EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF SCIENCE AND TECHNOLOGY POLICY
WASHINGTON, D.C. 20502

March 5, 2010

Dr. John A. Shanahan
660 Detroit St.
Denver, CO 80206

Dear Dr. Shanahan and colleagues:

Thank you for your letter and your interest in the important topic of nuclear energy policy. President Obama has said on many occasions that expanding our capacity to generate clean energy is crucial to our ability to combat climate change, enhance energy security, and increase economic prosperity. And in this connection he has directed his Administration to take steps to expand the safe, secure, and responsible use of nuclear energy.

You and your colleagues raised three issues in your letter.

First, you recommend accelerating the licensing and construction of light-water reactors. We agree. On February 16, President Obama announced that the Department of Energy had offered $8.33 billion in loan guarantees for construction of two new nuclear reactors in Georgia. The President said, "And this is only the beginning. My budget proposes tripling the loan guarantees we provide to help finance safe, clean nuclear facilities." The President recognizes that an increased contribution from nuclear energy will be necessary to meet some of the nation's most important challenges: "To meet our growing energy needs and prevent the worst consequences of climate change, we'll need to increase our supply of nuclear power. It's that simple."

Second, you note the shortage of isotopes for nuclear medicine. My office leads an interagency working group to address the shortage of molybdenum 99 (Mo-99), which is needed to produce the technetium 99m that is used in approximately 50,000 medical procedures per day in our nation. The U.S. government has been keenly aware of this problem and has taken several actions to reduce the impact of the global supply shortage on U.S. healthcare providers and patients. In cooperation with federal, international, and industry partners, we have taken steps to increase production, foster better communication between producers and end-users, and encourage effective management of the available supply. We are accelerating efforts to begin domestic commercial production of Mo-99 without the use of highly enriched uranium. The National Nuclear Security Administration (NNSA) is working with companies to demonstrate technologies for large-scale production, including low-enriched uranium (LEU) targets, LEU solution reactors, neutron capture, and accelerators. NNSA has entered into cost-sharing agreements with Babcock and Wilcox to develop the LEU solution reactor technology and with General Electric-Hitachi to develop the neutron capture technology.

Third, you call for developing fourth-generation nuclear reactors to facilitate the long-term expansion of nuclear energy. The Department of Energy has an active research program in

advanced rectors. This program includes the Generation-IV Next-Generation Nuclear Plant, a high-temperature gas-cooled reactor that could produce electricity with high efficiency and process heat for industrial purposes. The Department of Energy will also continue its participation in international activities considering the future of innovative nuclear power options. My office will continue to contribute to these discussions.

You mentioned the potential of the Integral Fast Reactor to address public concerns about nuclear waste. In January, the President directed the Secretary of Energy to establish a Blue Ribbon Commission on America's Nuclear Future. The Commission will conduct a comprehensive review of policies for managing the back end of the nuclear fuel cycle, including alternatives for the storage, processing, and disposal of civilian and defense used nuclear fuel and nuclear waste. The review will include an evaluation of advanced fuel-cycle technologies, including their cost, safety, resource utilization, and risks of proliferation and terrorism. The important work of the Commission is just getting underway, and I would not want to prejudge their conclusions by commenting on a particular option.

Thank you again for your interest in these important topics.

Sincerely,

John P. Holdren
Director