



Advancing Engineering Education and Research Outlook and Strategy for 2018

Miriam Quintal and Otto Katt
Lewis-Burke Associates, LLC
February 6, 2018

LEWIS-BURKE

ASSOCIATES LLC

www.lewis-burke.com



Lewis-Burke and ASEE

- Lewis-Burke began representing ASEE on October 1, 2017
- As federal consultants, Lewis-Burke promotes the policy agenda of scientific organizations to a diverse set of audiences, including:
 - United States Congress
 - White House/Administration and the Federal Agencies
 - Like-minded organizations and the advocacy community in Washington, DC
- 28 policy experts with range of expertise/backgrounds allow multi-layered issue teams with deep expertise in agencies and scientific/education areas
- 40 clients exclusively composed of non-profit entities: universities, scientific societies, managers of large federal facilities
- **Goals of ASEE Advocacy**
 - Conducting outreach to Congress to support funding and sound policy for engineering research and education
 - Supporting ASEE Councils to enhance advocacy goals of deans and other constituencies
 - Engaging the Administration and federal agency officials to inform future programs and create new opportunities
 - Elevating the role of ASEE within the Washington, DC-based scientific, STEM, and higher education advocacy communities and ensuring community advocacy reflects ASEE priorities



ASEE/EDDC Congressional Priorities

- Advocate for Funding at Critical Agencies
 - National Science Foundation research and education funding
 - Department of Defense basic and applied research
 - Specific research accounts for other mission agencies (e.g. DOE, NASA, NIH)
 - Pell and other student aid
- Protect Against Threats to Engineering Schools and Colleges
 - Immigration – high-skilled immigration and student talent pipeline (e.g. H1B visas, OPT, DACA)
 - Research infrastructure costs (e.g. F&A costs)
- Inform Education, Research, and STEM Policy
 - Higher Education Act reauthorization – student impacts, teacher training
 - Research agency reauthorizations (e.g. DOE, NASA)

LEWIS-BURKE

ASSOCIATES LLC





Big Picture: Federal Outlook for Engineering

- With some exceptions, research and STEM education are flying under the Administration's radar and benefitting from bipartisan congressional support
 - Bipartisan budget deal would enable major funding increases for both defense and non-defense agencies
 - Most research agencies are continuing business as usual

BUT, Challenges and Vulnerabilities Remain:

- Congressional brinkmanship threatens progress on FY 2018 spending and other potential areas of agreement
- FY 2019 budget request expected to severely cut key agencies and programs – continued F&A threat
- Loss of career staff could hollow out agency abilities and responsiveness over next several years.
- Worrisome views of higher education also emerging:
 - Caricatures of universities as unaffordable, elitist, not worth it, too liberal
 - Efforts to cut student aid or increase regulation around free speech and sexual assault
 - Attacks on US graduate student support and immigration potentially squeeze student pool from both sides

LEWIS-BURKE

ASSOCIATES LLC

 **ASEE**
AMERICAN SOCIETY FOR
ENGINEERING EDUCATION



Budget and Appropriations

Outlook - Final Deal is in Sight but Still Elusive

- Continuing resolution expires this week – potential to be extended until late March
- Discussions are ongoing for bipartisan budget deal to raise defense and non-defense spending by about \$300 billion over 2 years
- If no deal comes together most likely outcome is full-year CR
- President's Budget Request to be released February 12 – new round of threats, but Congress will likely ignore

Why it Matters for Tomorrow

- Visits are well timed to push for deal and completion of FY 2018 appropriations
- Chance to stay positive and establish importance of key programs ahead of FY 2019 budget request release

LEWIS-BURKE

ASSOCIATES LLC

 **ASEE**
AMERICAN SOCIETY FOR
ENGINEERING EDUCATION



National Science Foundation

Outlook

- NSF has been mostly flat for several years, growth far under paces other research agencies
 - Maintaining commitment to core programs, education and workforce investments, but new initiatives and funding rates are squeezed
- Strong congressional protectors, but few champions make it a top priority
 - Exception: Senator Shaheen Amendment during markup – 5% growth for FY 2018 assuming budget deal
- Focus on Big Ideas for Future Investment – still no widespread attention to these on Hill
 - Harnessing Data Revolution, Rules of Life, Quantum Leap and others

Why it Matters for Tomorrow

- Need more champions, especially members on appropriations committees
- Big Ideas are potential pathway for increased investment
 - Note potential to transform engineering and revolutionize medicine, agriculture, quantum, etc.
- Stress need for funding growth – what research areas are we underfunding/impact of flat funding on your faculty?
- Highlight connections to congressional priorities – local impact, national security, economic development, and health
 - NSF provides fundamental advances that are then built on by DOD and NIH to power their missions



Department of Defense Research

Outlook

- Defense prioritized under Trump Administration but focus on readiness and operations
- Champions have helped keep basic research on a strong path but impact has been uneven across branches
- Some reasons for optimism
 - Some new leaders on the record as wanting to reinvigorate basic and applied research
 - DOD continues to pursue 3rd Offset technologies for strategic advantage

Why it Matters for Tomorrow

- Many members care deeply about national security but are less familiar with engineering role in supporting DOD and the defense industrial base through research and workforce dev.
- Highlight concerns over large technological investments by adversaries
 - Engineering support is essential to keeping US superiority and protecting the warfighter

LEWIS-BURKE

ASSOCIATES LLC

 **ASEE**
AMERICAN SOCIETY FOR
ENGINEERING EDUCATION



Infrastructure

Outlook

- President pushing major package, proposal expected to have no research and no clear funding source
- Democrats want more federal investment and Congressional Republicans are still skeptical about push
- Likely will be focus of hearings and legislative activity but prospects for completed deal are low

Why it Matters for Tomorrow

- Deal is low likelihood but high potential reward – worth pushing for inclusion of our priorities
- Emphasize research and workforce dev. needed to ensure smart, resilient, connected infrastructure
- Research Infrastructure is also needed to support academic engineering – test beds, academic buildings, cyberinfrastructure, etc.
- If you find offices interested in these areas, let us know – we have much more detail on programs they can plus-up to accomplish these goals (at NSF, DOT, NIST, etc.)

LEWIS-BURKE

ASSOCIATES LLC

 **ASEE**
AMERICAN SOCIETY FOR
ENGINEERING EDUCATION



Higher Education Act Reauthorization

Outlook

- House PROSPER Act marked up by Committee in December
 - Aims to simplify aid and repayment, provide additional data for students, and streamline regulations in some areas
 - Many concerns: Eliminates several aid programs, teacher prep, forgiveness, and lowers available aid for graduate students
- Senate HELP Committee working on bipartisan legislation for markup in April
 - Likely similar simplification of aid programs, streamlining of regulations, possibly greater risk-sharing
 - Democrats focusing on access, accountability, and educational innovation

Why it Matters for Tomorrow

- Chance to highlight concerns to Members ahead of House vote later this month or in March
- Focus on student impacts, especially threats to graduate students
 - Want to attract more American students to engineering, not set up barriers for them
- Share concerns with House bill in Senate offices to impact Senate draft

LEWIS-BURKE

ASSOCIATES LLC

 **ASEE**
AMERICAN SOCIETY FOR
ENGINEERING EDUCATION



Immigration

Outlook

- Student talent pipeline: DACA/Dreamers
 - DHS currently accepting renewals due to Jan. 9 court decision
 - Congress continues negotiations – agreement from most on need for DACA fix, but lots of differences on eligibility, citizenship pathway, changes to legal immigration, and border wall funding
 - Senate Majority Leader Mitch McConnell pledged to address DACA by Thursday if no budget deal
- High-skilled immigration: DHS is considering changes to H1B, J, STEM OPT, and other employment-based visas

Why it Matters for Tomorrow

- Stress contributions of foreign students and faculty as well as DACA recipients
- Share concerns about chilling effect on international students which would be exacerbated by DHS proposals – international applications already down substantially
- Don't get caught in controversy over unrelated issues – we are officially neutral on family migration, visa lottery

LEWIS-BURKE

ASSOCIATES LLC

 **ASEE**
AMERICAN SOCIETY FOR
ENGINEERING EDUCATION



Midterms and Looking Ahead to 2019

Outlook

- Midterms greatly compress legislative year – major action unlikely after July
- Strong chance for Democrats to take over House, smaller chance for Senate
- Many key figures in engineering policy face tough races or are retiring
 - Science champions: Comstock (VA), Hultgren (IL), Yoder (KS), Culberson (TX)
 - Committee chairmen: Smith (Science), Goodlatte (Judiciary), Frelinghuysen (Appropriations)

Why it Matters for Tomorrow

- Committee chairs in legacy mode – looking to make an impact this year – brings potential opportunity and threat
- Democrats already thinking about priorities should they take control
 - Chance to plant seeds now ahead of the curve
- Need new engineering champions
 - Use visits to find excited members and ask them to step up on our issues

LEWIS-BURKE

ASSOCIATES LLC

 **ASEE**
AMERICAN SOCIETY FOR
ENGINEERING EDUCATION



Overall Goals for Congressional Visits

- Dispel myths and showcase the progress and innovation you are enabling in your communities
- Highlight federal partnership essential to support for engineering
- Fight against fatigue among the research community, advocates, and Congress
- Seek champions for bolstering engineering priorities
- Keep positive message on engineering research and education while protecting against threats

LEWIS-BURKE

ASSOCIATES LLC



Discussion