NSPE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

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TO: NSPE Board of Directors

cc: House of Delegates
NSPE Committee, Task Force, Council and Interest Group Chairs
State Society Presidents and Presidents-elect
State Society Executives Council
NSPE Past Presidents

FROM: Mark J. Golden, FASAE, CAE
Executive Director

DATE: October 16, 2017

RE: Board Update: October 1-15, 2017

Membership Model Update: Issue 3 of the membership model transition update was distributed through all channels last week. It includes a timeline for modifying governance documents to bring them into compliance with the House of Delegates' July 22, 2017, mandate. The new conditions on affiliation, finances, and operations, as well as the timeline for transition, specified by this House of Delegates action are now binding on the association. Accordingly, revisions to existing bylaws, operating procedures, and letters of agreement are being carefully crafted to align with the specifics laid out in that motion.

If a state society desires or requires a document for the record on the binding nature of the HoD motion or any specific provision therein in order to make its election of form of affiliation prior to the December 31, 2017, deadline, please communicate this need directly to the NSPE president and me and it will be provided.

State leaders should watch for Issue 4 of the membership model implementation update, planned for later this week. This update will focus on technical integration and database access for integrated affiliates.

As of October 15, the following states have formally elected integrated affiliation status:

- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Georgia
- Guam
- Hawaii
- Idaho
- Illinois
- Kansas
- Maine
- Michigan
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- Ohio
- Pennsylvania
- South Carolina
- Tennessee
- Texas
- Virginia
- West Virginia

NSPE encourages states to use the information in this report in newsletters or other updates to their membership to inform members on the activities of NSPE. As a suggestion, it may be most useful to take the bullets of most interest from the transmittal email. The full report (and past reports) can always be found online.

Two states (Florida and Louisiana) have formally elected nonintegrated affiliation.

Championing the PE License

Licensure Emphasized in Education Bill: NSPE has played a critical role in the development of a bill recently introduced in Congress that would bolster early engineering education. The Developing Tomorrow's Engineering and Technical Workforce Act was introduced on October 11, by Rep. Tim Ryan (D-OH) and cosponsors Rep. Tom Reed (R-NY) and Rep. Paul Tonko (D-NY). NSPE secured a bill provision explicitly emphasizing early engineering education as a vital component in attaining licensure as a professional engineer. This bipartisan legislation, H.R. 4023, would award grants to state and local education agencies to support, develop, and implement formal and informal engineering education programs in elementary and secondary schools. It also would help provide school districts the resources to incorporate engineering education into their science standards.

"A potentially criminal shortcut": As stated in the last board report, NSPE is taking a proactive, multifaceted approach to addressing the failed construction of two multibillion-dollar nuclear reactors in South Carolina. According to documents published by the Charleston *Post and Courier*, Westinghouse and other contractors used unlicensed engineers to design parts of two unfinished, nuclear reactors in South Carolina, "a potentially criminal shortcut that raises fresh questions about why the multibillion-dollar energy project failed." NSPE is preparing a letter to the Nuclear Regulatory Commission requesting a thorough and complete investigation of the events leading up to the failure of the project. NSPE staff discussed the situation with the South Carolina Society of Professional Engineers staff on October 11, and NSPE and SCSPE will be coordinating throughout this process. NSPE staff is devising an outreach strategy to key legislators, including PE members and South Carolina representatives in the US Congress, requesting a congressional investigation of events leading up to the project's failure. NSPE will provide continued communication of NSPE's interest, concern, and actions through social media and other communications channels, the NSPE website, and articles in *PE* magazine.

Future City Honored for Mentoring: DiscoverE's Future City competition has won the 2017 US2020 STEM Mentoring Award for "Most Innovative Hands-On Project." US2020's mission is to change the trajectory of STEM education in America by dramatically scaling the number of STEM professionals engaged in high-quality STEM mentoring with youth, particularly underserved and underrepresented students. The initiative launched at the 2013 White House Science Fair and is now building a working community of committed companies, organizations, schools, government agencies, and cities.

Ethical Guide to the Profession

Valued Ethics Content: NSPE's website now requires nonmembers to register to access NSPE Code of Ethics information, which always tops our most frequently visited resources list. We are building extremely valuable and useful demographic information about the who, how, and why of these individuals accessing/downloading NSPE's ethics material. Data analytics capabilities now resident in NSPE's state-of-the-art membership and prospect database will allow us to both increase awareness on engineering ethics and promote membership.

Members are reminded that a History of the NSPE Code of Ethics is available to them online. This resource can assist professional engineers and others in enhancing their understanding of past and present ethics language.

NSPE Communities is the place for members to connect online with colleagues. No matter what your interest, you can find great content in the Open Forum. Ethics and professional practice are frequent topics of robust dialogue in the forum. Citing just a few recent examples:

Occupational Licensure in the News: "We want to make our members aware of a recent article in the Wall Street Journal ... that unfortunately perpetuates a seemingly growing narrative that all licensure requirements are barriers to entry into professions and should be removed. In response to the article, NSPE submitted a 'Letter to the Editor.'"

Member Eric Tappert, P.E., posted a particularly powerful post on the value of licensure:

> "For those who think experience is the important part, I give you the Saint Francis Dam failure in California. As the dam filled to the spillway the first time it failed catastrophically, sending a wall of water 54 miles to the Pacific Ocean. Somewhere around 450 people died, nobody knows the exact number as many of the bodies were washed to sea, some returning to the coast years later. The man in charge was a self-taught engineer who had gained international prominence for his design and construction of the LA aqueduct, the longest in the world at the time. California responded by passing their first engineer licensing law.
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> "For those who think education doesn't mean very much, consider the great molasses flood in Boston. A 2.5-million-gallon tank of molasses failed, sending a 35-40-foot wave of molasses down Commercial street, wiping out buildings and part of the elevated railway. 21 people died (including 2 children) and 150 more were injured. The man in charge of construction and maintenance of the tank was trained as an accountant. He got promoted to VP while the company that owned the tank was settling the largest civil case ever brought in Massachusetts up to that time. Massachusetts responded by passing their first engineering licensing law.
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> "And finally, for those who think high school graduates have enough education to be engineers I offer the New London School explosion in Texas. A couple of high school grads, a janitor and a gas heater salesman, decided to save the richest school district in Texas money on their heating bill by tapping a wet gas line out back to provide fuel for the school. That led to some five minutes before dismissal one day that left 295 teachers and students dead, wiping out an entire generation in the town. They saved the district a whole $250.84 in gas bills. Texas responded by passing their first engineer licensing law.
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> "Over the years the 3-legged stool approach to determining minimal competency to safeguard the public health, safety, and welfare has worked pretty well. Combining education, experience, and verifying it with examinations has does a reasonable job in protecting the public. Adding in the legal responsibility for the work and a strong sense of ethics is also part of the strategy. There are questions and disagreements about the relative importance of the three legs and the substitution of one part over another. With better than 50 licensing boards across the country, this is bound to result in differing requirements in different jurisdictions. The lack of consensus in this thread simply means that those differences will not be resolved anytime soon. Let's all keep in mind our obligation to protect the public health, safety, and welfare in our work each and every day."

Citizen Engineer: "Change is coming rapidly. We, as licensed engineers, can either be part of that change to help shape the outcome or face the prospect of obscurity and irrelevance. The choice is ours."

Encourage your members to be a part of the discussion—a valuable benefit of membership. Information on how your members can sign up and get involved is found here.

Powering Professional Advancement

All the PE News That's Fit to Print: American Society for Engineering Education President Bevlee Watford highlighted *PE* magazine's September/October cover story, Profession X, at ASEE's Engineering Technology Leaders Institute on October 6 in Arlington, Virginia. In her address to the engineering technology deans, Watford spotlighted the article, which discussed the lack of knowledge about engineering technology and recent efforts to combat the issue. It was part of an overall discussion about issues with branding and identity that engineering technologists face. The article, by Senior Staff Writer and Content Editor Eva Kaplan-Leiserson, quoted NSPE members Walt Buchanan, P.E., F.NSPE, Jim Wathen, P.E., F.NSPE, and Robert Weissbach, P.E.

Learning Opportunities: State societies are encouraged to remind our members that they enjoy discounted NSPE webinars as a member benefit.

The NSPE live webinar lineup for October and November includes the following webinars:

- The High Demand for Social Skills in Engineering on October 25 at 2 p.m. ET
- Understanding Sanitary Wastewater Engineering on November 1 at 2 p.m. ET
- Staying Relevant: The Lifelong Learning Journey on November 8 at 2 p.m. ET
- Engineering Ethics: The PE and Sustainable Development on November 15 at 2 p.m. ET

Additional, on-demand courses (including special member discounts as well as 15 free PDH opportunities for NSPE members) are available to your members in the PE Institute. Does your state society have a live program or on-demand webinar it would like to promote to a national audience of potential customers? You can list it for free in the PE Institute.

Submit Your Conference Presentation Ideas: NSPE is now accepting presentation submissions for consideration for the 2018 Professional Engineers Conference, July 17–23, at Caesars Palace, Las Vegas.

Topic areas include but are not limited to:

- Alternative Energy (solar, hydro, and wind)
- Crisis Management
- Engineering for Health and Safety
- Smart Design and Technology (UAVs, drones, BIM, AVs)
- Sustainability
- Risk Management
- Water and Wastewater Management
- Theater, Entertainment, and Amusement Ride Engineering
- Dam Design and Construction Management
- Engineering Ethics
- Leadership and Development

The Professional Engineers Conference attracts more than 400 professional engineers and industry leaders from across the United States and internationally for two full days of professional development and networking.

Individuals interested in presenting sessions on topics of interest to professional engineers should complete the Call for Presentation form online by **November 30, 2017** for full consideration.

EJCDC Free Download: The Engineers Joint Contract Documents Committee (a joined venture of NSPE and other project-delivery stakeholders) has released a free download to facilitate effective use of its design-build documents.

EJCDC has worked since 1975 to provide fair and objective standard contract documents for public and private infrastructure and engineered facilities. A committee of project stakeholders, including owners, contractors, funding entities, attorneys, professional liability insurers, and sureties prepare the documents, which can be customized for each project's goals and regulatory requirements.

Eighteen documents are included in the 2016 edition of EJCDC's Design-Build Family, including 10 completely new documents and seven revised documents.

The *Commentary on the Design-Build Documents* offers guidance on proper use of the documents.

It contains

- A summary of the content and use of each of the documents;
- Discussion of key preliminary steps on a design-build project;
- An introduction to EJCDC's new *Agreement Between Owner and Design-Builder for Progressive Design-Build*; and
- Commentary regarding noteworthy provisions of the *2016 Standard General Conditions and Supplementary Conditions of the Owner*.

Also available without charge is *Commentary on the EJCDC Engineering Services Documents*, which provides resources for the EJCDC Engineering Series (E-Series).

Uniting the PE Community

@NSPEPrez: Are you following the NSPE president's Twitter feed? Add @NSPEPrez to your feed and follow 2017–18 President Tom Roberts, P.E., F.NSPE, for an inside look at his activities, including photos from headquarters visits, time on Capitol Hill, state and local chapter events, and more.

The Honors and Awards Committee is now accepting applications for the 2018 NSPE Honor Awards. The purpose of the Honor Awards program is to promote the exemplary service that NSPE members and professional engineers have made to the Society as well as to the engineering profession. The application deadline is January 31, 2018. More information, including how to apply, can be found on the website.

> ***NSPE Award:*** The NSPE Award is the **highest** award given to an individual by the Society. It is presented to a professional engineer who has made outstanding contributions to the engineering profession, the public welfare, and humankind. In addition, they have a strong record of service to NSPE and other professional and technical societies. Although the Society would like to present this award each year, it is more important that the successful nominee be of such a high caliber, similar to previous honorees like NSPE Founder Dr. David B. Steinman, P.E.,

former NSPE Executive Director Paul H. Robbins, P.E., and President Herbert Hoover, that it is not mandatory for this award to be presented each year.

(NSPE) Distinguished Service Award: This award recognizes an NSPE licensed member for exceptional contributions to the engineering profession, to one's community, and specifically to NSPE. The purpose of this award is to recognize a professional engineer who has provided many years of service at all levels of NSPE as well as made a significant contribution to the engineering profession through their professional accomplishments.

(NSPE) Young Engineer of the Year Award: This award recognizes an NSPE member who is a licensed professional engineer, engineering intern, or engineer-in-training who is 35 years of age or younger as of January 1 in the year in the year the award is to be presented and has made outstanding contributions to the engineering profession, the community, and especially NSPE during the early years of one's career.

Big Winners! NSPE member Gus Boschert, P.E., was the winner of our first *NSPE Speaks* podcast contest. Boschert received a $50 Amazon gift card and a $50 donation in his name to hurricane relief efforts. Check out our latest "Back to School" episode of *NSPE Speaks* and stay tuned for future contests.

And NSPE member Ivan Ivanov, P.E., earned the $500 gift card in the Society's website scavenger hunt. Thanks to Geico for sponsoring the hunt, in which participants had to find answers to five questions on the updated NSPE website. There were 150 submissions. Thank you to all who participated.

Countdown to EWeek: The 2018 Engineers Week will take place February 18–24 and volunteer kits with helpful resources to assist your state society in promoting the events are available online.

The kit, which includes a customizable career presentation and online training for educators titled "Inspire Innovation: Discover Engineering Careers," is available for your use online. The presentation is aimed at students in grades 8–11 and is anchored by six videos featuring engineering undergrads. The online trainings include tips on how to incorporate engineering into the classroom, lead kids through a successful engineering experience, talk to kids about engineering, and create large-scale engineering events.

On Wednesday, November 8 at 12:00 noon (Eastern), the Engineers Week Foundation (DiscoverE) will hold a free webinar on how you and your state society can participate in the 2018 "Introduce a Girl to Engineering Day." The webinar will help jumpstart your planning to make this the best Girl Day ever, including information on new resources and programs now available to support your participation and case studies from two Girl Day role models.

State societies are encouraged to identify and engage state and local Girl Day role models. More information can be found on the DiscoverE program website.

And remember, you always have access to NSPE leadership resources in the Leadership Toolbox. This includes talking point scripts and presentations for use by NSPE officers, board members, and other leaders during state visits, chapter meetings, or other venues to promote NSPE and its activities, updated on an at least quarterly basis. Current board members can access an online library of board meeting materials (past, current and future) through the online board book site, (BoardBookIt).

If you want to review NSPE's history and how that has been translated into current plans with a future-focus, NSPE's purpose, mission, vision and a history of the *Race for Relevance* and the resulting Strategic Plan is summarized in a section called "Who We Are and What We Do."