The New York Times, September 21, 2014

U.S. Ramping Up Major Renewal in Nuclear Arms

By WILLIAM J. BROAD and DAVID E. SANGER

SEPT. 21, 2014

President Obama and Dmitri A. Medvedev, then the Russian president, in 2009 at the Kremlin in Moscow, where they signed an agreement to cut strategic nuclear arms.

KANSAS CITY, Mo. — A sprawling new plant here in a former soybean field makes the mechanical guts of America's atomic warheads. Bigger than the Pentagon, full of futuristic gear and thousands of workers, the plant, dedicated last month, modernizes the aging weapons that the United States can fire from missiles, bombers and submarines.

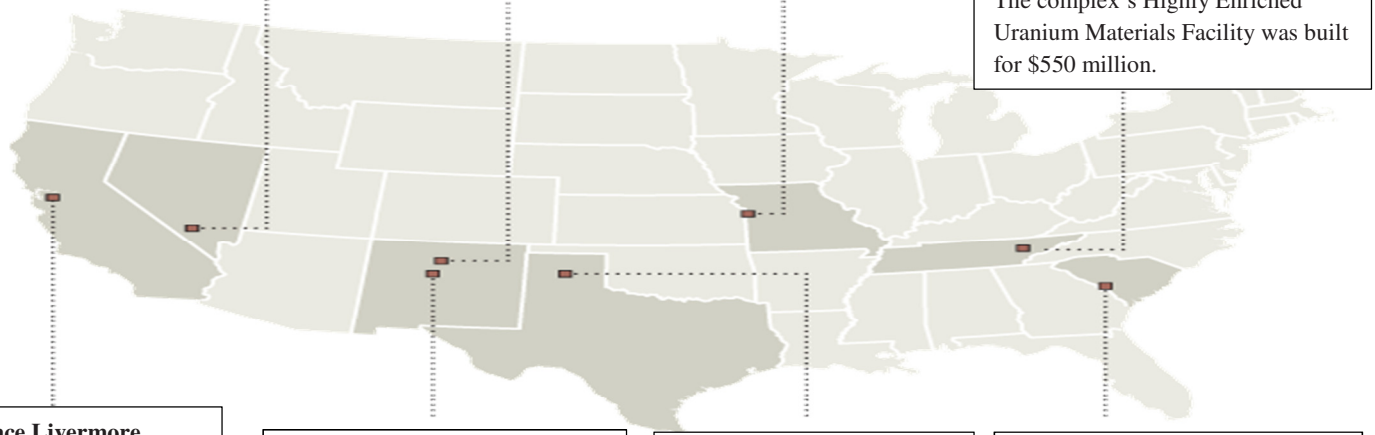
It is part of a nationwide wave of atomic revitalization that includes plans for a new generation of weapon carriers. A recent federal study put the collective price tag, over the next three decades, at up to a trillion dollars.

This expansion comes under a president who campaigned for "a nuclear-free world" and made disarmament a main goal of American defense policy. The original idea was that modest rebuilding of the nation's crumbling nuclear complex would speed arms refurbishment, raising confidence in the arsenal's reliability and paving the way for new treaties that would significantly cut the number of warheads.

Instead, because of political deals and geopolitical crises, the Obama administration is engaging in extensive atomic rebuilding while getting only modest arms reductions in return.

Modernizing a Nuclear Arsenal

The government is upgrading major nuclear weapon plants and laboratories, which employ more than 40,000 people.



Nevada National Security Site
EMPLOYEES: 2,500
UPGRADES:1 proposed
The National Criticality Experiments Research Center was built for $150 million.

Los Alamos National Laboratory
EMPLOYEES: 7,430
UPGRADES:
7 approved, 6 proposed
A plutonium processing site was recently renovated.

Kansas City Plant
EMPLOYEES: 2,730
The National Security Campus, recently completed for $700 million.

Y-12 National Security Complex
EMPLOYEES: 4,720
UPGRADES:5 approved, 4 proposed
The complex's Highly Enriched Uranium Materials Facility was built for $550 million.

Lawrence Livermore National Laboratory
EMPLOYEES: 5,250
UPGRADES:2 approved, 6 more proposed

Sandia National Laboratories
EMPLOYEES: 9,880
UPGRADES:3 approved, 9 proposed
A complex for testing weapons was recently rebuilt for $100 million.

Pantex Plant
EMPLOYEES: 3,180
UPGRADES:
3 approved, 10 proposed
The plant's high-explosives pressing facility is being built for $145 million.

Savannah River Site
EMPLOYEES: 5,670
UPGRADES: 1 approved
The new Tritium Engineering Building was recently completed.

Sources: National Nuclear Security Administration, Government Accountability Office

Supporters of arms control, as well as some of President Obama's closest advisers, say their hopes for the president's vision have turned to baffled disappointment as the modernization of nuclear capabilities has become an end unto itself.

"A lot of it is hard to explain," said Sam Nunn, the former senator whose writings on nuclear disarmament deeply influenced Mr. Obama. "The president's vision was a significant change in direction. But the process has preserved the status quo."

With Russia on the warpath, China pressing its own territorial claims and Pakistan expanding its arsenal, the overall chances for Mr. Obama's legacy of disarmament look increasingly dim, analysts say. Congress has expressed less interest in atomic reductions than looking tough in Washington's escalating confrontation with Moscow.

"The most fundamental game changer is Putin's invasion of Ukraine," said Gary Samore, Mr. Obama's top nuclear adviser in his first term and now a scholar at Harvard. "That has made any measure to reduce the stockpile unilaterally politically impossible."

That suits hawks just fine. They see the investments as putting the United States in a stronger position if a new arms race breaks out. In fact, the renovated plants that Mr. Obama has approved for a smaller force of more precise, reliable weapons could, under a different president, let the arsenal expand rapidly.

Arms controllers say the White House has made some progress toward Mr. Obama's broader agenda. Mr. Nunn credits the president with improving nuclear security around the globe, persuading other leaders to sweep up loose nuclear materials that terrorists could seize.

In the end, however, budget realities may do more than nuclear philosophies to curb the atomic upgrades. "There isn't enough money," said Jeffrey Lewis, of the Monterey Institute of International Studies, an expert on the modernization effort. "You're going to get a train wreck."

While the Kansas City plant is considered a success — it opened ahead of schedule and under budget — other planned renovations are mired in delays and cost overruns. Even so, Congress can fight hard for projects that represent big-ticket items in important districts.

Skeptics say that the arsenal is already dependable and that the costly overhauls are aimed less at arms control than at seeking votes and attracting top talent, people who might otherwise gravitate to other fields.

But the Obama administration insists that the improvements to the nuclear arsenal are vital to making it smaller, more flexible and better able to fulfill Mr. Obama's original vision.

Daniel B. Poneman, the departing deputy secretary of energy, whose department runs the complex, said, "The whole design of the modernization enables us to make reductions."

A Farewell to Arms

The new National Security Campus in Kansas City, Mo.

In the fall of 2008, as Barack Obama campaigned for the presidency, a coalition of peace groups sued to halt work on a replacement bomb plant in Kansas City. They cited the prospect of a new administration that might, as one litigant put it, kill the project in "a few months."

The Kansas City plant, an initiative of the Bush years, seemed like a good target, since Mr. Obama had declared his support for nuclear disarmament.

The $700 million weapons plant survived. But in April 2009, the new president and his Russian counterpart, Dmitri A. Medvedev, vowed to rapidly complete an arms treaty called New Start, and committed their nations "to achieving a nuclear-free world."

Five days later, Mr. Obama spoke in Prague to a cheering throng, saying the United States had a moral responsibility to seek the "security of a world without nuclear weapons."

"I'm not naïve," he added. "This goal will not be reached quickly — perhaps not in my lifetime. It will take patience and persistence."

That October, the Nobel committee, citing his disarmament efforts, announced it would award Mr. Obama the Peace Prize.

The accord with Moscow was hammered out quickly. The countries agreed to cut strategic arms by roughly 30 percent — from 2,200 to 1,550 deployed weapons apiece — over seven years. It was a modest step. The Russian arsenal was already declining, and today has dropped below the agreed number, military experts say.

Even so, to win Senate approval of the treaty, Mr. Obama struck a deal with Republicans in 2010 that would set the country's nuclear agenda for decades to come.

Republicans objected to the treaty unless the president agreed to an aggressive rehabilitation of American nuclear forces and manufacturing sites. Senator Jon Kyl, Republican of Arizona, led the opposition. He likened the bomb complex to a rundown garage — a description some in the administration considered accurate.

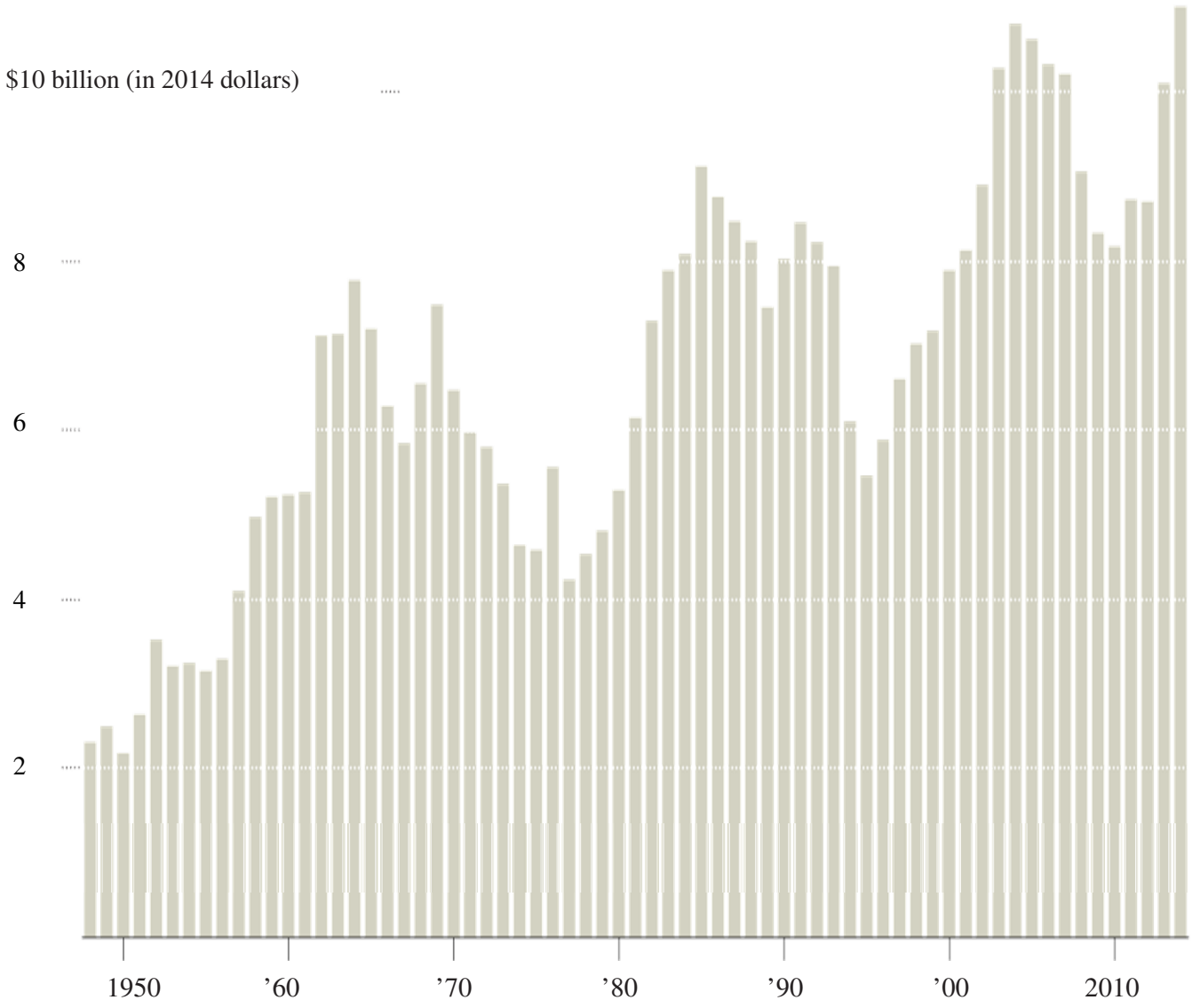
Under fire, the administration promised to add $14 billion over a decade for atomic renovations. Then Senator Kyl refused to conclude a deal.

Facing the possible defeat of his first major treaty, Mr. Obama and the floor manager for the effort, Senator John Kerry, now the secretary of state, set up a war room and made deals to widen Republican support. In late December, the five-week campaign paid off, although the 71-to-26 vote represented the smallest margin ever for the ratification of a nuclear pact between Washington and Moscow.

The Democrats were unanimous in favor, their ranks including six senators with atomic plants in their states. Among the Republicans joining the Democrats were Bob Corker and Lamar Alexander, both of Tennessee and both strong backers of modernization. ("We're glad to have the thousands of jobs," Mr. Alexander said recently in announcing financing for a new plant.)

Nuclear Spending

Annual spending by the Department of Energy and the Atomic Energy Commission on nuclear weapons research, development, testing and production.



Source: Monterey Institute of International Studies

In open and classified reports to Congress, Mr. Obama laid out his atomic refurbishment plans, which the Congressional Budget Office now estimates will cost $355 billion dollars over the next decade. But that is just the start. The price tag will soar after 10 years as missiles, bombers and submarines made in the last century reach the end of their useful lives and replacements are built.

"That's where all the big money is," Ashton B. Carter, the former deputy secretary of defense, said last year. "By comparison, everything that we're doing now is cheap."

A Wave of Modernization

The money is flowing into a sprawling complex for making warheads that includes eight major plants and laboratories employing more than 40,000 people. Its oldest elements, some dating to 1943, have long struggled with fires, explosions and workplace injuries. This March, a concrete roof collapsed in Tennessee. More recently, chunks of ceiling clattered down a stairwell there, and employees were told to wear hard hats.

“It’s deplorable,” Representative Chuck Fleischmann, Republican of Tennessee, said at an April hearing. Equipment, he added, “breaks down on a daily basis.”

In some ways, the challenge is similar to what Detroit’s auto industry faces: Does it make sense to pour money into old structures or build new ones that are more secure, are fully computerized and adhere to modern environmental standards?

And if the government chooses the latter course, how does it justify that investment if the president’s avowed policy is to wean the world off nuclear arms?

The old bomb plant in Kansas City embodies the dilemma. It was built in World War II to produce aircraft engines and went nuclear in 1949, making the mechanical and electrical parts for warheads.

But a river flooded it repeatedly, and in the past year it was gradually shut down. Today, visitors see tacky furniture, old machinery and floors caked with mud.

Its replacement, eight miles south, sits on higher ground. Its five buildings hold 2,700 employees — just like the old plant — but officials say it uses half the energy, saving about $150 million annually. Everything is bright and modern, from the sleek lobby and cafeteria to the fitness center. Clean rooms for delicate manufacturing have tighter dust standards than hospital operating rooms.

It is called the National Security Campus, evoking a college rather than a factory for weapons that can pound cities into radioactive dust.

Rick L. Lavelock, a senior plant manager, said during a tour in July that employees had a “very great sense of mission” in keeping the arsenal safe and reliable.

Los Alamos National Laboratory in New Mexico.

Their main job now is extending the life of a nearly 40-year-old submarine warhead called the W-76. Drawing on thousands of parts, they seek to make it last 60 years — three times as long as originally planned.

The warhead’s new guts, a colorful assortment of electronic and mechanical parts, lay alongside a shiny nose cone on a metal table outside an assembly hall.

The last stop on the tour was a giant storage room. Mr. Lavelock said it covered 60,000 square feet — bigger than a football field. Laughing, he likened it to the “Raiders of the Lost Ark” scene showing a vast federal warehouse that seemed to go on forever.

If the Kansas City plant is the crown jewel of the modernization effort, other projects are reminders of how many billions have yet to be spent, and how even facilities completed successfully can go awry.

At Los Alamos National Laboratory in New Mexico, birthplace of the atomic bomb, plans for a new complex to shape plutonium fuel emerged a decade ago with a $660 million price tag. But antinuclear groups kept publicizing embarrassing details, like the discovery of a geologic fault under the site. The estimated cost soared to $5.8 billion, and in 2012, the Obama administration suspended the project.

"In the current fiscal crisis," Charles F. McMillan, the director of Los Alamos, told a nuclear conference last year, building large facilities "may no longer be practical."

A different problem hit the Y-12 National Security Complex in Oak Ridge, Tenn. A $550 million fortress was erected there to safeguard the nation's main supplies of highly enriched uranium, a bomb fuel considered relatively easy for terrorists to make into deadly weapons.

In 2012, an 82-year-old Roman Catholic nun, Megan Rice, and two accomplices cut through fences, splashed blood on the stronghold and sprayed its walls with peace slogans. The security breach set off major investigations, and the nun was sentenced to almost three years in prison.

Now, the site's woes have deepened. As Oak Ridge prepared for an even bigger upgrade — replacing buildings that process uranium — the price tag soared from $6.5 billion to $19 billion. This year, the Obama administration scuttled the current plan, and the lab is struggling to revise the blueprint.

Robert Alvarez, a policy adviser to the energy secretary during the Clinton administration, recently wrote in The Bulletin of the Atomic Scientists that Oak Ridge was the "poster child" of a dysfunctional nuclear complex.

Across the nation, 21 major upgrades have been approved and 36 more proposed, according to the Government Accountability Office. In nearly two dozen reports over five years, the congressional investigators have described the modernization push as poorly managed and financially unaccountable.

They recently warned — in typically understated language — that the managers of the atomic complex had repeatedly omitted and underestimated billions of dollars in costs, leaving the plan with "less funding than will be needed."

The Y-12 National Security Complex in Oak Ridge, Tenn.

The Military Deployments

The Obama administration says it sees no contradiction between rebuilding the nation's atomic complex and the president's vow to make the world less dependent on nuclear arms.

"While we still have weapons, the most important thing is to make sure they are safe, secure and reliable," said Mr. Poneman, the deputy energy secretary. The improvements, he said, have reassured allies. "It's important to our extended deterrent," he said, referring to the American nuclear umbrella over nations in Asia and the Middle East, which has instilled a sense of military security and kept many from building their own arsenals.

The administration has told the Pentagon to plan for 12 new missile submarines, up to 100 new bombers and 400 land-based missiles, either new or refurbished. Manufacturing costs for these forces, if approved, will peak between 2024 and 2029, according to a recent study by Dr. Lewis and colleagues at the Monterey Institute.

It estimated the total cost of the nuclear enterprise over the next three decades at roughly $900 billion to $1.1 trillion. Policy makers, the report said, "are only now beginning to appreciate the full scope of these procurement costs."

Nonetheless, lobbying for the new forces is heating up, with military officials often eager to show off dilapidated gear. In April, a "60 Minutes" segment featured a tour of aging missile silos. Officials pointed out antiquated phones, broken doors, a missile damaged from water leaks and an old computer that relied on enormous diskettes.

The looming crackup between trillion-dollar plans and tight budgets is starting to get Washington's attention. Modernization delays are multiplying and cost estimates are rising. Panels of experts are bluntly describing the current path as unacceptable.

A new generation of missiles, bombers and submarines "is unaffordable," a bipartisan, independent panel commissioned by Congress and the Defense Department declared in July. Its 10 experts, including former Secretary of Defense William J. Perry, echoed other estimates in putting the cost at up to $1 trillion.

The overall investment, the panel said, "would likely come at the expense of needed improvements in conventional forces."

In August, the White House announced it was reviewing the atomic spending plans in preparation for next year's budget request to Congress, which will set federal spending for 2016.

"This is Obama's legacy budget," said a senior administration official who spoke on the condition of anonymity because of the topic's political delicacy. "It's his last chance to make the hard choices and prioritize."

Already, the administration has delayed plans for the Navy's new submarines, the atomic certification of new bombers and a new generation of warheads meant to fit more than one delivery system. And debate is rising on whether to ax production of the air-launched cruise missile, a new nuclear weapon for bombers, its cost estimated at some $30 billion.

One of the most dramatic calls for reductions came from Chuck Hagel shortly before he became defense secretary last year. He signed a study, headed by retired Gen. James Cartwright, a former vice chairman of the Joint Chiefs of Staff, that proposed cutting the nuclear arsenal to 900 warheads and eliminating most of the 3,500 weapons in storage. The nation's military plan, the study concluded, "artificially sustains nuclear stockpiles that are much larger than required for deterrence today."

In a speech in Berlin last year, the president said he would cut the arsenal to roughly 1,000 weapons — but only as part of a broader deal requiring Russian reductions. So far, the Russian president, Vladimir V. Putin, has shown no interest, and Mr. Obama has made clear he will not cut weapons unilaterally. Unless either man changes his approach, the president's legacy will be one of modest nuclear cuts and a significantly modernized atomic complex.

"I could imagine Putin might well decide it's in his interest to seek more cuts," said Rose Gottemoeller, the undersecretary of state for arms control and international security, and the country's top arms negotiator. "I don't discard the notion we could do it again."

Few of her colleagues are so optimistic. They predict that if Mr. Obama is to achieve the kind of vision he entered office with, he will have to act alone.

William J. Broad reported from Kansas City, Mo., and David E. Sanger from Washington.

A version of this article appears in print on September 22, 2014, on page A1 of the New York edition with the headline: U.S. Ramping Up Major Renewal in Nuclear Arms.