

Issued each Monday, FYI This Week highlights upcoming science policy events and summarizes news from the past week.

The Week of July 29, 2019

THE WEEK AHEAD



(Image credit – Architect of the Capitol)

Senate to Vote on Budget Deal, Setting Stage for September

Before leaving for its August recess, the Senate plans to vote this week on [budget legislation](#) that raises caps on discretionary spending and suspends the federal debt limit for two years. The House passed the bill last week by a vote of 284 to 149, with most of the opposition coming from Republicans, though President Trump [urged](#) his party to vote for the measure. For fiscal year 2020, the legislation will enable non-defense spending to increase by 4% to \$622 billion and defense spending to increase 3% to \$667 billion. However, Congress and the White House still must reach an agreement on how to apportion the money across federal programs. Senate appropriators have said they plan to advance their proposals in September prior to the start of the new fiscal year on Oct. 1, though Congress will likely have to temporarily extend current funding levels to buy time for a final agreement. Congress is expected to bundle its spending legislation into multi-bill “minibuses,” which can have significant implications for science agencies. Last year, the Department of Energy was included in a minibus that was enacted early, resulting in an [on-time appropriation](#) for the first time in two decades, while other agencies endured a lengthy shutdown before their appropriations were [finalized](#) four-and-a-half months into the fiscal year. (Correction: The initial version of this item incorrectly stated that the budget legislation would enable defense spending to increase to \$677 billion.)

Workshop to Look to Future of Nanotechnology ‘Ecosystem’

A [workshop](#) for stakeholders in the National Nanotechnology Initiative (NNI) is taking place Thursday and Friday to explore ideas for the field’s next 15 years. Participants will address the needs of the nanotechnology “ecosystem,” touching on applications in energy, aerospace, and electronics, among other areas. On the workshop’s second day, representatives from federal agencies, including the National Science Foundation and Department of Energy, will discuss mechanisms for supporting the field. The last time NNI came up for review three years ago, a National Academies panel [urged](#) it to help provide “focus,” particularly in moving applications toward commercialization. This week, the latest National Academies review panel will also be holding its [third meeting](#), which will include presentations from three federal agencies as well as discussions related to research, commercialization, and hazards identification.

Former State Department Climate Analyst Speaking Out

In his first public [appearance](#) since his resignation, former State Department analyst Rod Schoonover will discuss climate change at the World Resources Institute on Tuesday. The conversation will focus on preparations for the security implications of climate change and other climate science efforts within the federal government. Schoonover [testified](#) to Congress last month on the intersection between national security and climate change, but the White House questioned his presentation of climate science and blocked his written testimony.

Climate Forums to Chart Research Frontiers

The second [National Drought Forum](#) convenes this week in Washington, D.C., with a focus on the development of early warning systems and increasing drought resilience. A panel of congressional staff members will discuss relevant legislative efforts, including the recently enacted [reauthorization](#) of the National Integrated Drought Information System. Separately, the National Academies committee that advises the U.S. Global Change Research Program is [meeting](#) this week to discuss research needs related to coastal and urban systems as well as “emerging/frontier cross-cutting areas” that the program should consider in the future.

IN CASE YOU MISSED IT



FBI Director Christopher Wray testifying before the Senate Judiciary Committee on July 23.

(Image credit – C-SPAN)

APS Leaders Weigh in on Research Security

The four members of the American Physical Society’s presidential line published an [overview](#) last week of steps the society is taking to keep new [research security initiatives](#) in balance with the benefits of international collaboration. They report that APS has been in communication with various agencies, including the FBI, which they note has produced a [report](#) offering “compelling anecdotal evidence” of cases involving China that have “impacted industry, classified research, and applied research.” However, they note the report provides no evidence of “threats relating to unclassified basic research in academia,” and they argue it presents a misleading estimate of the costs of malign activities. They also report APS has been working with the National Academies and Congress to establish a forum for discussing security issues and is working to “sustain a dialogue” with physicists in China. The authors further express concern about [declining applications](#) from international students to U.S. doctoral programs, and observe that APS organized a campaign that “led directly” to the introduction of the [Keep STEM Talent Act](#), which aims to make it easier for students to remain in the U.S. after graduation. They report there is a parallel effort to introduce a House resolution affirming the importance of international students and scientists to U.S. research so as to combat perceptions among some government staff members that “banning foreign students” is a viable way forward. (APS is an AIP Member Society.)

FBI Chief Elaborates on Academic Outreach Campaign

Responding to queries from six Republican senators at a Senate Judiciary Committee [hearing](#) last week, FBI Director Christopher Wray offered new details on the bureau’s efforts to raise awareness in the academic sector about the means the Chinese government uses to acquire strategically important technologies. Describing the FBI’s concerns about China’s [talent recruitment programs](#), Wray said that, particularly at the graduate level at major universities, the programs have “created a pipeline ... of key intellectual property, sometimes that has dual-use potential, flowing back to China for the advancement of its various strategic plans.” While such

programs are not inherently illegal, he said, there are many cases where they “become violations of U.S. law or at the very least violate non-competes and things like that,” amounting to the misappropriation of taxpayer-funded research. Speaking broadly, he added that the bureau is “not requiring universities to do anything,” but is encouraging them to be more careful about safeguarding intellectual property and “more aware of who it is they are inviting over.” Though he did not address [growing fears](#) the government is discriminating against people of Chinese descent, Wray stressed that his remarks about China are “not about the Chinese people as a whole and it's certainly not about Chinese Americans in this country.”

Democrats Press OSTP Director on Climate, Scientific Integrity

Kelvin Droegemeier, director of the White House Office of Science and Technology Policy, made his first appearance before House appropriators at a [hearing](#) on July 24. Rep. José Serrano (D-NY), who chairs the appropriations subcommittee for OSTP, asked about Droegemeier’s views and the White House’s stance on climate change. Droegemeier replied that rising global temperatures are “predominantly” due to anthropogenic emissions of greenhouse gases and suggested more research should be dedicated to understanding “how those effects at the global scale translate down to local and regional effects.” He also confirmed that the National Security Council has not established a panel to scrutinize climate assessments. Rep. Ed Case (D-HI) asked Droegemeier if he is concerned about [reports](#) of political interference in science and the conclusions of a recent Government Accountability Office [study](#) documenting the uneven implementation of scientific integrity policies across agencies. Droegemeier said the new interagency [Joint Committee on Research Environments](#) is a potential mechanism for addressing the concerns after agencies have had “a few months” to respond to the GAO report. Asked by Rep. Matt Cartwright (D-PA) whether the Department of Agriculture’s [decision](#) to not publicize research on climate change impacts amounts to political interference, Droegemeier said he was not familiar with the case.

Weather Service Director Details Hurricane Forecast Improvement Goals

Testifying at a House Science Committee [field hearing](#) in Houston on July 22, National Weather Service (NWS) Director Louis Uccellini [charted](#) the history of improvements to hurricane forecasting and outlined new initiatives directed by the Weather Research and Forecasting Act, which [became law](#) in April 2017. He noted that the average two-day forecast location error for Atlantic hurricanes dropped from around 300 miles in the 1960s to about 85 miles in the 2010s, and that the five day forecast is now better than the 1.5 day forecast was in the 1970s. He said the National Oceanic and Atmospheric Administration, which houses NWS, has met its five year goal of reducing hurricane forecast track and intensity errors by 20% and now seeks to reduce these errors by a further 50% over the next 10 years. Despite the “significant strides” made to improve hurricane forecast accuracy, he said NOAA must focus more on understanding how people react to forecast information, identifying this as “one of the biggest” research gaps.

Partisan Rift on House Energy R&D Legislation Continues

The House Science Committee [voted](#) along party lines on July 24 to advance bills that would set policy for the Department of Energy’s [solar](#), [wind](#), and [fossil energy](#) programs. Committee Republicans [sustained](#) their [earlier objection](#) to the bills’ recommended spending increases, while offering failed amendments calling for smaller increases. Ranking Member Frank Lucas (R-OK) did however successfully attach a bipartisan [measure](#) to the fossil energy bill that would support work on natural gas carbon capture technologies. Separately, Lucas and six other Republicans [introduced](#) a [bill](#) last week that would set policy for DOE’s Advanced Research Projects Agency–Energy and recommend that its annual funding increase from its current level of \$366 million to \$500 million by fiscal year 2024. Last year, Lucas and Rep. Eddie Bernice Johnson (D-TX), who is now committee chair,

sponsored [bipartisan legislation](#) for ARPA-E that did not include funding recommendations. At a [hearing](#) earlier this year, committee members considered the potential of increasing the agency's budget to its originally envisioned level of \$1 billion, or even more.

House Panel Crafting 'Deep Decarbonization Strategy'

On July 23, House Energy and Commerce Committee Chair Frank Pallone (D-NJ) [announced](#) that the committee will hold a series of hearings to inform legislation for implementing a "deep decarbonization strategy" that would result in the U.S. economy producing net zero greenhouse gas emissions by 2050. In a [memo](#) released before the first hearing of the series, the committee identified a need for "aggressive investment" in low-carbon technologies to achieve that goal, citing an Obama administration [report](#) that sketched a "mid-century strategy" for decarbonizing the economy.

Bipartisan Innovation Bill Takes Aim at Industrial Emissions

Last week, lawmakers introduced a new bipartisan bill called the [Clean Industrial Technology Act](#) in the House and Senate that aims to reduce greenhouse gas emissions from industrial sectors. Among other provisions, it would direct the Department of Energy to establish an Industrial Emissions Reduction Technology Development Program aimed at developing low- and zero-emissions technologies in sectors such as aviation, shipping, and cement production, in which carbon-reducing R&D has lagged other sectors such as electricity generation. At a Senate Energy and Natural Resources Committee [hearing](#) last week on the role of energy innovation in U.S. economic competitiveness, Ranking Member Joe Manchin (D-WV) noted he is cosponsoring the bill as part of the committee's [ongoing work](#) on clean energy innovation.

Science Committee Makes Case for Sustainable Chemistry Initiative

The House Science Committee held a [hearing](#) last week to survey support for the [Sustainable Chemistry Research and Development Act](#). Committee Chair Eddie Bernice Johnson (D-TX) argued the time for the federal government to formalize its support for the field is overdue, noting it has been over 20 years since the "[12 design principles of green chemistry](#)" were developed, and over 10 years since she first sponsored [legislation](#) to spur green chemistry. Johnson said she is "concerned about steps this administration has taken to reverse the little progress we have made," pointing to a 2018 executive order that rescinded a requirement that agencies purchase certain products with sustainable chemicals, and said she believes the National Science Foundation can do more to integrate sustainability principles into its chemistry research and education programs. Witnesses endorsed the concept of establishing a national initiative and called for the adoption of a definition for "sustainable chemistry," which they said is broader than the well-established concept of green chemistry. Other recommendations included requiring all chemists to be trained in green chemistry and teaching sustainability principles in earlier stages of science education.

EVENTS THIS WEEK

All times are Eastern Daylight Time and all congressional hearings are webcast, unless otherwise noted. Listings do not imply endorsement.

Monday, July 29

DOD: Defense Science Board meeting (continues through Friday)
National Academies Beckman Center (Irvine, CA)

DOE: [Biennial EFRC PI meeting, "EFRCs at Ten"](#) (continues Tuesday)

Washington, DC

CASIS: [International Space Station R&D Conference](#) (continues through Thursday)

Atlanta, GA

Tuesday, July 30

NOAA: [National Drought Forum](#) (continues Wednesday)

U.S. Institute of Peace (2301 Constitution Ave. NW, DC)

National Academies: [U.S. Global Change Research Program advisory committee meeting](#) (continues Wednesday)

National Academy of Sciences building (2101 Constitution Ave. NW, DC)

Commerce Department: [Sensors and Instrumentation Technical Advisory Committee meeting](#)

9:30 am, Herbert Hoover Building (1401 Constitution Ave. NW, DC)

WRI: ["Climate Change and National Security: A Conversation with Dr. Rod Schoonover"](#)

2:00 - 3:00 pm, World Resources Institute (10 G St. NE, DC)

Senate: ["Oversight of the U.S. Copyright Office"](#)

2:30 pm, Judiciary Committee (226 Dirksen Office Building)

Senate: ["Solutions to Improve Federal Hiring"](#)

2:30 pm, Homeland Security and Governmental Affairs Committee (342 Dirksen Office Building)

Wednesday, July 31

NOAA: [Ocean Exploration Advisory Board meeting](#) (continues Thursday)

Consortium for Ocean Leadership (1201 New York Ave. NW, DC)

Chamber of Commerce: ["EnergyInnovates: All In"](#)

8:30 am - 3:30 pm, U.S. Chamber of Commerce (1615 H St. NW, DC)

Stanford: ["Prompting Environmental Behavior Change: from Science to Practice"](#)

8:30 - 10:00 am, National Press Club (529 14th St. NW, DC)

STEM Education Coalition: ["Well Rounded STEM Education: Developing Healthy Learning Environments for Students and Educators"](#)

2:00 - 3:00 pm, 2325 Rayburn House Office Building

Thursday, August 1

NNI: [The Future of the National Nanotechnology Initiative: A Stakeholder Workshop](#) (continues Friday)
Hilton Washington National Mall (480 L'Enfant Plaza, DC)
Webcast available

National Academies: [Review of the NASA Science Mission Directorate Science Plan](#) (continues Friday)
National Academy of Sciences building (2101 Constitution Ave. NW, DC)

House: ["Colorado's Roadmap for Clean Energy Action: Lessons from State and Local Leaders"](#)
9:00 am MDT, Climate Crisis Committee (Boulder, CO)

Friday, August 2

No events start today.

Sunday, August 4

SciLine: ["Science Essentials for Political Reporters"](#) (continues through Tuesday)
Drake University (Des Moines, IA)

Monday, August 5

DOD: [Defense Science Board meeting](#) (continues through Friday)
National Academies Beckman Center (Irvine, CA)

National Academies: [Panel on Review of Extramural Basic Research at the Army Research Laboratory](#)
(continues through Wednesday)
Durham, NC

NITRD: [Community of Interest Meeting on Future Computing](#) (continues Tuesday)
NITRD National Coordination Office (490 L'Enfant Plaza SW, DC)
Webcast available

Know of an upcoming science policy event either inside or outside the Beltway? Email us at fyi@aip.org.

OPPORTUNITIES

Nominees Sought for Inaugural Biophysics Decadal Survey

The National Academies is [seeking](#) nominees to serve on a committee tasked with carrying out the first-ever decadal survey for the biophysical sciences. According to the nomination notice, the survey will seek to “help federal agencies, policymakers, and academic leadership understand the importance of biophysics research and make informed decisions about funding, workforce, and research directions.” Consideration of nominations will begin on Aug. 6.

NSF Geosciences Directorate Hiring for Leadership Positions

The National Science Foundation’s Geosciences Directorate is hiring a [director](#) for its Earth Sciences Division and a [section head](#) for the division’s atmospheric science section. The section head position oversees budgets for programs in Atmospheric Chemistry, Climate and Large-scale Dynamics, Physical and Dynamic Meteorology, and Paleoclimate. Applications are due at the end of August.

Foundations Sponsoring ‘Civic Science’ Fellow

Six foundations interested in the relationship between science and society are partnering to [sponsor](#) a “Collaborative Civic Science Fellow.” The fellow will work to coordinate relevant work across the foundations and lead development of a “future collaborative work among funders in the civic science space.” Applications received by Aug. 15 will be given priority consideration.

For additional opportunities, please visit www.aip.org/fyi/opportunities. Know of an opportunity for scientists to engage in science policy? Email us at fyi@aip.org.

AROUND THE WEB

News and views currently in circulation. Links do not imply endorsement.

White House

- [White House science chief: US is still beating China in AI, quantum research](#) (Nextgov)
- [CTO nominee Kratsios: Workforce development ‘at the heart of everything we do’](#) (Fedscoop)

Congress

- [OTA making a comeback? House Dems eye shuttered office to combat Silicon Valley](#) (NBC News)
- [House Modernization Committee recommends bringing back OTA](#) (Federal News Network)
- [House Democrats plan an alternative to Green New Deal](#) (New York Times)
- [Senate Dems seek guidance on climate messaging from Republicans](#) (Eos)
- [Rep. Francis Rooney \(R-FL\) joins House Science Committee](#) (House Science Committee Republicans)

Science, Society, and the Economy

- [Iowa survey reveals strong support for science from both Democrats and Republicans](#) (Research!America)
- [A glacier is dead. A monument will tell visitors whose fault it was.](#) (Washington Post)

Education and Workforce

- [A vaunted program for boosting diversity of US academic scientists is starting to spread](#) (ScienceInsider)

- [Plan to expose all students to physics missing one element — teachers](#) (EdSource)
- [Why physics is still a man's world, and how to change it](#) (Nature, audio)
- [After investigation, Neil deGrasse Tyson will keep his job](#) (New York Times)
- [FBI chief says China is trying to 'steal their way' to dominance](#) (Bloomberg)
- [Trial of Houston businessman stirs debate over US crackdown on China's economic espionage](#) (Washington Post)
- [Three more US universities pledge support for Chinese-American scientists caught in growing web of suspicion](#) (South China Morning Post)
- [Abrupt about-face on indictment of Louisiana coastal scientist over IP theft shocks legal community](#) (New Orleans Times-Picayune)
- [Ex-Michigan State professor, world-renowned robotics expert, cleared of wire fraud](#) (Grand Rapids Press)
- [A scientific Red Scare](#) (Boston Globe, perspective by Arthur Lambert)
- [America can't beat Beijing's tech theft with racial profiling](#) (War on the Rocks, perspective by Peter Mattis and Matt Schrader)

Research Management

- [Letter of support for DOE advisory committees](#) (Energy Sciences Coalition)
- [Registering reports: An innovative way to publish](#) (Nature, editorial)
- [Publish or perish: How China's Elsevier made its fortune](#) (Sixth Tone)
- [New guidelines for statistical reporting in the journal](#) (New England Journal of Medicine)

Labs and Facilities

- [Astronomers at existing Mauna Kea telescopes frustrated as research is delayed by TMT conflict](#) (Hawaii News Now)
- [Opponents of the Thirty Meter Telescope fight the process, not the science](#) (Nature, perspective by Rosie Alegado)
- [The fight for Mauna Kea is a fight against colonial science](#) (The Nation, perspective by Keolu Fox and Chanda Prescod-Weinstein)
- [Supporters say Hawaii telescope will bring jobs, knowledge](#) (AP)
- [Notice of intent to compete the management of NEON](#) (NSF)
- [ITER fusion reactor is now 6.5 years away from first plasma](#) (E&E News)
- [\\$54 million grant will spur new research at Cornell's synchrotron](#) (Ithaca Voice)

Energy

- [Ohio lawmakers approve financial rescue for Ohio's nuclear plants](#) (AP)
- [Ohio governor signs nuclear and coal bailout at expense of renewable energy](#) (InsideClimate News)

Quantum Science and Technology

- [Taking the quantum computing leap](#) (CIO Review, perspective by Steven Ashby)
- [UChicago jumpstarts collaborations with national labs in AI, quantum](#) (University of Chicago)

- [Inside the government's 'Quantum Computing Summer School'](#) (Vice)
- [UK government investing £94 million in quantum research hubs](#) (Optics.org)
- [Why big banks could soon jump on the quantum bandwagon](#) (Wired)

Space

- [Burying CAESAR: How NASA picks winners — and losers — in space exploration](#) (Scientific American)
- [Key House appropriator still skeptical of NASA's lunar plans](#) (SpaceNews)
- [Mars sample return mission plans begin to take shape](#) (SpaceNews)
- [Fueling of NASA's Mars 2020 Rover power system begins](#) (JPL)
- [A 'city-killing' asteroid just zipped by Earth. Why didn't we see it coming?](#) (Vox)
- [India's ambitious Moon mission launches](#) (Nature)

Weather, Climate, and Environment

- [We can protect the ocean 'twilight zone' with a new moonshot](#) (USA Today, perspective by James Cameron)
- [How science got trampled in the rush to drill in the Arctic](#) (Politico)
- [Meet seven EPA science advisers under Trump](#) (E&E News)
- [I'm a scientist. Under Trump I lost my job for refusing to hide climate crisis facts](#) (The Guardian, perspective by Maria Caffrey)
- [The case for a supply-side climate treaty](#) (Science, perspective by G. B. Asheim, et al.)

Defense

- [Esper confirmed as new defense secretary, ending Pentagon leadership uncertainty](#) (DefenseNews)
- [Fixing relationships: How US Army Futures Command is working with small biz, academia](#) (DefenseNews)
- [US Air Force wants wargames that simulate lasers, electromagnetic weapons](#) (Defense One)
- [Griffin confident new space agency will win over skeptics](#) (SpaceNews)
- [Rep. Mac Thornberry \(R-TX\): Pentagon will not have its way in space force legislation](#) (SpaceNews)
- [Air Force chief scientists see Alaska as 'central'](#) (DOD)
- [To protect its satellites, France outlines ambitious space weapons program](#) (Ars Technica)

Biomedical

- [Scientists doing basic studies of human brain win longer reprieve from clinical trial reporting rule](#) (ScienceInsider)
- [California stem cell agency's supporters reveal plan for \\$5.5 billion ballot initiative](#) (Nature)
- [Trump administration releases details on fetal tissue restrictions](#) (ScienceInsider)
- [NNSA awards cooperative agreements for the production of Mo-99 to three US companies](#) (DOE)
- [Japan approves first human-animal embryo experiments](#) (Nature)

International Affairs

- [What Boris Johnson's leadership could mean for science](#) (Nature)
- [Johnson victory sends no-deal shivers through UK research](#) (*Research)
- [Jo Johnson is back at the science ministry as Brexit government assembles](#) (Nature)
- [R&D 'essential' to Finland's EU presidency plans](#) (*Research)
- [European Open Science Cloud to start offering services by 2020](#) (*Research)
- [European Commission launches public consultation for Digital Europe plan](#) (Science | Business)
- [Australia mulls deeper science ties with EU](#) (Science | Business)
- [China to eclipse US as Australia's preeminent research collaborator](#) (Times Higher Education)
- [Mystery surrounds ouster of Chinese researchers from Canadian laboratory](#) (ScienceInsider)
- [Palestinian university fights Israeli visa restrictions](#) (Times Higher Education)
- [Israel's restrictions on international academics at Palestinian universities must be opposed](#) (Times Higher Education, perspective by David Palumbo-Liu)
- [India debates a nationwide tenure system](#) (Nature)
- [Indonesia gets tough on foreign scientists](#) (Science)
- [Mexico's new president shocks scientists with budget cuts and disparaging remarks](#) (ScienceInsider)
- [Quo vadis, Mexican science?](#) (Science, perspective by Antonio Lazcano)
- [Were US diplomats attacked in Cuba? Brain study deepens mystery](#) (New York Times)
- [A call for more robust global science collaboration](#) (Eos, perspective by Chris McEntee)