

# UPF UPDATE

JUNE 2013

## SOARING COSTS DIMINISHING RETURNS

**In early June**, for the first time, Tennessee Senator Lamar Alexander publicly voiced concern about the rising costs of National Nuclear Security Administration projects: “I’ve pretty well had it with these big Energy Department projects that start out costing a billion dollars and end up costing \$6 billion. We can’t afford that.”

### RISING COSTS

Alexander was in Oak Ridge, home of the latest NNSA runaway project, the Uranium Processing Facility, when he said that. Tracking the cost of the UPF is not easy, and even the most diligent pursuer of fiscal clarity will eventually be disappointed—the light at the end of the tunnel is three letters blinking erratically: TBD. In the code language of NNSA federal contracting, this seems to translate to “blank check.”

The trajectory of the UPF project tracks neatly with the criticisms of the GAO for major NNSA construction projects. GAO has suggested, and OREPA has declared on numerous occasions, that NNSA lacks the institutional capacity to effectively manage major projects. On projects over \$100 million, NNSA’s track record is abysmal—costs double and re-double, schedules push out decades. OREPA believes the problem is cultural, meaning it can not be resolved by replacing personnel.

### HOW WE GOT HERE

In 2005, when the UPF was first proposed, the NNSA projected it would cost in the range of \$600 million - \$1.5 billion to replace the aging weapons production facilities in Building 9212 and modernize other operations, including dismantlement operations, support for the Navy’s nuclear

fuel program, and preparation of HEU for downblending. As Y12 developed the Environmental Impact Statement [EIS] for the UPF, the cost estimate jumped to a higher range, from \$1.5 - \$3.5 billion. The Government Accountability Office did a review and found these estimates were unsupportable.

Still later, NNSA upped its estimate to \$4.2 - \$6.5 billion, with a billion dollar contingency built in. Meanwhile, a look by the Army Corps of Engineers suggested the upper range could be expected to go as high as \$7.5 billion.

In October 2012, NNSA announced its “space/fit issue,” a major setback for the UPF schedule and the cost projections, though NNSA said it would keep to the \$6.5 pricetag figure. At the same time, NNSA said it would narrow the scope of the UPF, dropping modernization of dismantlement operations from the plan for at least 10-20 years.

In February 2013 NNSA informed the Defense Nuclear Facilities Safety Board [DNFSB] the cost of the redesign would eat into the contingency set aside in earlier projections.

By the time the President’s budget was released in April 2013, NNSA noted the cost of the “space/fit” design fiasco was nearly \$600 million, and the total design cost would now be \$1.19 billion.

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### THE UPF

The UPF was proposed in 2005 as a replacement for aging production facilities, Building 9212, at Y12 in Oak Ridge.

The original plan for the UPF included modernized dismantlement operations; that mission was dropped in October 2012 when designers realized the facility was too small to hold all the equipment planned for it.

In 2014, the UPF gets a name change—the Uranium Capabilities Replacement Project—obfuscating the fact that the UPF is the flagship of the next generation of nuclear weapons production facilities in the US.

### LIFE EXTENSION PROGRAM

The NNSA’s Life Extension Program seeks to refurbish and replace aging parts of weapons in the US nuclear stockpile to extend their useful life for 60-80 years.

In some cases, life extension modifications significantly change the military capabilities of the warhead being “LEPped,” effectively creating a new nuclear weapon.

In 2013, the US is performing LEPs on the W-76 Trident warhead; plans to perform LEPs on the B61 bomb are undergoing scrutiny; initial studies on LEPs for the W78/88 warhead are also beginning.

The price for the UPF would still be \$6.5 billion, said NNSA, but this would be a production-only UPF, with other missions deferred for decades.

The Government Accountability Office subsequently reviewed NNSA cost projections and recalculated the price of the UPF, the whole thing, including the parts to be added later. The new numbers were shocking—a pricetag now exceeding \$11 billion dollars, and a construction schedule pushing into the 2030s.

## SAVING MONEY NOW

Four important things can be done to save big money on the UPF project. Senator Alexander, sitting on a key appropriations committee, is well situated to take action.

### 1. DOWNSIZE PRODUCTION OPERATIONS

In 2011, NNSA announced it would build the UPF with a larger-than-necessary production capacity of 80 warheads/year. In 2010, NNSA said it could meet mission requirements with a UPF capacity of less than 10 warheads/year. The choice to supersize the UPF was to maintain the capability to produce new nuclear weapons—which would contravene US policy and undermine US nonproliferation efforts by emboldening other nations.

### 2. THINK LONG TERM.

The need for weapons production capacity has been declining steadily for twenty-five years; the need for dismantlement capacity has been increasing. The UPF, proposed when the US nuclear stockpile was 6,000 warheads, makes much less sense when the active US stockpile stands at 1,525 with further reductions projected for the future.

The primary production mission of the UPF—the Life Extension Program—may also be mooted as questions are being raised about the cost and wisdom of major design changes to US warheads in the absence of nuclear testing. Questions are being raised as the cost for a B61 LEP rises above \$10 billion and NATO countries question its continuing role in Europe.

On the other hand, the US lacks sufficient capacity to disassemble and dismantle nuclear warheads retired from the stockpile as required by our arms control treaties. At Y12 in Oak Ridge, a more-than-ten-year backlog of weapons components awaiting dismantlement presents criticality safety risks as well as general management challenges.

Mission priorities for the UPF should be reversed. Dismantlement operations should have first claim on floor space; production operations should be right-sized.

### 3. SECURITY NOW, NOT LATER.

One reason for the “space/fit” issue was NNSA’s refusal to incorporate safety into the initial design for the facility, despite repeated pleas by the DNFSB, GAO recommendations, and the Department of Energy’s own guidelines.

Still, a larger safety/security question is not even being asked: *Why is the UPF being designed as an above-ground facility when it introduces avoidable vulnerabilities into the facility and risks neutralizing US HEU operations capacity?*

When the UPF’s sister facility in Oak Ridge, the

Highly Enriched Uranium Materials Facility, was being designed, the Project on Government Oversight and the DOE’s own Inspector General’s

office expressed concern that an above-ground facility would be vulnerable. Their concerns were dismissed in the name of cost savings. But on July 28, 2012, three protesters approached the HEUMF and painted on its walls for nearly twenty minutes before they were interrupted. Had their intentions been maleficent...

The UPF, if built above grade, will be no more secure and, by the nature of its work, will be a more attractive target for anyone who wishes to harm the US or debilitate US nuclear capacity.

Now, while the UPF is undergoing a redesign, is the time to address this fundamental security issue—not ten years from now when the building sits in smoke and ruin, and HEU lays across the landscape of East Tennessee.

### 4. CUT EXCESS BUREAUCRACY—THE NNSA.

The Government Accountability Office has been unsparing in its review of NNSA major project failures in the 13 years of the NNSA’s existence. It should be clear to fiscally concerned members of Congress that, whatever the original intent in sequestering nuclear weapons operations from the rest of the Department of Energy, the actual effect has been to create a level of bureaucracy which has not added efficiency or effectiveness to the work of the government.

OREPA has said, and others have echoed, that it is past time to pull the plug on the NNSA and to revert to direct DOE management of programs within the department. NNSA has failed to respond adequately to past critiques and has shown itself incapable of good management; it should not be given billions of dollars more to prove it again.

Senator Alexander should hold hearings before signing any checks—it’s past time for answers to these questions and action to rein in the NNSA’s spending rodeo.

**“I’VE PRETTY WELL HAD IT WITH PROJECTS THAT START OUT AT A BILLION DOLLARS AND END UP COSTING SIX BILLION.”**

SENATOR LAMAR ALEXANDER