

LEGISLATIVE UPDATE

October 19, 2021

LEWIS-BURKE
ASSOCIATES LLC



REMAINDER 2021 FEDERAL OUTLOOK

Biden Administration's Priorities

- Address COVID-19 Pandemic
- Economic recovery
- Advancing Racial Equity
- Climate Change/Clean Energy
- Building consensus on infrastructure and reconciliation
- FY 2023 budget planning
- Executive Actions
- Border policies and immigration

Congressional Priorities

- Debt Ceiling
- Fiscal Year (FY) 2022 Appropriations
- Bipartisan Infrastructure Package
- \$1-3.5 Trillion Reconciliation package to include American Jobs Plan and Families Plan priorities
- NSF/DOE/NIST/NASA Reauthorization
- National Defense Authorization Act
- Electoral reforms

2021 LEGISLATIVE PROGNOSIS

REALLY HARD TO PREDICT

- Debt Ceiling + Fiscal Year (FY) 2022 Appropriations + Bipartisan Infrastructure Package + Reconciliation Framework – ALL LINKED
 - If deal on one thing, likely deal on most things
 - “Pay-for’s” also getting smaller as the package gets smaller
 - Defense vs. Non-defense still an issue for appropriations (CROmnibus at best likely)
- NDAA (Defense) likely becomes vehicle for NSF/DOE (maybe NIST/NASA) reauthorization + CHIPS (microelectronics) funding + regional innovation
 - Common denominator items have best chance
 - May provide “one bite” for science and security provisions

INFRASTRUCTURE AND BUDGET RECONCILIATION

\$550 Billion Bipartisan Infrastructure Package + Transportation Bill

- Infrastructure Investment and Jobs Act passed in the Senate by a vote of 69-30 on August 10
- House to resolve?
- Largely focuses on transportation, energy, and broadband infrastructure
- Funding for the University Transportation Centers program, new transportation resilience centers of excellence program, DOE energy demonstration programs, \$46 billion for community resilient infrastructure programs at DHS, EPA, Interior, and NOAA

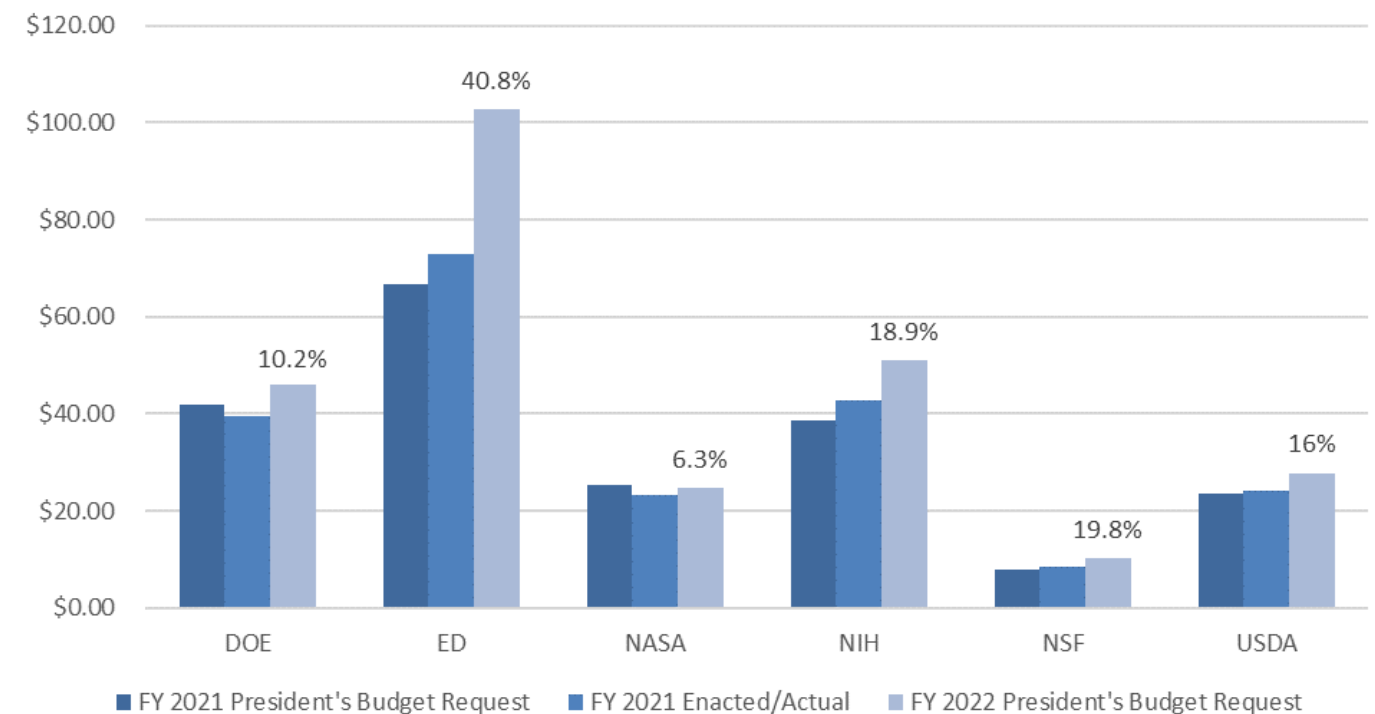
>\$1 Trillion Budget Reconciliation (Democrat only)

- Support for R&D and research infrastructure across agencies
- Climate Research, Coastal and ocean resiliency, DOE National Lab Infrastructure
- Agriculture climate research and research infrastructure
- DOC Regional Technology Hubs
- Tuition free community colleges, HBCUs and MSIs support, Pell Grant increase, workforce development

BUDGET FOR FISCAL YEAR (FY) 2022

President's Budget Request R&D:

- Map – Where Headed
- President Biden proposed 18% increase in discretionary funding across agencies
- Primary R&D focus is on *translational research and technology development and deployment*, including:
 - New Technology directorate at NSF
 - \$6.5B for new ARPA-H (Health) at NIH
 - New Manufacturing Institutes
 - \$1B for new ARPA-C (Climate)
- FY 2022 Appropriations Outlook:
 - Congress generally increasing budgets
 - Bipartisan agreement will be difficult
 - Flat funding through December 3



BIDEN ADMINISTRATION R&D PRIORITIES

Biden Administration Science and Technology Priorities

The FY 2023 OMB/OSTP memo to federal agencies highlights importance of federally supported R&D to address societal grand challenges including climate change, health, prosperity, security, environmental quality, equity, and justice. The Biden Administration's focus on innovation and the translation of basic research into businesses and products is also emphasized in the memo.

FY 2023 Multi-Agency R&D Priorities

- **Pandemic Readiness and prevention**
- **NEW** Innovation for Equity
- **NEW** Tackling Climate Change
 - **NEW** Climate science
 - **NEW** Innovation in clean-energy technologies and infrastructure
 - **NEW** Climate adaption and resilience
 - **NEW** Nature-based climate solutions for mitigation and adaption
 - Monitoring and measurement
- **Catalyze research and innovation in critical and emerging technologies**
 - AI and QIS
 - Advanced communications technologies
 - **NEW** Microelectronics
 - High-performance computing
 - Biotechnology
 - Robotics
 - Space technologies
- **National Security and economic resilience**
 - **NEW** Biosecurity and biosafety
 - Nuclear nonproliferation
 - **NEW** Defense against cyber-attacks and supply chain attacks

SCIENCE AND SECURITY

- Policies not keeping pace with adaptations and updates on campuses
- Legislative:
 - Expansion of CFIUS review (Section 3132) – USICA
 - HEA gift/contract reporting (Section 6124)
 - Section 117 threshold reduction
 - Reports for DOD; research security training requirement
- Executive:
 - NSPM-33 Guidance Still Expected Soon (End October / Early November)
 - Hope to replicate the best ideas and reduce duplication/inconsistencies
 - Plan for past inconsistencies / data not previously requested?
 - Institutional responsibility (applicability of Section 223(c)(3) of NDAA)?
 - Section 117 reporting concerns
 - JCORE future?
 - DOE changes and updates to matrix / updates to lab contracts
 - Cybersecurity implementation and transition underway

COVID FEDERAL CONTRACTOR COMPLIANCE

- Path Out of the Pandemic: COVID-19 Action Plan.
 - Executive Order 14042 (E.O.) on Ensuring Adequate COVID Safety Protocols for Federal Contractors
- **Rollout Has Begun**
 - NASA's implementation out
 - HHS agencies pending
 - Federal policy controls
 - Burden to comply – but likely limited relief
 - Effective Oct 15 and beyond

WHITE HOUSE CLIMATE ROADMAP

- Federal agencies adopting resilience and adaptation plans
- DOD/GSA/NASA – Changes to FAR? –
 - Expectation of changes to federal procurement to include “climate-related financial risk”
 - Comment period open on proposed rule until 12/14/2021
- New research and public policy agendas to roll out related to climate change across government
 - E.g., NSF DCL, NIH & Climate Change agenda

INNOVATION AND MANUFACTURING

- **Innovation**

- National Lab Innovation Consortia
- GAO thinking about IP policies
- New mechanisms being considered by TIP directorate (including tech accelerators)
- More emphasis on geographic distribution
- New DOD Innovation Steering Group
- NACIE relaunch
- Cost-Share implications

- **Manufacturing and Regional Innovation**

- Manufacturing Innovation Institutes:
 - NIST FY 2022 budget request included \$150M for two new MIIs, one of which would be focused on the design and manufacture of semiconductors
 - DOE PBR includes \$28 million to fund two new Clean Energy Manufacturing Innovation (CEMI) Institutes focused on industrial decarbonization
- Economic Development Administration (EDA) - \$3 billion for Investing in America's Communities (IAC) program
- Proposed Regional Technology Hubs would be funded through EDA
- CHIPS funding would enable NIST/DARPA expanded research/workforce/fab investments for semiconductors

HUMANITIES



- The President announced his intent to nominate: Shelly Lowe as chair of the National Endowment for the Humanities (NEH)
- More than \$87 million allocated on October 4 from the American Rescue Plan funding; included awards to grantmaking entities:
 - Association for Asian Studies
 - National Writing Project
 - Oral History Association
 - Social Science Research Council
 - American Council of Learned Societies
- Next solicitation - Infrastructure and Capacity Building Challenge Grants (maximum funding per award of \$750,000) – expected March 2022

NEW OR EXPANDED AREAS ON THE HORIZON

- Diversity, equity, and inclusion
 - Health Disparities Research
 - STEM workforce
 - Title IX/Harassment/Assault/Free Speech
- Renewable energy, energy storage
- Technology for Climate, Environment
- AI-as-a-Service
 - Explainable AI
 - Adaptive Machine Learning
 - Personalized and predictive medicine
- Data and privacy
- Practical Cryptocurrency
- Synthetic Biology / Engineering Biology
- Plastics
- Critical Minerals
- Metamaterial Optics
- DNA Data Storage
- Beyond GPS/PNT
- Collaborative Telepresence
 - Computer Vision
 - Extended Reality
- Nano scale printing
- Next Gen Wireless
- Low Earth Orbital Satellite Systems
- Humanities / dialogue / future of democracy
- Biomedical technology, modeling, computation
- Infectious disease
 - Modeling and prediction
 - Pandemic preparedness
- Minority and rural health
- Mental Health
 - School Safety and Campus Culture
- Workforce Pathways – community colleges, veterans, new industries
- China Concerns/Domestic S&E pathways
- Intellectual Property Security
- Social and Behavioral Science + X
- Public health innovation

TAKE AWAY MESSAGES

ANNUAL FUNDING

Even without reconciliation, federal agencies could see potentially significant increases for FY 2022

INFRASTRUCTURE

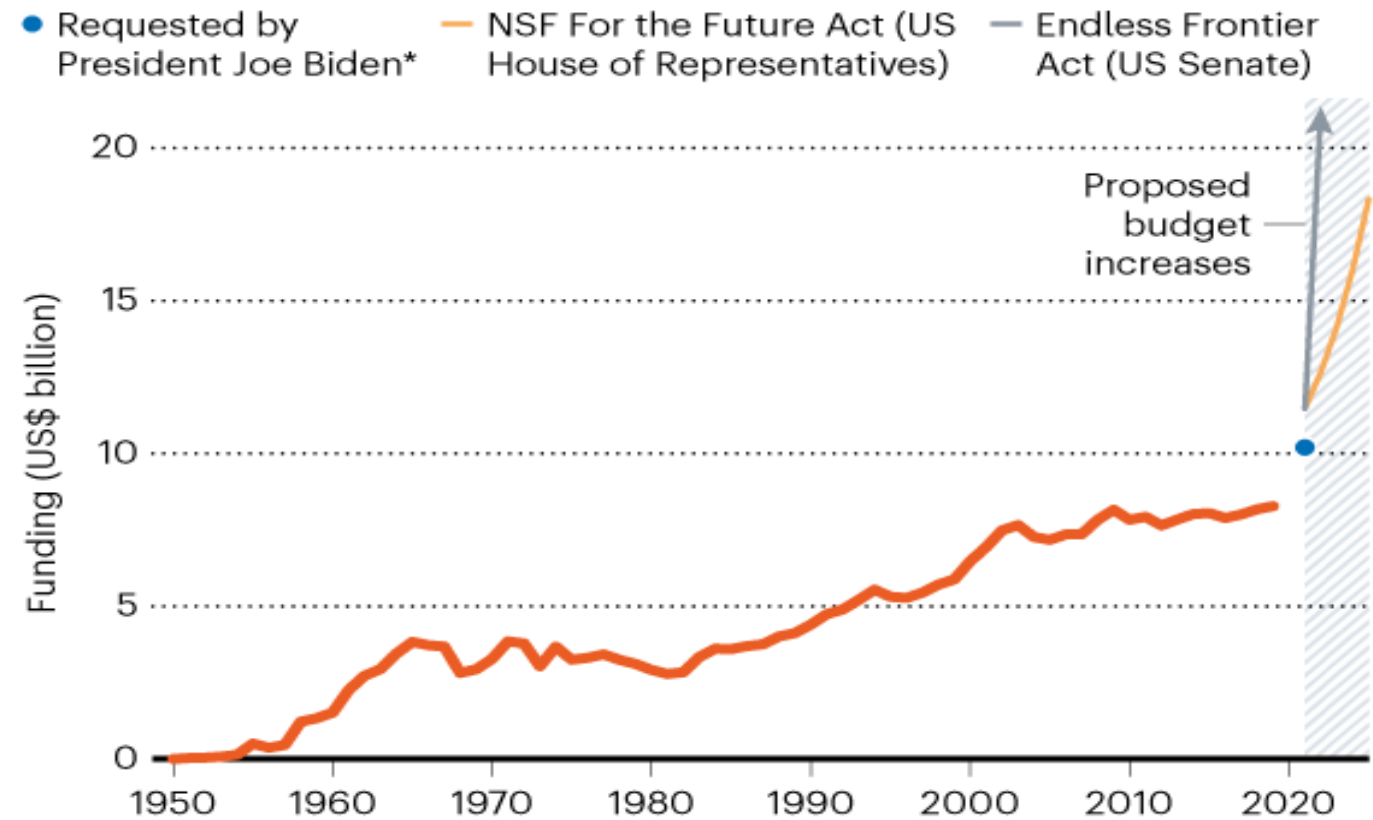
Infrastructure package could provide one-time major investment mostly around climate and transportation

FOCUS AREAS

Innovation/tech transfer/applied research; Climate change; racial equity will feature strongly across agencies

SLOW AND STEADY

Since its launch in 1950, the US National Science Foundation has experienced only gradual changes in its budget. Now it stands to gain a massive funding boost if any of the proposals under consideration are adopted.



Years are fiscal years, and funding is in constant 2020 dollars to adjust for inflation. Data exclude the \$3 billion given to the NSF in 2009 through the American Recovery and Reinvestment Act.

*Excludes \$50 billion requested by President Biden with no time frame specified.

2022 HORIZON

REALLY HARD TO PREDICT

- What wasn't resolved from 2021 / Will reconciliation be used as a tool
- FDA Authorization + Drug Prices?
- ARPA-H (21st Century Cures 2.0)
- Pandemic Preparedness + Public Health
- Wildfires
- ESRA Reauthorization
- NDAA (+ more science legislation?)
- WIOA
- Supply Chain
- SBIR/STTR
- SCOTUS?
- Stalled agenda by.....?