this pace, achieving racial equity in engineering on par with population share would take 76 years for Latinx and Black/African American workers as a group and up to 256 years for Black/African American workers alone.

“Having a career in engineering means you’ve made it,” said Anthony Carnevale, CEW director and report lead author in a statement. “While it’s a marker of climbing the wage and status occupational pyramid, it’s also a social indicator of progress on racial and gender justice.”

The report addresses how Black and Latinx are underpaid in a profession that pays very well. A person with an engineering bachelor’s degree (and no graduate degree) earns 25% more on average than the typical bachelor’s degree holder in the first job after graduation.

However, as with almost all fields, Black/African American and Latinx workers earn less than the average. While White and Asian workers with a bachelor’s degree in

engineering earn 61% and 71% more, respectively, than the average for all bachelor's degree holders, Black/African American and Latinx engineering majors earn just 15% and 18% more, respectively. To attain earnings comparable to those of White engineering majors, Black/African American or Latinx engineers must earn an additional degree beyond the bachelor's degree.

The report authors emphasize that it shouldn't take decades or centuries to ensure diversity in the engineering workforce mirrors diversity in society. It will take a comprehensive, committed, and innovative approach from employers and universities to close the gap.

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