

Monthly Review: July 2012

The American Geosciences Institute's monthly review of geosciences and policy goes out to the leadership of AGI's member societies, members of the AGI Geoscience Policy Committee, and others as part of a continuing effort to improve communications about the role of geoscience in policy. The current monthly review and archived monthly reviews are all available online. Subscribe to receive the Geopolicy Monthly Review by email.

Announcements

1. **Congressional Visits Day in September - Join Us in DC**

Administration News and Updates

2. **President Obama Hopes to Create Master Teacher Corps for Science and Math**
3. **Early Career Geoscientists Receive Presidential Award**

Congressional News and Updates

4. **Appropriations Update for July 2012**
5. **Congress Passes Bill to Accelerate Presidential Appointments**
6. **Large Transportation Authorization Bill Presented to Obama**
7. **Hydropower Legislation Approved by House**
8. **House of Representatives Passes Critical Minerals Bill**
9. **Domestic Energy Bill Introduced in Senate, Includes Critical Minerals Language**

Federal Agency News and Updates

10. **NSF Charters Russian Icebreaker to Supply Antarctic Research Stations**
11. **USAP Blue Ribbon Panel Releases Report on Improving Logistics**
12. **New Million-Scale Digital Map Data Program Led By USGS**
13. **EPA Reports Water at Dimock, Pennsylvania Safe to Drink**
14. **DOE Announces \$7 Million for Carbon Capture and Storage Research**
15. **ERS Releases Regional Climate Change and Agriculture**
16. **Landsat Program Celebrates 40th Anniversary**

Other News and Updates

17. **Drillers in Arkansas Threatened with Lawsuit for Induced Seismicity**
18. **More Countries Join United States-Led Climate and Clean Air Initiative**
19. **China Develops Carbon Cap and Trade Rules**
20. **UK Government Makes Publically Funded Scientific Research Freely Available**
21. **Former Congressman Inglis Launches Energy & Enterprise Institute**
22. **Washington Post Article Claims Lack of U.S. Jobs for Scientists**
23. **2012 Presidential Candidates Support Clean Energy R&D Initiatives**
24. **Top American Science Questions of 2012 Posed to Presidential Candidates**
25. **Key Reports and Publications**
26. **Key Federal Register Notices**
27. **Key AGI Geoscience Policy Updates**

1. Congressional Visits Day in September – Join Us in DC

Geoscientists are invited to join us for a workshop and visits on 11-12 September in Washington DC for Geosciences

Congressional Visits Day (GEO-CVD). Decision makers need to hear from geoscientists. Become a citizen geoscientist and join many of your colleagues for a workshop followed by a day conducting visits with members of Congress or congressional staff on Capitol Hill to speak on the importance of geoscience research, development, and education.

Email govt@agiweb.org for more information or to sign-up.

[Back to top](#)

2. President Obama Hopes to Create Master Teacher Corps for Science and Math

The White House announced the creation of a Master Teacher Corps, which aims to select the most exceptional elementary and secondary education science and math teachers to serve as mentors for fellow teachers. The program, established at 50 sites in an effort to recruit more students into science, technology, engineering, and mathematic (STEM) fields, will expand over the next four years to include over 10,000 Master Teachers.

The STEM Master Teacher Corps, recommended by the President's Council of Advisors on Science and Technology September 2010 report, is not expected to receive the necessary funding this year. The Department of Education has requested \$5 billion for the Recognizing Educational Success, Professional Excellence, and Collaborative Teaching (RESPECT) project, which would reinforce the Master Teacher program. The House of Representatives Appropriations subcommittee that funds the Department of Education did not include funding for the RESPECT project in the fiscal year 2013 appropriations bill though it has not passed the full committee and may be amended.

[Back to top](#)

3. Early Career Geoscientists Receive Presidential Award

On July 23, the Presidential Early Career Awards for Scientists and Engineers (PECASE) were awarded to 96 researchers for their accomplishments and discoveries in science and technology. This award represents the United States Government's highest honor presented to science and engineering professionals during the start of their independent research careers. For the 2012 awards, the United States Geological Survey (USGS) was represented by three PECASE recipients.

Awardees are nominated based on the promise of their early research efforts to advance agencies' goals, contribute to the American economy, and assure America's global preeminence in science and engineering fields. Innovative goals and a commitment to community service through public education and scientific leadership are additional qualities considered during the nomination process.

The USGS awardees were Joseph Colgan, Karen Felzer, and Justin Hagerty.

[Back to top](#)

4. Appropriations Update for July 2012

On July 31, House and Senate leadership announced an agreement to fund the government for six months at the \$1.047 trillion cap set by the Budget Control Act (BCA, P.L. 112-25). This continuing resolution (CR), set to be voted on and passed in September, is necessary because Congress has not passed any of the 12 appropriations bills that are needed to fund the government beyond September 30. Earlier this month, the House and Senate continued to debate how to protect certain programs from the automatic cuts, or sequestrations, required by law under the BCA, and the House of Representatives approved the fiscal year 2013 Defense Appropriations bill (H.R. 5856) on July 19.

Speaker of the House John Boehner (R-OH) and Senate Majority Leader Harry Reid's (D-NV) agreed-upon stopgap, if passed, will avoid a possible government shutdown a month before the November presidential elections. As of August 1, the CR is just an agreement though Speaker Boehner said that the actual legislation will be written during the August recess set to begin August 4. The CR will have no riders attached and is not expected to deal with the automatic spending cuts or sequestrations set to occur in 2013.

It is still unclear how Congress will deal with the automatic cuts, or sequestrations. In an effort to better understand the effects, the House and Senate worked together to pass the Sequestration Transparency Act of 2012 (P.L. 112-577) on July 25. This law requires the Obama Administration to report the estimated sequestration percentages and amounts necessary to achieve the required reductions for discretionary appropriations and direct spending. A report is due by the end of August.

The House-passed Defense Appropriations bill, H.R. 5856, would provide \$2.1 billion in basic research and \$5.6 billion for the Defense Advanced Research Projects Agency (DARPA). The Committee on Appropriations notes in the accompanying report, "The Committee is concerned about the future of the Nation's workforce, specifically in the science, technology, engineering, and math (STEM) disciplines. These skills are vitally needed within the Department of Defense to maintain United States military superiority. While these skills are underrepresented in the available workforce, minorities especially are underrepresented in these skill sets both in the current workforce and at university levels." The report thus encourages the Department of Defense to support STEM education in undergraduate and graduate programs with a focus on the participation and success of underrepresented minorities. It later recommends that the Department "explore the expansion of programs in science, technology, engineering and

mathematics for grades K through 12 that are comprehensive in nature, provide curriculum for in-school and after-school programs, and promote an overall appreciation for the subject matter.”

[Back to top](#)

5. Congress Passes Bill to Accelerate Presidential Appointments

On July 31, the House of Representatives passed the Presidential Appointment Efficiency and Streamlining Act of 2011 (S. 679) originally introduced by Senator Chuck Schumer (D-NY) in March 2011. The bill eliminates the requirement of Senate approval for nearly 170 presidential appointments.

Presidential appointments often take long periods of time to be approved by the Senate. In the past, senators have placed holds on certain appointees they disagree with therefore delaying an individual nomination process indefinitely. If the Senate does not act on a nomination, the President has the power under the Constitution to appoint a nominee when the Senate is in recess.

Among the appointments that the bill singles out for direct appointment are the Chief Scientist at the National Oceanic and Atmospheric Administration (NOAA) and all board members of the National Science Board.

[Back to top](#)

6. Large Transportation Authorization Bill Presented to Obama

After nearly two months of negotiations, a comprehensive bill to reauthorize the federal government’s surface transportation programs and the National Flood Insurance Program passed the House and Senate on June 29 and was sent to the President on July 2. The Moving Ahead for Progress in the 21st Century Act (MAP-21, H.R. 4348) contains a provision that 80 percent of the penalties paid under the Federal Water Pollution Control Act (33 U.S.C. 1321) as a result of the 2010 Deepwater Horizon BP Oil Spill will be deposited in a Gulf Coast Restoration Trust Fund. The fund is meant to support the economic and environmental restoration of Alabama, Florida, Louisiana, Mississippi, and Texas.

As part of the new law, a Technical Mapping Advisory Committee is established to advise the Administrator of the Federal Emergency Management Agency (FEMA) with recommendations to improve the accuracy and dissemination of flood maps, develop mapping standards and guidelines for data accuracy and quality, and submit a funding strategy to leverage and coordinate budgets across federal agencies.

The law was originally introduced on April 16 by Chairman John Mica (R-FL) of the House Committee on Transportation and Infrastructure and by the end of the month a conference was formed to resolve the language differences between Mica’s original transportation reauthorization bill and Senator Barbara Boxer’s (D-CA) Moving Ahead for Progress in the 21st Century Act (MAP-21, S. 1813). The House and Senate passed the conference report on June 29.

[Back to top](#)

7. Hydropower Legislation Approved by House

On July 9, the House of Representatives passed a bill that encourages permitting of small hydropower projects and supports research into pumped storage for solar and wind projects. The Hydropower Regulatory Efficiency Act of 2012 (H.R. 5892), sponsored by Representative Cathy Rodgers (R-WA), would allow the Federal Energy Regulatory Commission (FERC) to exempt conduit projects from the regulatory process that generate less than five megawatts. In addition, the bill requires FERC to submit a report to Congress on the viability for a shortened, two-year permitting process for pumped storage projects and non-powered dams.

H.R. 5892 has received bipartisan support within the House and Senate. Lisa Murkowski (R-AK), ranking member of the Energy and Natural Resources Committee, is currently working on sister legislation for the House bill, with support from the Committee Chairman Jeff Bingaman (D-NM). Many in the hydropower industry and Department of Energy claim the bill will support job creation, expand the hydropower industry, and potentially provide 15 percent of the nation’s electricity needs by 2030.

[Back to top](#)

8. House of Representatives Passes Critical Minerals Bill

On July 12, the House of Representatives passed the National Strategic and Critical Minerals Production Act of 2012 (H.R.4402). The bill’s supporters claim it would streamline regulations and increase agency cooperation to strengthen the domestic mining industry.

As of 2010, the U.S. imports 17 critical minerals including rare earths and thorium. Critical minerals are defined as being necessary for vital technology such as missile defense systems, wind turbines and catalytic converters and whose supplies are not subject to U.S. control.

The author of H.R.4402, Congressman Mark Amodei (R-NV), asserts that these minerals could be produced in the U.S. if permitting regulation is curbed. He made the case on the House floor that Australian and Canadian mining operations are subject to environmental protections similar to those in the U.S., but their permitting process takes less than two years, while it can take more than seven years in the U.S. Amodei argued that bureaucratic restrictions in the permitting process are depriving the U.S. of

high paying jobs and a domestic supply of critical minerals.

Opponents claim H.R.4402 is meant to reduce environmental protection in the mining industry. Other critical minerals bills plan to support the industry by creating inter-agency groups to monitor the global supply chain or research U.S. deposits and mineral processing techniques. This bill primarily deals with relaxing permit regulations for companies attempting to mine critical minerals. While H.R. 4402 was able to pass the Republican-controlled House of Representatives, it will unlikely pass through a Democratic Senate.

[Back to top](#)

9. Domestic Energy Bill Introduced in Senate, Includes Critical Minerals Language

On July 26, Senator John Hoeven (R-ND) announced the Domestic Energy and Jobs Act of 2012 (DEJA) in the Senate. This bill would put policy in place to reduce energy costs and create jobs within the energy sector. It incorporates language from Senator Lisa Murkowski's (R-AK) Critical Minerals Policy Act of 2011 (S.1113) directing the U.S. Geological Survey (USGS) to evaluate domestic mineral deposits and find sources of critical materials. DEJA would approve the Keystone XL Pipeline, limit regulations of the coal mining industry and make more land available for oil and gas leasing. The bill has not yet been introduced though it is already supported by Senator Murkowski and Senate Minority Leader Mitch McConnell (R-KY).

A House of Representatives version of DEJA was announced by Representative Kevin McCarthy (R-CA). It is unlikely DEJA will pass the Democratic Senate, however the bipartisan collaboration between Senator Murkowski and Senator Jeff Bingaman (D-NM) suggests hope for S.1113.

[Back to top](#)

10. NSF Charters Russian Icebreaker to Supply Antarctic Research Stations

On July 3, the National Science Foundation's (NSF) Office of Polar Programs (OPP) announced it would continue its contract with the Russian icebreaker vessel *Vladimir Ignatyuk*. The vessel will escort supply ships to and from the McMurdo station on Ross Island, off the coast of Antarctica.

OPP's lease of the *Ignatyuk* began in 2011 when the office first made an escort agreement with the owners of the vessel, Murmansk Shipping Company. The most recent agreement came after negotiations to resolve Murmansk's concerns after *Ignatyuk*'s first trip to McMurdo in February 2012. OPP planned to run the station at a reduced level if an agreement could not be reached, but the contract ensures McMurdo can continue research at the same pace as in 2011.

[Back to top](#)

11. USAP Blue Ribbon Panel Releases Report on Improving Logistics

Commissioned by the White House Office of Science and Technology and the National Science Foundation, the U.S. Antarctica Program (USAP) Blue Ribbon Panel released a report recommending changes needed to improve science infrastructure and research operations in Antarctica.

The report, entitled *More and Better Science in Antarctica through Increased Logistical Effectiveness*, follows a 2011 National Research Council report which called for enhanced Antarctic science through organizational changes, broader geographical spread, more international involvement, and increases in the quantity, networking, and duration of observations.

Following visits to McMurdo, Palmer, and South Pole bases, cargo facilities, logistics stations, supply vessels, and several foreign research stations, the twelve-member panel collaborated in Washington, D.C. on policy recommendations to ensure the sustainability of Antarctic science. The report outlines the need to upgrade McMurdo and Palmer stations, repair Palmer's pier and boat ramp, modernize communications, and increase energy efficiency at all bases. The panel acknowledges the vital need to fund a new national icebreaker because the medium class *Healy* icebreaker is incapable of breaking through thick ice sheets leading to research bases, and the Coast Guard's heavy-duty icebreakers are currently out-of-service.

To improve logistics and management of Antarctic research stations the panel recommends decreasing the National Science Foundation's appropriations for Antarctic research by six percent a year over the next four years. The reduction in research budgets would be directed toward improving the Antarctic Program's infrastructure and logistics by the same amount over the same period. The report claims that reductions to scientific research funding could be diminished by reducing the number of support personnel employed at the U.S. Antarctic Program's three bases by 20 percent. This decrease would generate enough money to create 60 new, annual science grants worth \$125,000 each. The report claims that delaying investment in the logistical operations of Antarctica would place additional stress on scientific research funding in the future.

[Back to top](#)

12. New Million-Scale Digital Map Data Program led by USGS

On July 24, the United States Geological Survey (USGS) introduced the *National Atlas of the United States of America*, a comprehensive, digital cartographic system to make maps easily accessible and internationally compatible. The one million-scale maps, where one inch on the map is equivalent to about 16 miles, have twice the resolution of previous versions.

National Atlas is modeled to make geographic information easier to find, get, and use. Digital maps of national, state, and country boundaries, transportation infrastructure, surface waters, and cities and towns can now be easily found on-line through data portals such as data.gov or nationalatlas.gov. Future map themes will include Federal and Native American lands, Congressional districts, and U.S. statistical areas. Data can be downloaded free of charge and easily used with Geographic Information Systems (GIS) or desktop mapping software. In addition, the National Atlas has connected map features along the U.S. borders with national mapping programs in Canada and Mexico, and now meets the Global Map specifications. Global Map is an international mapping coalition with the goal to create an integrated, million scale map of the world.

[Back to top](#)

13. EPA Reports Water at Dimock, PA Safe to Drink

The Environmental Protection Agency (EPA) announced in July that contaminant levels in Dimock, Pennsylvania's water supplies show no health threat and no connection to chemicals used in hydraulic fracturing.

The Pennsylvania Department of Environmental Protection (DEP) has not allowed Cabot Oil and Gas to drill near Dimock, the town featured in the documentary "Gasland." The wells were shut down in 2009 because the town claimed poor well construction caused the migration of methane gas into water resources. The DEP found unnatural gas concentrations on 18 properties. The EPA methane tests found five wells with methane levels above the 28 parts per million threshold. People receiving water from these wells were already aware of methane levels present in local water.

The EPA tested for naturally occurring substances including arsenic, barium, and manganese. Levels of concern for health impacts were identified at five households, however all have built, or plan to build, water treatment systems to reduce the risk.

[Back to top](#)

14. DOE Announces \$7 Million for Carbon Capture and Storage Research

The Department of Energy (DOE) will be allocating \$7 million to eight projects at universities, companies and research institutions in an effort to control the release of carbon dioxide from coal plants and lower the cost of oxy-combustion.

The administration has said they hope to develop technologies to capture 90 percent of emissions at less than \$25 per ton of carbon dioxide. Test pilot projects have not yet been able to reach commercial scale because costs were at least double the \$25 goal.

FutureGen 2.0, a large-scale demonstration project, plans to use oxy-combustion when it comes online in 2017.

Projects exhibiting promise would be proposed for more funding next year. Companies and universities are adding their own money to the DOE's \$7 million, raising the total amount of funds to around \$9.4 million. To date, \$6.9 billion has been spent by the federal government on carbon capture and sequestration.

[Back to top](#)

15. ERS Releases Report on Regional Climate Change and Agriculture

In *Agricultural Adaptation to a Changing Climate: Economic and Environmental Implications Vary by U.S. Region*, a report conducted by the Economic Research Service and sponsored by the United States Department of Agriculture, researchers analyze the extent to which global temperature rise will affect local climate. In addition, the report examines how the magnitude, direction, and rate of local changes will influence food supplies, farmer livelihoods, and rural communities. The use of global climate models and statistical analyses suggest farmers can adjust crop variety, crop rotation, and/or production practices to mitigate the impacts of local climate variations on national agricultural markets.

The study was conducted using the A1B emissions scenario from the Intergovernmental Panel on Climate Change's (IPCC) Special Report on Emissions Scenarios (SRES) and extensive modeling. Models include the Environmental Productivity and Integrated Climate (EPIC) model which estimates weather effects on crop yields, the Agricultural Resource Management Survey (ARMS) that predicts cost and yield impacts, and the Regional Environment and Agriculture Programming (REAP) model which determines the extent that climate-induced changes in crop productivity and price/demand market feedbacks will shift regional agricultural production.

The report outlines several key findings regarding potential land use change and environmental quality under different climate and adaptation scenarios. The Corn Belt and Northern regions of the nation will be less sensitive to climate-induced changes to crop acreage and planting patterns. The aggregate national returns to crop production will decline with increasing severity of climate change, particularly in the Corn Belt region with annual losses that could range from \$1.1 billion to \$4.1 billion. Changes in crop production will lead to changes in crop prices, with the soybean markets experiencing price changes between -4 and 22 percent, and corn prices changing between -2 and 6 percent. Agricultural production could be impacted by heightened damage from crop

pests, rainfall-related soil erosion, and nitrogen loss associated with changes in climate.

Besides significantly impacting farmers' livelihoods, changes in crop production could significantly affect the livestock industry and consumers. The study suggests that farmers introduce crop varieties adapted to changing growing conditions to mitigate the costs of regional climate change and capitalize on new production opportunities.

[Back to top](#)

16. Landsat Program Celebrates 40th Anniversary

On July 23, 1972, the National Aeronautics and Space Administration (NASA) launched the first Landsat satellite. 40 years later, NASA and the United States Geological Survey (USGS) continue to operate and maintain Landsat 5 and 7 and Landsat 8, the Landsat Data Continuity Mission (LDCM), is scheduled to launch in February 2013. The American Geosciences Institute, American Geophysical Union (AGU), Geological Society of America, Soil Science Society of America, and Ball Aerospace sponsored a congressional briefing on the 40th anniversary. Video of the briefing and interviews with USGS Director Marcia McNutt and others can be found on the AGU YouTube account.

[Back to top](#)

17. Drillers in Arkansas Threatened with Lawsuit for Induced Seismicity

On behalf of Stephen Hearn and other residents of Faulkner County, Arkansas, Emerson Poynter LLP has filed a lawsuit against drilling operators due to the onset of thousands of earthquakes in 2010 and 2011. The lawsuit targets subsidiaries of Chesapeake Energy Corporation and BHP Billiton for their "ultrahazardous" decisions to inject hydraulic fracturing wastewater underground. The process of hydraulic fracturing creates toxic, briny flowback water, which drilling companies must treat and discharge into surface water or dispose of by underground injection. Recent technological advances to hydraulic fracturing have led to an increase in gas production wells and wastewater injection sites. Numerous scientific studies, including one conducted by United States Geological Survey scientists, conclude that injecting wastewater underground can lubricate faults and induce small earthquakes.

Citizens of Faulkner County claim the earthquakes, which have reached magnitudes as strong as 4.7, are caused by the negligence of drilling companies and are asking the court to decide whether the drilling operations amount to a public nuisance or trespassing. Although no law addresses induced seismicity, the law firm claims the drilling companies disregarded the well-known connection between injection wells and seismic activity and are causing the increase in earthquake activity. The lawsuit states that this has resulted in higher insurance costs and residents now fear for their safety. The case is scheduled for trial in March 2014.

[Back to top](#)

18. More Countries Join United States Led Climate and Clean Air Initiative

Seven more nations joined the Climate and Clean Air Coalition, launched by Hillary Clinton in February. The addition of Britain, Denmark, Finland, France, Germany, Italy and Jordan brings the total membership to 20 countries. Work has been done to attract more nations, including China and India, to join the coalition.

According to the U.N. Environment Programme (UNEP), air pollution may cause up to 6 million deaths per year worldwide and significantly contribute to global warming. The United States has not taken any legislative action to cut greenhouse gas emissions, however the Climate and Clean Air initiative could reduce global temperature rise associated with greenhouse gases 0.9 degrees Fahrenheit by 2050.

[Back to top](#)

19. China Develops Carbon Cap and Trade Rules

China's National Development and Reform Commission (NDRC) released its rules for a voluntary carbon emissions trading scheme. The rules were translated into English and distributed by Chinese environmental advocacy group The Climate Group. The policy promotes reduction of greenhouse gas (GHG) through setting emissions limitations set by China's National Development and Reform Commission (NDRC). Limitations can be raised by purchasing credits from other companies. The NDRC's monitored emission reduction levels will be reviewed by third party organizations as dictated by the government report. Beijing and the Hubei and Guangdong provinces have begun crafting local emissions trading schemes based on the system emplaced by the European Union. Guangdong is a major center of China's growing coal production industry and is the largest carbon-emitting region in the country. Environmental advocates hope this cap and trade scheme will curb the coal industry and encourage clean energy technology.

[Back to top](#)

20. UK Government Makes Publicly Funded Research Freely Available

The United Kingdom is requiring tax-payer funded research be publicly available beginning in April 2013. The European Commission (EC) followed UK action by opening all work funded by the Horizon 2012 research program in hopes of having about 60 percent of European funded research available by 2016.

The EC's support of open access was made clear through the pilot run on 20 percent of the current research funding budget. The "Accessibility, sustainability, excellence: how to expand access to research publications" report suggested implementation of the "gold open-access model" to have work readily available and free upon publication. Research Councils United Kingdom (RCUK) supports the gold model and plans to assist with charges incurred from the model.

[Back to top](#)

21. Former Congressman Inglis Launches Energy & Enterprise Institute

On July 10, George Mason University announced the formation of the Energy & Enterprise Institute (E&EI) through its Center for Climate Change Communication (4C). E&EI, led by Executive Director and former Congressman Bob Inglis (R-SC), will seek conservative solutions to climate change. To achieve its small government and free enterprise-based solutions, E&EI will sponsor policy papers, collaborate with industry and government leaders, and organize events to promote both climate change mitigation and economic growth. The institute has already begun sponsoring lectures by Inglis and President Ronald Reagan's economic advisor Art Laffer at universities around the country.

Joining Inglis will be Director of Strategy and Operations Alex Bozmoski. Bozmoski has a conservative and technical background through his work for GOP campaigns and conservative activist groups, and implementation of rural energy projects in Africa.

[Back to top](#)

22. Washington Post Article Claims Lack of U.S. Jobs for Scientists

On July 7, *The Washington Post* published an article which claimed, despite estimates from many federal agencies and industry analysts, that the U.S. job market is oversaturated with scientists. This broad claim is based on a lack of professorships in biology and chemistry departments at universities. The article cites PhD graduates staying in post-doctoral positions for over five years and job-slashing in the pharmaceutical industry as symptoms of an economy-wide scientist glut. It acknowledges the need for physicists in industry, but is silent about geoscientists and non-biomedical engineers.

AGI submitted an op-ed in response to this article. AGI criticized the oversimplification and misrepresentation of information in the article. It argued that professor positions are historically competitive and life science departments typically graduate more students, with many eventually pursuing careers in other fields. The letter emphasized the need for geoscientists and engineers in industry and said students can pursue these careers with just a Master's degree. The American Geophysical Union submitted a response to the article as well but neither was printed in the *Post*.

[Back to top](#)

23. 2012 Presidential Candidates Support Clean Energy R&D Initiatives

During a debate on energy and environmental policy sponsored by Business Roundtable (BRT), representatives for Barack Obama and Mitt Romney expressed the candidates' support of the Advanced Research Projects Agency-Energy (ARPA-E) funding model for high-risk basic research. Since it first received funding in 2009, ARPA-E has spent more than \$1 billion on new, clean energy technologies.

Bipartisan praise for ARPA-E research and development (R&D) efforts differed only in the extent to which the campaigns believe government should subsidize clean energy technology with public funds. Romney representative Linda Gillespie Stuntz accused the Obama Administration of investing in clean technologies that produce few jobs and argued that the federal government should not pick technology "winners and losers." She cited the failure of Solyndra, a thin-film solar cell manufacturing company, as an example. Dan Reicher, campaign representative for the Obama Administration, argued that government assistance is needed to promote commercialization of clean energy technologies. Both administrations said they would use government-backed loan guarantees to encourage nuclear power plant development.

When the conversation turned to carbon dioxide emissions, the campaign representatives disagreed on the value of carbon capture and storage technologies (CCS). The Romney campaign doubts the cost-effectiveness of CCS technology; whereas, the Obama campaign defends its efforts to launch a CCS pilot project in Texas. In terms of climate change policy, the Romney campaign said they would be reluctant to mandate greenhouse gas emissions reductions unless nations such as China and India agreed to similar reductions.

[Back to top](#)

24. Top American Science Questions of 2012 Posed to Presidential Candidates

In collaboration with scientists, engineers, and concerned citizens, Sciencedebate.org has requested Barack Obama's and Mitt Romney's campaign teams to respond to a list of 14 critical science issues facing the nation.

Sciencedebate.org is a grassroots, nonprofit science advocacy organization dedicated to initiating a national dialogue on the top science and engineering policy problems. The organization first held an online discussion forum for potential questions and then partnered with science and engineering organizations, including the American Geosciences Institute and several member societies, to reach a consensus and finalize the list.

The top science questions for 2012 focus on issues including innovation and the economy, climate change, research investments, biosecurity, education, energy, food, fresh water resources, internet management, improving ocean health, improving scientific integrity, space exploration, critical natural resources, and vaccination requirements.

The Obama and Romney campaigns have been asked to respond to the questions by August 15. Sciencedebate.org and its media partner *Scientific American* magazine welcome societies to cross-publicize, generate unique coverage of the issues, and discuss the questions in order to encourage productive debate.

[Back to top](#)

*****Government Accountability Office (GAO)*****

Nonpoint Source Water Pollution: Greater Oversight and Additional Data Needed for Key EPA Water Program

In fiscal year (FY) 2012 the Environmental Protection Agency (EPA) allocated \$165 million to address nonpoint source pollution, which is caused by runoff from farms or construction sites. These sources are the lead polluters of water in the nation. Department of Agriculture (USDA) has programs to protect water resources as well. The Government Accountability Office (GAO) looked at the states' experiences in addressing nonpoint source pollution by funding projects, the oversight conducted by the EPA, and the extent of agricultural programs complementing pollution control efforts. GAO made recommendations to both EPA and USDA in the report.

Air Pollution: EPA Needs Better Information on New Source Review Permits

In this report GAO looked at the information the Environmental Protection Agency (EPA) has in regards to New Source Review (NSR) permits issued to fossil fuel electricity generating units. GAO looked at the challenges posed to the EPA, state, and local agencies in complying with requirements set to obtain NSR permits. Finally, they looked at what data shows about compliance with requirements to obtain NSR permits. In an effort to help oversight of NSR permitting and enforcement, GAO recommended the EPA look at ways to have a centralized data source on NSR permits. The EPA acknowledged fixing gaps in data systems, but disagreed with actions recommended by GAO as a whole.

*****National Academy of Sciences (NAS)*****

An Interim Report on Assuring the Department of Defense a Strong Science, Technology, Engineering and Math (STEM) Workforce

This report comes from an 18-month study on the Department of Defense's (DOD) needs in the STEM fields. The report incorporated views from the public and private sectors about the current state of the STEM workforce in achieving the DOD's mission and predictions of potential challenges. The report stressed the importance of maintaining a STEM workforce in the future and shifting the focus towards recognizing and utilizing important technological advancements made outside DOD. The final report of the study will make its recommendations to the Assistant Secretary of Defense for Research and Engineering, Zachary J. Lemnios.

Rising Above the Gathering Storm: Developing Regional Innovation Environments

This report is a summary of a workshop held in Madison, Wisconsin which focused on state-based approaches to strengthen education and improve the U.S. economy. The report emphasized the importance of science, technology, engineering and math (STEM) education from kindergarten to undergraduate studies for research and innovation. It also discussed partnerships between universities, government and industry and the role of technology development and entrepreneurship in forming jobs. It also recommended university and private research focus on questions of global importance such as climate change, energy and infrastructure sustainability and clean water.

Water Reuse: Potential for Expanding the Nation's Water Supply through Reuse of Municipal Wastewater

This report presents a wide variety of treatment options to mitigate water quality issues in reclaimed water and new analysis of microbial and chemical contaminants. Recommendations to the federal regulatory framework are made, which could increase protection of public health for both planned and unplanned reuse and boost confidence in the method.

*****Congressional Research Service (CRS)*****

Rare Earth Elements: The Global Supply Chain

This report evaluates the U.S. dependence on rare earth elements (REE) and how a disruption in their supply can harm national security and the economy. MolyCorp's reopening of the Mountain Pass rare earth mine and its vertical integration program are included as examples of companies attempting to reduce U.S. reliance on the global supply chain. MolyCorp is hoping to domesticate all aspects of REE production from mining, separation and processing. The report recommends the federal government support research programs on REE run by the United States Geological Survey (USGS), challenge Chinese export restrictions and establish a domestic stockpile to reduce dependence on foreign sources of the valuable minerals.

[Back to top](#)

EPA – The EPA has determined the necessity of the National Advisory Council for Environmental Policy and Technology (NACEPT) and has renewed the committee for another two-year period. [Thursday, July 5 2012 (Volume 77, Number 130)]

EPA – The National Advisory Council for Environmental Policy and Technology (NACEPT) will hold a two-day public meeting for the continual development of recommendations for EPA actions regarding the National Academy of Sciences Report, "Incorporating Sustainability in the U.S. Environmental Protection Agency." The meeting will occur August 2nd from 8:30 a.m. to 5 p.m. and August 3rd from 8:30 a.m. to 2 p.m. in Room 2138, EPA East Building. [Thursday, July 5 2012 (Volume 77, Number 130)]

FWS – The U.S. Fish and Wildlife Service (FWS) is holding a public meeting of the U.S. Coral Reef Task Force (USCRTF) August 20-23, 2012. Preliminary comments on the role of USCRTF and coral reef conservation issues were submitted by July 22, 2012. [Thursday, July 5 2012 (Volume 77, Number 130)]

NRC – The U.S. Nuclear Regulatory Commission (NRC) is asking for public comment on the draft regulatory guide, "Fuel Oil Systems for Emergency Power Supplies." Comments must be received by August 31, 2012. [Thursday, July 5 2012 (Volume 77, Number 130)]

AD – The Petroleum Environmental Research Forum (PERF) of the Antitrust Division (AD) notified changes in its membership. No changes in the group research project have occurred and PERF will soon file additional notifications of all changes in its membership. [Friday, July 6 2012 (Volume 77, Number 131)]

EPA – The EPA has posted its draft non-binding guidance titled, *Draft Guidance to Implement Requirements for the Treatment of Air Quality Monitoring Data Influence by Exceptional Events*. Public comments on the document will be accepted until September 4, 2012. [Friday, July 6 2012 (Volume 77, Number 131)]

BOEM - The Bureau of Ocean Energy Management (BOEM) announces the availability of the Final Programmatic Environmental Impact Statement for the Proposed Final Five-Year Outer Continental Shelf Oil and Gas Leasing Program for 2012-2017. [Friday, July 6 2012 (Volume 77, Number 131)]

EPA- The Environmental Protection Agency (EPA) has extended the public comment period for its draft of *Permitting Guidance for Oil and Gas Hydraulic Fracturing Activities Using Diesel Fuels*. The comment period has been extended to August 23, 2012. [Monday, July 9 2012 (Volume 77, Number 132)]

EPA- The EPA has announced renewal of its Acid Rain Program under the Clean Air Act. Comments on this program are due by September 10, 2012. [Tuesday, July 10 2012 (Volume 77, Number 133)]

NOAA- The National Oceanic and Atmospheric Association (NOAA) has approved the extension of Lockheed Martin's license for access to deep seabed mineral exploration. During the comment period, the U.S. Department of State stated that the extension of this license must be approved by the International Seabed Authority under the United Nations Convention on the Law of the Sea (LOS). NOAA extended the license under the Deep Seabed Hard Mineral Resources Act, but noted the terms may change if the LOS is ratified. [Tuesday, July 10 2012 (Volume 77, Number 133)]

NOAA- The National Ocean and Atmospheric Association (NOAA) has released a draft of its Strategic Plan for Federal Research and Monitoring of Ocean Acidification for public comment. Comments are due September 10, 2012. [Wednesday, July 11 2012 (Volume 77, Number 134)]

EPA- The Environmental Protection Agency (EPA) is transitioning to its new greenhouse gas (GHG) regulations under the GHG Tailoring Rule of the Clean Air Act. The final rule goes into effect on August 13, 2012. [Thursday, July 12 2012 (Volume 77, Number 135)]

NOAA- The National Oceanic and Atmospheric Administration (NOAA) announces a public meeting of its National Sea Grant Advisory Board to discuss science and technology programs, education and extension, and program evaluation. The meeting will be held on Monday, August 6, 2012. [Thursday, July 12 2012 (Volume 77, Number 135)]

EPA- The Environmental Protection Agency (EPA) has released its comments on Environmental Impact Statements (EISs) of other federal agencies. [Friday, July 13 2012 (Volume 77, Number 136)]

BOEM- The Ocean Energy Management, Regulation and Enforcement Bureau (BOEM) announces the availability of the Proposed Final Five Year Outer Continental Shelf (OCS) Oil and Gas Leasing Program for 2012-2017. This is the third and final proposal in the new program and can be accessed at the agency's web site. [Friday, July 13 2012 (Volume 77, Number 136)]

NSF- The National Science Foundation (NSF) is accepting comments on applications to enter the Antarctic Specially Protected Areas under the Antarctic Conservation Act of 1978 (P.L. 95-541). Activities requested by these permits include Earth magnetic field studies and environmental observation. Comments are due by August 15, 2012. [Monday, July 16 2012 (Volume 77, Number 137)]

DOE – The National Petroleum Council will hold a meeting on Wednesday, August 1, 2012 from 9:00 a.m. until 11:30 a.m. at the St. Regis Hotel in Washington, DC. [Wednesday, July 18 2012 (Volume 77, Number 139)]

USN – The U.S. Navy's Ocean Research and Resources Advisory Panel will hold a meeting Wednesday, August 15 (8:30 a.m. to 5:15 p.m.) and Thursday, August 16 (8:30 a.m. to 1:00 p.m.) located at Consortium for Ocean Leadership, 1201 New York Ave, Washington, DC. [Wednesday, July 18 2012 (Volume 77, Number 139)]

USCG – The U.S. Coast Guard has publicly released the Coast Guard-Engineering (CG-ENG) Policy Letter 2002-2012, "Acceptance of the 2009 MODU [Mobile Offshore Drilling Units] Code". [Monday, July 23 2012 (Volume 77, Number 142)]

DOE – The State Energy Advisory Board (STEAB) will hold a teleconference call open to the public on Thursday, August 16, 2012, from 3:30 to 4:00 p.m. Call information can be obtained from the listing. [Monday, July 23 2012 (Volume 77, Number 142)]

USGS – The U.S. Geological Survey (USGS) is asking for comments on a draft strategy document aimed at creating 10-year strategies in the mission areas of: Climate and Land Use Change, Core Science Systems, Ecosystems, Energy and Minerals, Environmental Health, Natural Hazards, and Water. The comment period will close midnight of September 1, 2012. [Monday, July 23 2012 (Volume 77, Number 142)]

NRC – The Nuclear Regulatory Commission (NRC) has released Final Revision 6 to the "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Branch Technical Position (BTP) 7-19 on "Guidance for Evaluation of Diversity and Defense-in-Depth in Digital Computer-Based Instrumentation and Control Systems." [Tuesday, July 24 2012 (Volume 77, Number 143)]

NOAA – The National Oceanic and Atmospheric Administration (NOAA) National Climate Assessment and Development Advisory Committee will hold a meeting Wednesday, August 15, 2012 from 3:00 to 5:00 PM at the U.S. Global Change Research Program, Conference Room A, Suite 250, 1717 Pennsylvania Ave NW. There will be a 10-minute public comment period. [Wednesday, July 25 2012 (Volume 77, Number 144)]

USCG – The United States Coast Guard (USCG) is extending the comment period to September 7, 2012 for the proposed "MARPOL Annex I Amendments." This rule proposes to align Coast Guard regulations with the amendments to Annex I of the International Convention for the Prevention of Pollution from Ships. [Thursday, July 26 2012 (Volume 77, Number 145)]

BLM – The Bureau of Land Management (BLM) has issued a rule to amend regulations on locating, recording, and maintaining mining claims or sites. The interim final rule went into effect July 27, 2012. Comments on the interim final rule should be submitted by September 25, 2012. [Friday, July 27 2012 (Volume 77, Number 146)]

NNSA – National Nuclear Security Administration (NNSA) and the Department of Energy (DOE) announced the "Draft Surplus Plutonium Disposition Supplemental Environmental Impact Statement," available for public comment. DOE has released information for public hearings as well. The comment period will close on September 25, 2012. [Friday, July 27 2012 (Volume 77, Number 146)]

EPA – The EPA will host a public meeting from 1:00 to 4:30 p.m. on August 16, 2012 at the EPA Conference Center (Room 1204), One Potomac Yard, 2777 South Crystal Drive, Arlington, Virginia. The purpose of this meeting is to discuss and gather input on the implementation of the Reduction of Lead in Drinking Water Act of 2011. The Act will go into effect January 4, 2014. [Monday, July 30 2012 (Volume 77, Number 147)]

NPS – The National Park Service will hold a teleconference meeting on August 16, 2012, from 2 to 3:30 p.m. The public can attend the meeting in person in Washington D.C. The report from the Science Committee will be on the agenda for discussion by the Board. [Tuesday, July 31 2012 (Volume 77, Number 148)]

NRC – The Nuclear Regulatory Commission (NRC) is holding a public meeting to discuss a draft regulatory issue summary for clarifying the NRC's staff position on the general design criteria for nuclear power plants and technical specification operability. The NRC is asking that comments be made by September 14, 2012. [Tuesday, July 31 2012 (Volume 77, Number 148)]

[Back to top](#)

- Hearing on the National Integrated Drought Information System (7/31/12)
- Hearing on Nuclear Regulatory Commission Policy and Governance Oversight (7/30/12)
- Hearing on Helium Supply Shortages (7/26/12)
- Hearing on Environmental Change in Tribal Nations (7/24/12)
- Panel on Critical Minerals from the Sea (7/20/12)
- Hearing on NASA-Derived Technology (7/13/12)
- Hearing on Legacy Oil Well Remediation in Alaska (7/13/12)
- Hearing on U.N. Convention on the Law of the Sea (7/5/12)
- Hearing on Research Universities (7/5/12)
- Hearing on JPSS and GOES-R Weather Satellites (7/5/12)

Back to top

Monthly Review prepared by Wilson Bonner and Linda Rowan, Staff of Geoscience Policy; Beth Hoagland AIPG/AGI Summer 2012 Intern, Krista Rybacki AIPG/AGI Summer 2012 Intern, and Stephen Ginley AIPG/AGI Summer 2012 Intern.

Sources: Associated Press, AAAS, Environment and Energy Daily, Greenwire, New York Times, Washington Post, National Academies Press, Government Accountability Office, Open CRS, Thomas, House of Representatives, U.S. Senate, the White House, Department of Energy, Department of the Interior, National Aeronautics and Space Administration, Environmental Protection Agency, National Science Foundation, National Oceanic and Atmospheric Administration, Nuclear Regulatory Commission, Department of Commerce, United Nations, Department of Education, Department of Defense, Department of State, Economic Research Service, Washington Post, ScienceDebate.org, Chinese Government, UK Government, George Mason University

This monthly review goes out to members of the AGI Geoscience Policy Committee, the leadership of AGI's member societies, and others as part of a continuing effort to improve communications about the role of geoscience in policy. For additional information on specific policy issues, please visit the web site or contact us at govt@agiweb.org or (703) 379-2480.

Compiled August 1, 2012.
