

U.S. NUCLEAR INFRASTRUCTURE COUNCIL

**Statement by David Blee
Executive Director
U.S. Nuclear Infrastructure Council**

**Senate Republican Conference Hearing
Monday, June 8, 2009**

The U.S. Nuclear Infrastructure Council – a nuclear energy think tank evolution of the U.S. Transport Council representing the vanguard of companies involved in the next wave of nuclear energy plants in the United States – is encouraged by the focus of today’s hearing and its emphasis on the benefits of nuclear energy and the goal of 100 new nuclear plants in the U.S. over 20 years.

A few years ago, there was much buzz about the dawn of the nuclear energy renaissance in the United States. The good news is that there is a renaissance – internationally -- with an estimated 44 plants under construction. But while there are reasons for guarded optimism here at home – only one nuclear energy plant is actually under construction in the United States -- TVA’s Watts Bar Unit 2.

The United States is clearly at a crossroads. The question is: Do we want to help lead the global nuclear energy renaissance – with enormously favorable benefits for homegrown clean energy, jobs, manufacturing and technology development -- or do we want to follow?

There has been much talk in this Congress about global climate concerns and clean energy; a clean energy economy; economic stimulus; job creation; and reviving American manufacturing.

But while nuclear energy is the most potent clean energy baseload power option, the most powerful stimulator of jobs per megawatt -- and enjoys record performance reliability, safety, economics and strong public support -- nuclear energy was excised from the stimulus package and there is no nuclear title in the sweeping clean energy bill, H.R. 2454, recently passed by the House Energy and Commerce Committee.

Consequently, we are encouraged to see the clarity of vision and boldness of purpose in your hearing statement today.

We believe there are five essential components for any comprehensive approach to a blueprint -- an Apollo program successor to the Manhattan Project -- to dramatically expand U.S. reliance on nuclear energy and American leadership in this arena. These elements generally parallel thinking along these lines by the "Making the Renaissance a Reality" roundtable series sponsored by Senators Voinovich and Carper, a forum in which we have been privileged to participate.

1. New Build Focus

The first of these elements is a laser-focus on the looming first wave of new U.S. nuclear energy plants. With applications for combined construction and operating licenses for 26 reactors submitted to the U.S. Nuclear Regulatory Commission (NRC), it is critical that we do everything possible to get as many of this wave of initial plants out of the red zone and into the end zone.

One obvious key to this is to consummate the \$18.5 billion loan guarantee volume for new nuclear plants in Title XVII of the Energy Policy Act of 2005 – which is still pending at the U.S. Department of Energy (DOE).

However, it appears that we need to go further to mitigate what the MIT Energy Initiative calls the "risk-premium" inherent in high up-front capital costs. To this end, we would support expanding the loan guarantee volume to at least cover the four top projects currently under review by the DOE at an estimated \$38 billion in loan volume.

Concepts for deployment of a “Clean Energy Bank” with additional funding of \$100 billion for clean energy technology development should also be pursued.

Additional consideration should also be given to the inclusion of nuclear energy in any renewable portfolio standard (RPS) or renewable electricity standard. The MIT Energy Initiative recently issued an update of its Future of Nuclear Power Study in which it noted: “unfortunately, most RPS programs, exclude two important low-carbon technologies, nuclear and coal with CO₂ sequestration, confusing the objective of reducing carbon emission with encouraging renewable energy in electricity generation.”

2. Regulatory Stability

The work of the U.S. Nuclear Regulatory Commission is obviously pivotal to the future of new nuclear generation in the United States. It is vital that they have the resources to carryout their responsibilities for new licensing, particularly at the scale that we are contemplating today. Under the Chairmanship of Dale Klein, the NRC has done a Herculean job of preparing for the nuclear renaissance. We are hopeful that the new NRC Chairman Gregory Jaczko will seek to build positively on this foundation. It is also imperative with the balance of the NRC Commission up in the air – given the pending appointment of two new Commissioners – that any new nominees be scrutinized thoroughly for readiness for these positions and their approach to the pressing demand for deployment of new nuclear energy plants.

3. Building the Industry Base

With a third of the current industry workforce approaching retirement and roughly fifty percent fewer nuclear engineering programs and operating university nuclear reactors than twenty years ago, the challenge of rebuilding the U.S.'s nuclear education infrastructure is significant. This is particularly daunting given the approximately 700 workers required to operate a new nuclear energy plant, not to mention two to three thousand construction workers needed to build it.

The Nuclear Energy Institute (NEI) estimates that eight new plants would represent almost 20,000 direct construction jobs or 62,000 construction jobs if all 26 plants now on the drawing board were built. The impact on commodities such as concrete and steel and manufacturers of plant components would be equally enormous, with NEI estimating that each plant would require “approximately 400,000 cubic yards of concrete, 66,000 tons of steel, 44 miles of piping and 300 miles of electric wiring and 130,000 electrical components,” – not to mention the related jobs.

We believe that building the U.S. nuclear industry base will take an across-the-board recipe including a re-orientation of the DOE's Office of Nuclear Energy's priorities and a combination of worker training and clean energy technology neutral manufacturing incentives.

4. Sustainable Fuel Cycle

A significant nuclear energy expansion in the U.S. requires a path forward for the back-end of the nuclear fuel cycle with respect to nuclear spent fuel and high-level waste.

This was illuminated in a assessment signed last year by Energy Secretary Steven Chu along with nine other National Laboratory directors: “In the long term, given the envisioned expanded use of nuclear energy, it is both appropriate and timely to reconsider the sustainability of the fuel cycle and to recognize that even with recycling, a geologic repository will be required.”

The vital elements of a workable sustainable fuel cycle framework are:

- Restructuring

We support the Voinovich-Alexander legislation (S. 3661) introduced in the past Congress to establish a U.S. Nuclear Fuel Management Corporation along with access to the Nuclear Waste Fund.

- More Options

We favor the deployment of best available technology to close the fuel cycle. Promulgation of NRC regulations to enable licensing a recycling facility is among the necessary first steps.

We support long-term R&D, but deployment should not wait for R&D, rather, facilities should be designed to incorporate innovation where practical.

Central interim storage of spent fuel from shutdown plants would be another step forward toward creating more options.

- Repository

It is essential that licensing of the proposed Yucca Mountain repository – which the U.S. Chamber of Commerce Institute for 21st Century Energy has called “the safest and best option for disposing of the country’s used nuclear fuel and nuclear waste given the parameters of U.S. law” – be completed. Under any spent fuel management scenario, a nuclear waste repository will be required. We don’t need to foreclose options, we need more of them.

It is logical to pursue R&D on potential future repository options. After recycling, wastes may be better suited for other geologies and lower cost solutions may become available.

- Waste Confidence

Notwithstanding the demonstrated safety and security of at-reactor storage of nuclear spent fuel, in our opinion, reaffirmation of so-called waste confidence language to reaffirm the confidence of the NRC in continuing to renew or issue licenses for nuclear energy plants is desirable.

5. Non-Proliferation

Given continued concern about the safeguards and security of nuclear materials internationally, it is increasingly evidence that our non-proliferation programs can't be business as usual. We need a Nunn-Lugar style ramping up of commonsense non-proliferation programs such as the Global Threat Reduction Initiative (GTRI) and the Reduced Enrichment for Research and Test Reactors (RERTR) among others.

In closing, we applaud the focus of this hearing and we appreciate the opportunity to offer our perspective. We look forward to working with you as you move forward to build consensus, focus and dialog on this critical issue, which is inextricably linked to America’s energy security, competitiveness, environmental progress and national security future.