



## **Energy and Water Appropriations Requests**

**The following requests are Idaho-related projects supported and sponsored by Senators Crapo and Risch:**

**Item Name:** Boise River Floodplain Mitigation

**Amount Requested:** \$990,000

**Recipient:** City of Boise

**Location of work:** Boise, Idaho

**Public Interest:** To help reduce flood risk and enhance redevelopment on the Boise River near the cities of Boise and Garden City

**Project Description:** The project will support a flood study for the Boise River and the design and construction of proposed river channel modifications.

**Item Name:** Boise State University Visualization Center

**Amount Requested:** \$2,000,000

**Recipient:** Boise State University

**Location of work:** Boise, Idaho

**Public Interest:** To support the efforts of the National Science Foundation and the National Institutes of Health

**Project Description:** The proposed Visualization Information Center will consist of a state-of-the-art 3-D visualization, communication, and processing system. This technology will provide the Treasure Valley a diverse array of research tools such as image processing, computational geometry, geometric modeling, computer graphics animation, data analysis, and computational mathematics. The Center would also support real-time video teleconferencing and lectures, webcasts, data-sharing among distributed locations, live field reports, and real-time data acquisition and presentation.

**Item Name:** Columbia River at the Mouth

**Amount Requested:** \$21,000,000

**Recipient:** Pacific Northwest Waterways Association

**Location of work:** Regional

**Public Interest:** Safe passage through the Columbia River supports international trade from exporters in the Pacific Northwest, including Idahoans.

**Project Description:** This project is the first phase of the Mouth of the Columbia River jetty rehabilitation project to improve commercial traffic transit through the Columbia River.

**Item Name:** Component Test Capability

**Amount Requested:** \$9,600,000

**Recipient:** Idaho National Laboratory

**Location of work:** Idaho Falls, Idaho

**Public Interest:** To enable deployment of new nuclear technology enabling reduced greenhouse gas emissions and enhanced energy security

**Project Description:** A need exists to develop a large-scale integrated high-temperature component testing capability to support the research and development of advanced Very High Temperature Reactor components and systems to advance nuclear reactor technology adaptation to commercial applications, mitigate significant technology development cost, and ensure energy security, reducing carbon emissions, and the advancement of the U.S. energy economy.

**Item Name:** Great Feeder Canal Headgate and Fish Screen Project

**Amount Requested:** \$100,000

**Recipient:** Great Feeder Canal Company

**Location of work:** Rigby, Idaho

**Public Interest:** The South Fork of the Snake River is a national fishery, recreation, and agricultural resource, and the river is a federally-designated Wild and Scenic River.

**Project Description:** The project will support design of a headgate and fish screen for the Great Feeder Canal, a major irrigation diversion on the South Fork of the Snake River.

**Item Name:** Green Separation Techniques for Nuclear Waste Recycling

**Amount Requested:** \$1,144,264

**Recipient:** University of Idaho

**Location of work:** Moscow, Idaho

**Public Interest:** To support the development of more efficient and environmentally-sustainable processes for nuclear waste management

**Project Description:** This project will develop new processes using environmentally-friendly "green solvents" for the separation of uranium and fission products.

**Item Name:** Idaho Accelerator Center Production of Medical Isotopes

**Amount Requested:** \$3,000,000

**Recipient:** Idaho State University

**Location of work:** Pocatello, Idaho

**Public Interest:** To enable the development of a reliable domestic supply of medical isotopes

**Project Description:** The Idaho Accelerator Center (IAC) will develop a medical isotope production facility to serve regional isotope needs, conduct basic research in isotope production, educate the next generation of medically-related nuclear scientists, and partner with regional and national entities in medical isotope distribution and use. This program would meet regional and national needs in education and isotope production and provide new isotopes that are not currently part of the national isotope portfolio. IAC would complement and enhance the Department of Energy's National Isotope Program.

**Item Name:** Idaho Facilities Management

**Amount Requested:** \$187,000,000

**Recipient:** Idaho National Laboratory

**Location of work:** Idaho Falls, Idaho

**Public Interest:** To ensure that the Idaho National Laboratory is able to respond to the nation's energy challenges in safe and regulatory-compliant manner

**Project Description:** The INL's role as the lead laboratory for nuclear energy requires that it be equipped to conduct leading-edge research. This includes the capability to support research required by the current reactor fleet, research on advanced reactors, and fuel cycle research. In addition, the INL must continue to support the materials and fuels testing needs of the naval nuclear propulsion program and myriad national and homeland security research and development needs. All of these endeavors require that INL nuclear facilities operate safely, efficiently, securely, and in an environmentally-compliant manner while delivering the needed capabilities to the customers.

**Item Name:** Idaho National Laboratory Center for Advanced Energy Studies

**Amount Requested:** \$2,600,000

**Recipient:** Idaho National Laboratory

**Location of work:** Idaho Falls, Idaho

**Public Interest:** To support the education of students through the development of advanced energy systems

**Project Description:** The Center for Advanced Energy Studies (CAES) is a partnership between the State of Idaho and its academic research institutions and the federal government through the U.S. Department of Energy's Idaho National Laboratory. Through its collaborative structure, CAES combines the efforts of these institutions to provide advanced energy research on both technical and policy issues. These resources will secure equipment that CAES researchers, faculty, and students will use to address the nation's energy challenges through cutting-edge research, while preparing the future energy workforce with expanded educational opportunities and creating and sustaining energy discourse to shape U.S. energy policy.

**Item Name:** Idaho National Laboratory Research on Liquid Phosphazene

**Amount Requested:** \$1,000,000

**Recipient:** Idaho National Laboratory

**Location of work:** Idaho Falls, Idaho

**Public Interest:** To support the development of commercially-viable carbon capture technologies

**Project Description:** This project will support continuation of research on liquid phosphazene for post-combustion carbon dioxide capture.

**Item Name:** Little Wood River Rehabilitation Project

**Amount Requested:** \$1,000,000

**Recipient:** City of Gooding, Idaho

**Location of work:** Gooding, Idaho

**Public Interest:** To increase safety to the community and reduce threats to loss of life and property at risk by deterioration of the rock wall in the Little Wood River

**Project Description:** The project will affect approximately 1.5 miles of the Little Wood River flow within Gooding city limits. In the 1930s and early 40s, the Civilian Conservation Corps constructed a masonry rock wall to channelize the Little Wood River in order to protect the city from floods. Over the years, high water and ice jams have caused severe deterioration of the walls. Large portions of the existing lava rock walls that line the Little Wood River through the city are structurally-unserviceable and many have failed and fallen into the channel. The project will remove and replace the existing rock wall and the boxed culverts that severely restrict the stream channel flow.

**Item Name:** Lower Clearwater Exchange Project

**Amount Requested:** \$400,000

**Recipient:** Lower Clearwater Exchange Project Coalition

**Location of work:** Lewiston, Idaho

**Public Interest:** To help address water quality impacts on Endangered Species Act-protected species and habitat

**Project Description:** The project seeks to permanently resolve impacts to Endangered Species Act-listed Snake River steelhead and critical habitat and to address inadequate water quantity and quality in the Snake River.

**Item Name:** National Electric Grid Reliability Test Bed

**Amount Requested:** \$10,000,000

**Recipient:** Idaho National Laboratory

**Location of work:** Idaho Falls, Idaho

**Public Interest:** To support the development of testing facilities in support of smart grid technologies

**Project Description:** This project will establish a National Electric Reliability Grid Test Bed for evaluating the reliability of our nation's electrical grid infrastructure and for research and development associated with the emerging technologies related to Smart Grid; create a stand-alone power grid infrastructure that would incorporate smart grid technologies for distribution, transmission, and generation and allow full-scale testing without interruption to other INL operations; mitigate the effects of system complexity of smart grid technologies through advanced modeling and digital simulation and real infrastructure testing; and enable the capability to assess architectures and components to mitigate cyber security vulnerabilities prior to full deployment on the power grid.

**Item Name:** Next Generation Nuclear Plant

**Amount Requested:** \$244,000,000

**Recipient:** Idaho National Laboratory

**Location of work:** Idaho Falls, Idaho

**Public Interest:** To support the development of emission-free nuclear power research at the INL

**Project Description:** The Next Generation Nuclear Plant program was initiated in the 2005 Energy Policy Act with the objective of enabling commercial deployment of high-temperature gas-cooled reactor plants for the cogeneration of electricity and process heat for commercial applications such as hydrogen production, with a target of 2021 for initial operation of the plant. Since 2006, the program has been managed by the NGNP Project at Idaho National Laboratory under direction and funding of the Department of Energy.

**Item Name:** Pocatello Wind Turbine Partnership

**Amount Requested:** \$1,000,000

**Recipient:** City of Pocatello

**Location of work:** Pocatello, Idaho

**Public Interest:** To support alternative energy supply and economic development

**Project Description:** The project will install two 1-megawatt wind turbines at the Trail Creek wind turbine farm.

**Item Name:** Idaho Environmental Infrastructure Projects

**Amount Requested:** \$5,000,000

**Recipient:** U.S. Army Corps of Engineers

**Location of work:** Rural Idaho

**Public Interest:** To support environmental infrastructure projects for rural areas in Idaho

**Project Description:** Funding through this program helps continue and initiate several high-need and high-priority environmental infrastructure projects administered by the U.S. Army Corps of Engineers for rural areas and small communities in Idaho that otherwise would be difficult to accomplish.

**Item Name:** Sandia Sodium Debris Bed Treatment Project

**Amount Requested:** \$7,600,000

**Recipient:** Idaho National Laboratory

**Location of work:** Idaho Falls, Idaho

**Public Interest:** To reduce a security threat by treating and eliminating a source of material that is weapons-grade

**Project Description:** The project will support the treatment of the Sandia Debris Bed Fuels shipped to the Idaho National Laboratory.

**Item Name:** Teton Creek Restoration Project

**Amount Requested:** \$333,333

**Recipient:** Friends of the Teton River

**Location of work:** Driggs, Idaho

**Public Interest:** To support restoration work preventing fragmentation of the Teton Creek Restoration project, stimulate the regional economy, and promote the public-private partnerships that have contributed to this effort

**Project Description:** The Teton Creek project will protect against flood damage, improve water quality, and restore critical habitat.

**Item Name:** Third Generation Photovoltaics

**Amount Requested:** \$1,000,000

**Recipient:** Idaho State University

**Location of work:** Pocatello, Idaho

**Public Interest:** To provide cutting-edge technologies, which can be spun off to create high-tech businesses in Idaho and across the country and create well-trained work forces

**Project Description:** The objective of this research at Idaho State University is to create environmentally-benign methods and materials for producing next generation photovoltaic technologies and to train the next generation workforces for Idaho's future high-tech industries.

**Item Name:** Twin Bridges / South Fork Snake River Infrastructure Protection

**Amount Requested:** \$4,800,000

**Recipient:** Madison County

**Location of work:** Rexburg, Idaho

**Public Interest:** To support a long-term solution to protect water resources by minimizing impact to the river and riparian areas, as well as maintaining economic viability and supporting jobs in the region

**Project Description:** The project will support river and infrastructure modifications to protect and restore river system function.