


TO: NSPE Board of Directors

cc: 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

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RE: Board Update: October 1-15, 2016

Championing the PE License

In another significant victory for NSPE, professional engineers and public health, safety and welfare, the Bureau of Safety and Environmental Enforcement [increased the role of professional engineers in its updated oil and natural gas production safety final rules](#). The bureau updated the regulations regarding oil and natural gas production safety on the Outer Continental Shelf by addressing issues such as safety and pollution prevention equipment design and maintenance, production safety systems, subsurface safety devices, and safety device testing. The changes in this rule are necessary to improve human safety, environmental protection, and regulatory oversight of critical equipment involving production safety systems. Of particular importance were changes to the approval of safety systems design and installation features. Before installing or modifying a production safety system, a production safety system application must be submitted to the district manager for approval. Under the new rule, the as-built diagrams must be approved and sealed by a licensed professional engineer. This new rule aims to keep pace with advancing technologies to ensure worker safety and protection of the environment.

NSPE has been working closely with the Washington Society of Professional Engineers to provide input on a proposal that WSPE will be presenting to the Washington Department of Licensing for WSPE to advise the department on issues pertaining to autonomous vehicles.

NSPE is also advising the Wisconsin Society of Professional Engineers on advocacy strategies to urge Wisconsin state lawmakers to revise statutes pertaining to education requirements for taking the PE exam.

In this election season, we are seeing an uptick in efforts (or campaign pledges) to reduce regulations on industry that allegedly harm job creation. See, for example, a recent [tweet](#) from Senator Ben Sasse (Republican-Nebraska), who finds the “600% increase in the number of jobs requiring a government license since 1950” to be “troubling.” Click on his video, and it is clear his concern is with licenses required for such things as cutting hair. But, as NSPE has been [reporting](#), there can be negative and unintended consequences for the PE even if fields less

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](#).

critical to protecting the public health, safety and welfare are the intended targets of challenge to occupational licensing. Now is not the time to be complacent: be on the watch and please alert NSPE advocacy staff if occupational licensing emerges on your state's legislative or regulatory agenda. (NSPE has contacted Senator Sasse to ensure he appreciates the importance of professional licensure for engineering.)

Ethical Guide to the Profession

In September, the federal government issued its long-awaited automated vehicles policy. It includes vehicle performance guidance for automated vehicles, model state policy, and current and potential regulatory tools. But NSPE believes the policy fails to address major safety implications, and has communicated its concerns in a widely distributed press release, to be followed by detailed comments on the guidelines.

In its [statement](#), NSPE noted it is "disappointed that several major safety implications are still not addressed in the National Highway Traffic Safety Administration's *Federal Automated Vehicles Policy*." Although the guidelines are not binding, they "will play a key role in the development and deployment of autonomous vehicles."

Specifically, NSPE emphasizes that the administration should reconsider and revise its policy to address several key issues:

- There is no requirement for third-party certification of autonomous vehicles and technologies by someone in the decision chain with a duty that puts public safety first and overrides competitive pressures: that is, a professional engineer. The guidelines allow manufacturers and suppliers to self-certify, eliminating a critical third-party safety check.
- Although deployments of autonomous vehicles in controlled environments have had encouraging results, NSPE points out that factors such as weather, pedestrians, and road conditions are highly unpredictable and can change rapidly. The guidelines assume these hurdles will be easily overcome, NSPE said, and don't provide for adequate safety provisions.
- The enormous ethical implications of deploying autonomous vehicles are not addressed. The guidelines acknowledge that major ethical issues exist, but no proposed methods for addressing them are provided, which leaves them up to manufacturers. NSPE believes that professional engineers should play a key role in this evaluation, because their license requires them to hold paramount the public health, safety, and welfare.

NSPE also participated in an invitation-only meeting convened on September 28th by a Washington, DC think tank, Third Way, to discuss "grey areas" surrounding autonomous vehicles. The conveners wanted to discuss autonomous vehicles' implications for energy and specifically clean energy options, but the meeting pretty quickly shifted away from this issue. Instead, the participating organizations were more interested in discussing the substantial excitement that AVs testing and deployments are creating, particularly among state and Federal legislators and regulators, and the fact that public sentiment does not match this excitement and is counterbalanced by significant concern that safety and the impact of introducing the vehicles into the larger transportation system are not being given adequate attention. It does *not* appear that this particular coalition is likely to emerge as a

significant player in this policy debate: it lacks bipartisan backing, and while NSPE effectively communicated that safety and ethical issues need to be addressed *before* deployment this is not likely to be a central focus of any future efforts. Nonetheless, the invitation to participate is evidence of NSPE's achieving recognition and credibility on this issue in Washington policy circles, and we were able to make connections with individual stakeholders who may prove useful as we continue to pursue these matters.

[NSPE has been [a leading voice on the safety of autonomous vehicle technology](#), recognizing the potential while advocating for the need to place the public health, safety, and welfare first. Towards this end, NSPE emphasizes the need for licensed professional engineers in vehicles' development, testing, and safety certification.]

Powering Professional Advancement

Upcoming NSPE webinars include: "[Engineering Ethics: Public Health and Safety and Communications Issues](#)" (October 19, 2016); "[Defining Roles and Risks for Engineers and Construction Managers](#)" (October 26, 2016); "[Building Your Pipeline of Success](#)" (November 2, 2016) and "[Engineering Ethics: Licensure and Professional Practice Concerns](#)" (November 9, 2016).

State societies are reminded they can promote their upcoming PDH offerings to a national audience by [listing](#) them in the [PE Institute](#), on NSPE's website. State societies interested in promoting the value of membership are also reminded that the [15 free PDHs](#) offered from the national website are always a highly rated benefit of three-tier membership. This year's offerings will expire in December.

The end of October is your last chance to submit nominations for the Federal Engineer of the Year Award (YEYA). Sponsored by NSPE's Professional Engineers in Government, the award recognizes engineers employed by a federal agency that employs at least 50 engineers worldwide. The winner will be announced at a luncheon honoring all of the agency winners at the National Press Club in Washington, D.C., February 17, 2017. Agency winners are chosen by their engineering achievements, education, continuing education, professional/technical society activities, awards, honors, and civic and humanitarian activities. Nomination criteria and application information is available [online](#). Nominations must first be submitted to the agency's point of contact and human resources department for approval. Deadline for submissions is October 31, 2016.

The Power to Pass (an independent publisher of professional licensing exam review material) has published its [2016-17 College Salary Report](#). Twelve of its top 15 "highest paid bachelor degrees, by salary potential" are in engineering fields. The analysis and methodology of their study has not been independently verified, but offers some useful data points.

The Teagle Foundation, which works to support and strengthen liberal arts education, has launched a "Liberal Arts and the Professions" initiative, which aims to embed the liberal arts in undergraduate engineering education by forging curricular links between faculty in the disciplines and professional fields so students more fully appreciate the social, cultural, and ethical dimensions of their work. It is offering grants to put this concept to the test. Engineering programs in your state may wish to explore this opportunity. Information on the program and application guidelines can be found [online](#). Read more in the July/August *PE* magazine article "[Engineering as a Liberal Art](#)."

Uniting the PE Community

The NSPE Dues Model Study Group I held its first meeting on September 29th to start work on its assignment to evaluate, analyze, improve and finalize the details of a unified, three-tiered membership model to be presented to NSPE's House of Delegates in July 2017. It has established a schedule of meetings and organized its work as a series of four "sprints" to address its charges:

- The capacity matrix and service expectations (week of October 24th);
- Pricing and feasibility (week of December 12th);
- Transition and implementation (week of January 16th); and
- Advancing the proposal (week of February 13th).

In the meantime, regional directors have been provided questionnaires laying out the state membership data gaps that need to be filled in order to make a fully informed decision on any proposal that emerges from this effort¹. This information is needed so the state volunteer and executive leadership working on the new dues and membership business model can compose a complete picture of the position and needs of each state society and their membership makeup. Without a complete picture, it will be impossible to understand the impact, feasibility and desirability of any proposal on the individual and collective needs of NSPE members.

As questions arise regarding this membership model and structure initiative, staff is collecting them so that a dynamic "Frequently Asked Questions" section can be created for the board to assist you in talking about and responding to concerns over this important initiative. The first of these talking point documents should be posted and available by next week. Membership staff will alert you once they are.

Just as a summary and reminder, we are in phase 2 of this initiative, which grew out of a year-long effort started in 2015 involving state and national leaders to see if a new or different business model and structure for integrated, three-tier membership for NSPE could be designed that:

- appeals to and is considered fair and equitable by members and all other stakeholders;
- enhances the likelihood of stronger membership acquisition and improved member retention at all levels of the organization (state and national); and,
- ensures the long-term financial health and viability of NSPE national and its state and local components.

The study effort is being supported by the expertise of McKinley Advisors and culminated in discussion by the NSPE House of Delegates in June and a decision to continue the effort. (The House of Delegates presentation can be found [here](#).)

¹ It should be stressed that NSPE is not asking for or looking for data on individual members, only aggregate and trend data, similar in form and content to the aggregate information on membership that national shares each month with the SSEC.

The discussions to date have yielded consensus around exploring the feasibility and desirability of a unified, single price point membership offer. The above mentioned working group, made up of state leaders, is the next step in evaluating, analyzing, improving and finalizing the details of such a model, with the goal of having a consensus proposal to be presented to NSPE's House of Delegates in July 2017. (As the board discussed in Alexandria, although a growing number of state societies are expressing interest in this concept, participation in any model actually proposed and authorized by the membership will be entirely voluntary. States societies have and will continue to have the final say into whether they participate or not.)

The National Engineers Week Foundation (d.b.a. DiscoverE) will host its annual webcast on November 7th at 12:00 noon (Eastern), previewing plans for this year's EWeek and new resources to help promote engineering year-round. They will be broadcasting from the Maryland Science Center, and will be discussing opportunities to partner with local museums to make the premiere of the IMAX film on engineering, "Dream Big," part of local EWeek activities. Information and registration is available [online](#).

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](#)."