Testimony of Winfred Nash, President, BWXT, Nuclear Operations Division
Before the Subcommittee on Seapower and Expeditionary Forces of the
House Armed Service Committee

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Rayburn House Office Building, Room 2212

Chairman Taylor, Congressman Bartlett, and Members of the committee:

My name is Winfred Nash and I am the President of BWXT's Nuclear Operations Division.

Thank you for inviting me to testify today before the Subcommittee on Seapower and Expeditionary Forces of the House Armed Service Committee on submarine force structure and acquisition strategy. I am honored to have this opportunity to speak with you.

As the largest supplier of GFE (Government Furnished Equipment) components to the Navy's submarine and aircraft carrier programs, I believe that I can bring a unique perspective to the committee on the critical issue of submarine force structure and acquisition.

I would like to take a moment to tell you a little about the history of BWXT and why our company is critical to answering many of the questions concerning nuclear power shipbuilding.

What is today known as BWXT was formally part of the Babcock and Wilcox Company (B&W), formed in 1867. The first utility power plant in the United States had a boiler designed and supplied by B&W. B&W is the world's expert on steam which is still the most economic medium to generate electricity worldwide. Beginning this year, we reintegrated with B&W and are both now parts of The Babcock and Wilcox Companies.

Our manufacturing capabilities have powered national security since the start of the last century. Teddy Roosevelt's Great White Fleet was primarily powered by B&W boilers. At the end of World War II, at the surrender of Japan, 395 of the 400 U.S. Navy ships in Tokyo Bay were powered by B&W boilers. In the 1950s, B&W became a major U.S. manufacturer and supplier of components for the U.S. Navy's fleet of nuclear powered ships and submarines.

BWXTechnologies, Nuclear Operations Division (BWXT-NOD), a division within BWXT, is a long term supplier of major components of the nuclear power plants operated by the US Navy. Historically, BWXT-NOD has supplied completed power unit

assemblies as well as steam generators and steam system pressurizers, and is presently the sole source supplier of these components.

BWXT has supported the Navy nuclear program since its inception. We are proud to have provided components to the very first nuclear submarine, the Nautilus. Since those early days in the 1950's, BWXT's designing, manufacturing, and operational expertise has assured the success of such programs as the Advanced Test Reactor at the Idaho National Laboratory, Nimitz-class carriers, and the Los Angeles-, Ohio- and Seawolf-class submarines. Today we are proud of our ongoing contribution to the SSGN program, Virginia-class submarines and the newest class of aircraft carriers.

Capacity to Support a Second Virginia-class Annual Procurement

BWXT-NOD can support procurements for the second Virginia-class ship per year. A number of years ago, in anticipation of the eventual need to increase the build rate from one to two per year, BWXT-NOD had either retained or acquired the facility and equipment capacity to support a two per year procurement rate. What remains is to acquire the human resources necessary to staff the facilities and operate equipment at full capacity.

Cost Savings

The added volume associated with a second shipset allows BWXT to more efficiently use its available capacity. In essence, by building only one submarine per year and an aircraft carrier every five years in a facility built to support that plus an additional submarine, we are operating well below our capacity. Each Virginia-class is carrying the BWXT fixed overhead of two submarines.

The resulting efficiencies would yield a 9% savings over current power plant prices. The additional volume would also yield an 8% savings in the production of the CVN-21 power plant.

These cost decreases cross programs for two primary reasons. First, the extremely low volume of nuclear shipbuilding undertaken by the Nation over the past few decades has resulted in a single supplier for nuclear power plants. Incidentally, last year before this Committee, Allison Stiller, Deputy Assistant Secretary of the Navy for Ships, estimated that approximately 80% of the Virginia-class supplier base is sole source. As a result, the same facilities that manufacture aircraft carrier power plants also build submarine power plants.

While having a single source supplier for something as critical as the power plants may seem to increase risk, the reality is that heavy manufacturing is an extremely capital intensive business. So long as acquisition cycles are rationally staggered or volume is adequate to fill a plant's planned sizing, great savings can be achieved and the result is an efficient manufacturing process. Unless and until the Nation drastically expands its

nuclear Navy well beyond anything anticipated today, the most efficient way to produce nuclear power plants is the system that is currently in place, as BWXT has demonstrated with high quality and value since the beginning of the submarine program over 50 years ago. However, working at low volumes with extreme fluctuations of manpower requirements does drive cost higher.

Right now, because of the extreme work load variability associated with nuclear shipbuilding, I am forced to surge my manpower to support an aircraft carrier every five years only to layoff a significant portion of that workforce prior to the next award. When many of the skill sets required to support our activities take, literally, years of training to acquire, hiring and firing is an extremely painful and expensive process. With each cycle, we also lose valuable expertise, as those with the skills to support the front end of the process are lost when their job is done. We must then be prepared to hire, train, and then layoff a whole new cadre of personnel. The resurgence of commercial nuclear power will complicate the process because we will be vying for the same resource pool.

The manpower requirements of a second Virginia-class submarine would help level load those manpower requirements between CVN-21 years, which increases our efficiency and drives down the costs of both power plants.

One attractive option to drive down the program costs and to protect schedules without actually authorizing a second submarine before 2012 is to fund a second shipset of long lead material in 2008 at $400 million, which would not be specifically assigned to a submarine, but would instead roll forward for future use. This would allow us to capture the savings associated with a second submarine while not subjecting the Navy to having to pay for the balance of program out of its future shipbuilding plan, which I understand is a major concern of Naval leadership.

This option is very attractive for a number of reasons. As stated, a revolving inventory would allow us, and much of the submarine industrial base, to better level our work loads over time, thus more efficiently managing our resources and achieving savings. There is another and potentially more critical reason for this, however: the commercial nuclear renaissance. Nuclear power is quickly becoming an attractive option for nations across the world. Some projections show hundreds of reactors being constructed over the next twenty-five year. Given the limited manufacturing capacity, globally, to produce large forgings and tubing and other specialized components and the limited availability of raw resources, such as nickel, higher demand could significantly affect the price of a nuclear power plant. Growing demand in the commercial nuclear sector could also create such gridlock in the system that surging production to meet some future crisis could be difficult. A revolving shipset would substantially mitigate all of these problems.

Expanding the Nuclear Navy beyond Submarines and Aircraft Carriers

I would now like to expand my comments beyond our ability to support a second Virginia-class and talk briefly about our capacity to support growing the nuclear Navy to

include nuclear cruisers and/or large deck amphibious ships. Because this program direction would have major implications for both the Virginia-class and the CVN-21 program, I think my comments are germane.

Adding a nuclear cruiser or large-deck amphibious ship would significantly drive down nuclear power plant costs across the fleet, even beyond the savings associated with the second Virginia-class. If the Navy adds a new class of surface combatant using an existing design, such as CVN 21, BWXT would also be able to support the manufacturing of those components.

That concludes my testimony for today. I thank the Chairman and the rest of the subcommittee for their time.