

# Stewards of the Apocalypse

The new and improved doomsday racket at the warhead labs,  
and what to do about it

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Omitted references available upon request

“It is disturbing to witness the transition from national interest to self-interest.” (Bob Puerifoy, former vice president for weapons, Sandia National Laboratories (SNL), email of 7/2/2012)

“They call it the Nuclear Security *Enterprise*. That’s the problem right there.” (Steve Guidice, former weapons complex manager, Albuquerque Operations Office)



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# Preliminary considerations

- Human survival and the survival of nature is our topic. The weapons labs are a small but important piece of this problem.
- Nuclear extinction –
  - Begins with *some* people and *some* species, not *us*; is fundamentally related to problems of justice, solidarity, and stewardship. We must fear and fight a politics of disposability everywhere and in every way, while also keeping in mind triage of *our time and attention*.
  - We do not understand what will happen when we “open the gates of hell” even part-way. Our models of the direct effects of nuclear weapons do not include their social and political sequellae, which we do not and will not understand. We should not think such sequellae do not exist. We are inexperienced.
  - There are three forms, we might say:
    - Extinction by the sun (is underway now, if not halted);
    - Extinction by nuclear war (likelihood increasing);
    - Patchwise destruction, e.g. by nuclear contamination or climate (underway now; likelihood increasing); unknown, complex consequences

## U.S. Nuclear Forces (review)

- Land-based ballistic missiles (warheads: W78 and W87)
- Gravity bombs (B61-3,4,7,10,11 and B83)
- Air-launched cruise missiles (W80-1)
- Submarine-launched ballistic missiles (W76, W76-1, W88)
  
- Deployed and reserve (“hedge”) arsenals, plus dismantlement queue (~7,400 total)
- “Strategic” and “tactical”
  
- Warhead design, manufacture, surveillance: Department of Energy (DOE) and its subsidiary National Nuclear Security Administration (NNSA) and its contractors (ratio of 1 fed to 20 contractors)
  
- Delivery system design, procurement: Department of Defense (DoD) and military (ratio of 1 fed to 2 contractors in DoD overall)
  
- Operation of forces: DoD and military
  
- Projected cost of all: \$348 billion over 10 years (CBO); \$1 trillion over 30 years (MIIIS, LASG)

# Nuclear weapons complex – visible, yet invisible

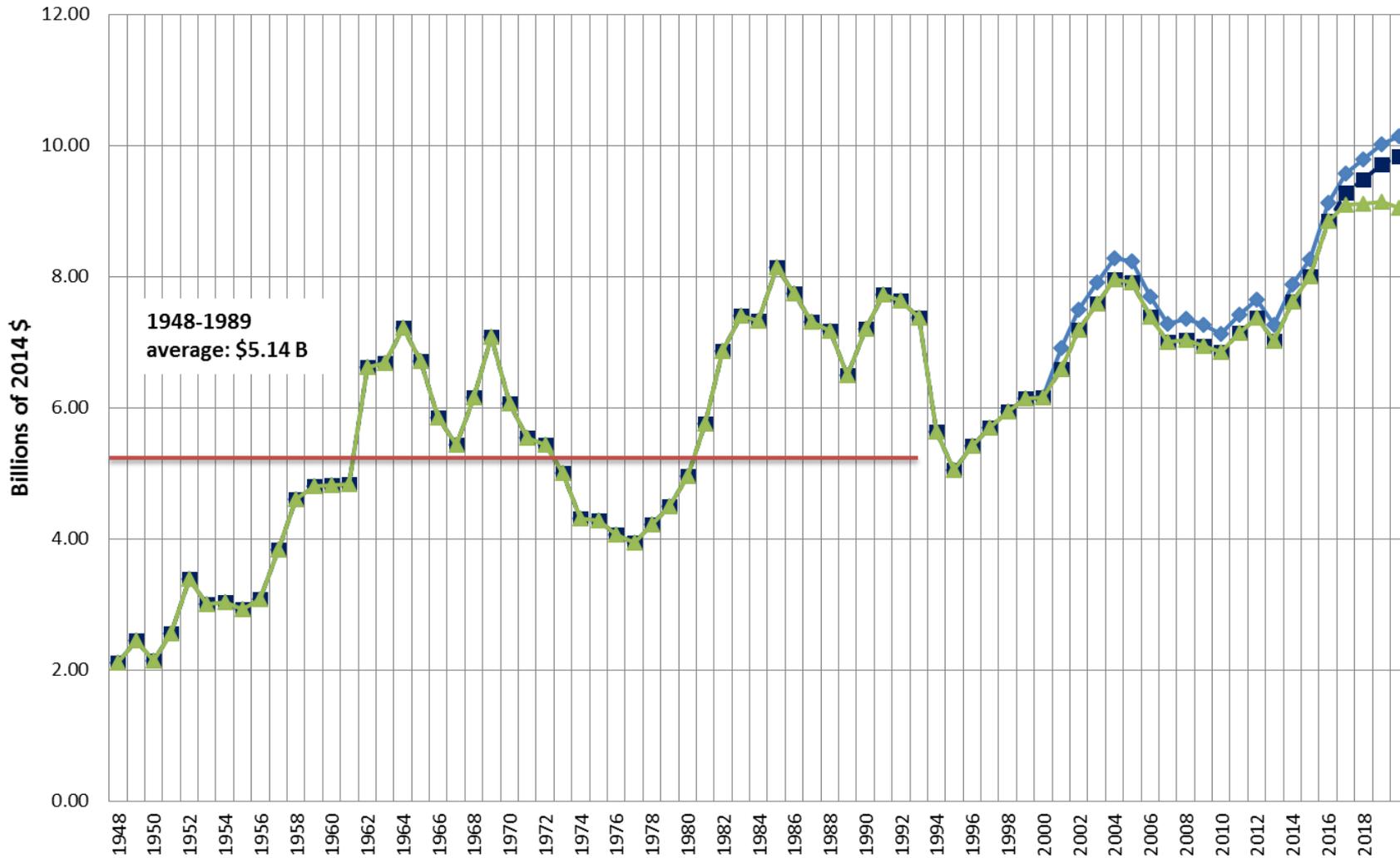


[old map, numbers obsolete]

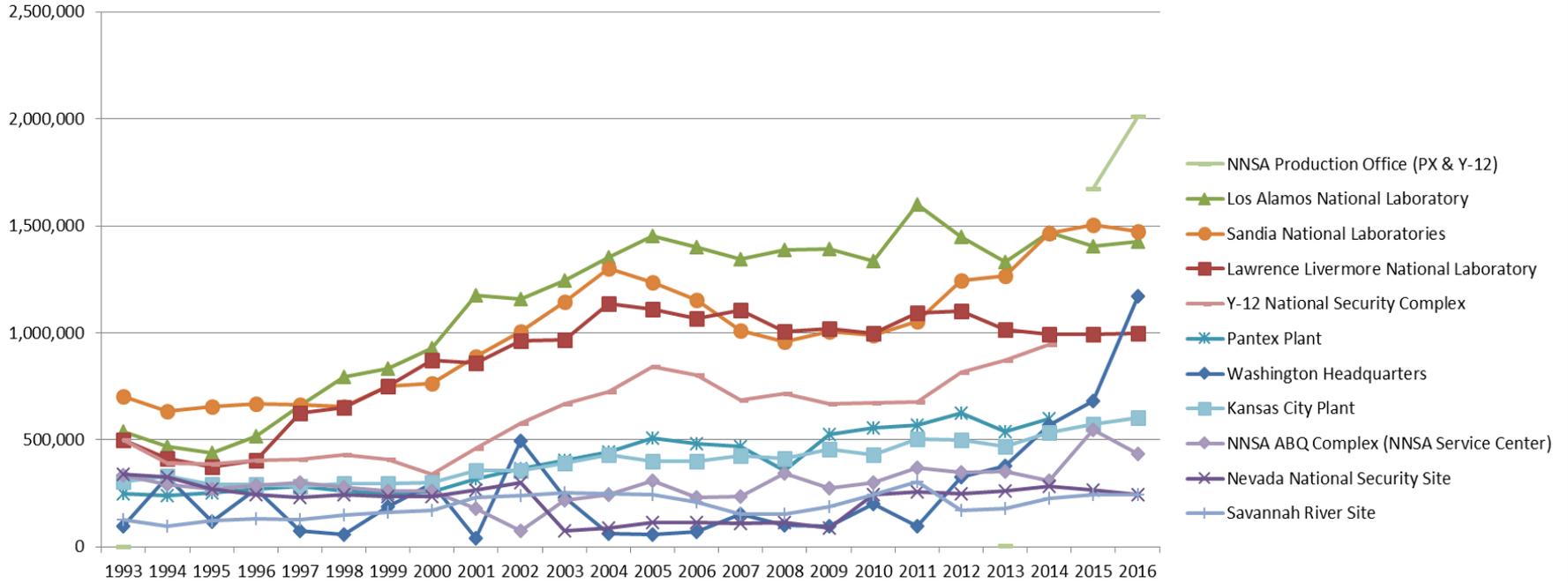
Source: Taking Stock: Worldwide Nuclear Deployments 1998. Natural Resource Defense Council. William M. Arkin, Robert S. Norris and Joshua Handler. [www.nrdc.org](http://www.nrdc.org).

# AEC/ERDA/DOE/NNSA Annual Spending for Nuclear Weapons Research, Development, Testing, and Production

NNSA Weapons Activities w/ admin costs (lighter) & w/o (darker), in 2014 \$ except FY15 & FY16-20  
(requested) in current \$. Green: 2% inflation after 2015

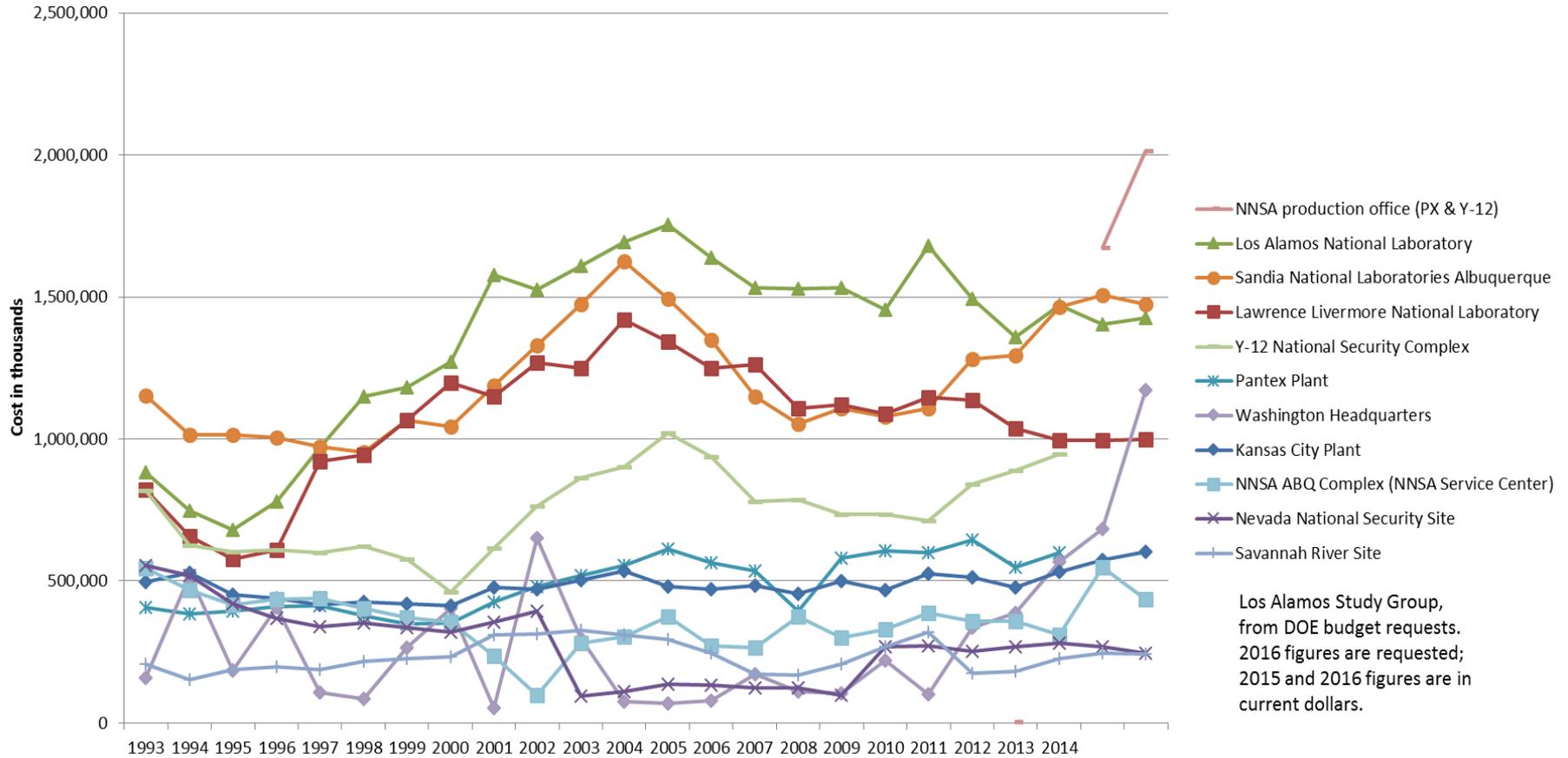


## U.S. Nuclear Warhead Complex: Weapons Activities Spending (Then-Year Dollars, \$K)



Los Alamos Study Group, from DOE budget requests. 2016 figures are those requested.

## U.S. Nuclear Warhead Complex: Weapons Activities Spending (2014 dollars, \$K)



# An abridged history of nuclear weapons labs since 1989

- 1989-1994: Uncertainty and then downsizing (“right-sizing”) at the labs. Rocky Flats shutdown and Berlin Wall (1989). Reciprocal stockpile reductions (about half), bomber de-alerting. Successive failures of DOE plans for a renewed weapons complex. Production site closures. End of nuclear weapons production after SRAM workaround. Nuclear test moratorium from 9/92, extended under O’Leary in 1993 after collapse of stated testing rationales and notional commitment to what became Science-Based Stockpile Stewardship (SBSS). Welsome report on human radiation experiments, O’Leary press conference (12/93). Initiation of the ambitious Science-Based Stockpile Stewardship (SBSS) program (JASON SBBS report, 11/94); aggressive programs for new nuclear weapons at labs continue to press upwards.

Cold War triumphalism, which meant more to some factions than others. Leaked Wolfowitz draft Strategic Planning Guidance (1992), at the time seemingly dead in the water. Yeltsin era begins in 1991 (through 1999). Dismantling and collapse of Soviet Union. Strong START II signed (1993), ratified by Russia in 2000 under Putin including condition to retain ABM Treaty.

- 1994-1996: Stabilization and groundwork for growth; new powers to the labs; many new weapons proposed, first new bomb built. SBSS begins, the precursor of the broader Stockpile Stewardship and Management (SSM) program, the result of a political deal (“Deal #1”). Galvin Panel threat (especially to LLNL and NIF) fended off. Clinton Nuclear Posture Review (NPR) fails under Ash Carter (1994). SSM PEIS. Comprehensive JASON 1995 study of stockpile: margins all high enough, can be made higher; warns against changes. Major effort to include disarmament provisions in Nuclear Nonproliferation Treaty (NPT) led by Non-Aligned Movement nations (NAM) fails in 1995 due to opposition from nuclear weapon states and U.S. arms control funders and NGOs; “Abolition Caucus” of NGOs formed in response. “Stockpile Confidence Symposium” hosted by STRATCOM later in 1995; new weapon candidates briefed by labs. First “Submarine Warhead Protection Program” meeting (1995), eventually leading to significant upgrade of W76 fuzing (a little more than half completed as of Feb. 2015). CTBT signed, Safeguards in place; annual warhead certification requirement initiated. New era for labs begins. B61-11 earth-penetrator rapidly created by a modification in the field (1996) after years of study, first new post-testing warhead or bomb.

- 1995-2004: Decade of large real annual increases in warhead and lab spending, fully-supported by arms control community as part of CTBT ratification “deal.”

Initial rise of the neocons. Project for a New American Century (PNAC) begins (1997); “Rebuilding America’s Defenses” (2000). Brzezinski *The Grand Chessboard* (1997). Lewinsky scandal, impeachment, Kosovo war (all 1998). NATO expansions (Poland, Hungary, and the Czech Republic in 1999; Estonia, Latvia, Lithuania, Slovenia, Slovakia, Bulgaria, and Romania in 2004); other Russian border states put in NATO “vestibule” pending membership.

- 1997 or 1998: NDAA “reforms” give additional new powers to lab directors and other weapons complex and STRATCOM leaders. Lab directors, who are contractors, cannot be fired for opinions about stockpile, etc. Project Sand Dune (1997), part of stage-setting for next administration (a repeating pattern).
- 1999-2000: “Lab Breakout” I: CTBT ratification (“Deal #1”) fails; Wen Ho Lee; Foster Panel reports (through 2003); NNSA created. PNAC nuclear policy study.

- 2001-2005: Neocons in power, unprecedented warhead budgets (Breakout II, attempted but only partially successful); plan to make over or replace whole arsenal in Bush NPR; Modern Pit Facility. Checked in part by lack of sound purpose, bipartisan congressional and NGO opposition, and poor management. LANL security and safety shutdown (2004).

Beginning of continuous global “liquid war” and resulting growing chaos (aka “War on Terror”). U.S. withdrawal from ABM treaty (2002), triggering end of START II (2002). (Weak) Strategic Offensive Reductions Treaty (SORT) signed (2002).

- 2005: Breakout III: physics lab privatization decision (LANS 2006, LLNS 2007). Bechtel-led consortia with only minor corporate differences take over both labs. Lab directors now interest-conflicted corporate CEOs. Previous contractor (UC) was not using latent power of labs sufficiently. Privatization causes reductions in force, lays groundwork for pension crisis to come. Warhead budgets begin falling in real terms as cost of new wars weighs budget. RRW proposed.
- 2005: Peak conventional (i.e. cheap) oil begins, peak oil exports worldwide, peak oil *per capita* and peak oil *per dollar GDP* worldwide, all initiating a new era in history – one of incipient scarcity.

- 2006-2008: Relative stability at the labs amid the growing turmoil about performance; budgets sag in real terms and operational costs soar; RRW dies; new plans laid; global financial crisis. GW Bush retires half of nuclear arsenal (2007), fulfilling SORT commitment 5 years early.

Putin speech in Munich reviewing history of arms control, drawing line, halting Russian weakness toward U.S. and NATO (Feb. 2007). Russo-Georgia war (2008).

- 2009-2010: Breakout IV: “Prague Deception,” Nobel rumors (Feb.), then the speech, then the prize; December 2009 love-fest with labs at White House committing to wider role for nuclear labs later visible in interagency charter of July 2010, *plus also* \$1 trillion comprehensive DoD/DOE nuclear modernization commitment, *plus also* a New START *without disarmament* (and with *more* active warheads in reserve). Vague NPR with differing interpretations. This is “Deal #2.”

Albania and Croatia join NATO (2009).

- 2011-2013: Modernization struggles. Flagship project CMRR paused by litigation, then fails from lack of need, wasting \$600+ million invested; fiasco continues to this date. UPF stumbles and is dramatically downsized, also wasting hundreds of millions. Every single large NNSA and DOE project in trouble by now. Sequestration limits modernization takeoff in wasteful institutional environment.

Direct U.S. involvement in Syria war, sought by neocons, averted at last minute (2013). Pentagon approves possible deployed nuclear arms reduction of one-third, which wasn't implemented in part due to political conditions associated with Deal #2. Yalta conference re future of Ukraine; fracking promised to provide energy independence for that country and indeed for all of Europe.

- 2014: Breakout V: massive warhead budget liftoff at last, disarmament ended. But significant retrenchment and delays in stockpile management goals. Old-fashioned “public service” fee model for labs floated by NNSA given poor performance under profit motive. “Interoperable” warhead delayed indefinitely at end of year or beginning of 2015, effectively ending (LLNL-written?) “3 + 2” stockpile plan in all but name. LANL shuts down WIPP indefinitely due to scientific, management error incurring \$500+ million in costs. DOE withholds all LANL fee, shortens contract by two years. Latest reform committees stumble forward fecklessly. NNSA called a “failed experiment” but nothing is done.

Neocons attack Russia via coup d'état and subsequent civil war in Ukraine, plus sanctions, plus currency attack; Russia accepts Crimea back. Arms reductions likely end under Obama before they begin.

## Summary of this history:

- 25+ years of crisis and fiascos punctuated by periods of apparent relative stability (or lack of visibility) after attempted reforms.
- Continuous active and passive support for nuclear labs by arms control community, by Democrats as well as Republicans, down to present day. Fantasies of “diversification” and “conversion” are used to bring in donors and voters.
- Ever-more-sophisticated modes of public relations, political control, and propaganda applied by labs nationally and regionally. Mere existence at scale and continued funding largesse without accountability are now considered essential elements of nuclear “deterrent,” independent of product or work.
- Approximately 55 studies of DOE lab reform are conducted from 1994-2014 and more are ongoing now, with no apparent success. GAO has kept DOE and now NNSA large project management on its “high risk” list for waste, fraud, and abuse since the early 1980s. Long survival of functioning warhead complex not assured.
- Across this span of time the labs have gained power but also squandered it in poor management. Funding is higher but so are salaries; employment remains near Cold War levels. Productivity is by any metric much lower (see e.g. Alvarez, BAS).

## Summary, continued:

- Workload and mission crisis now looms at LANL and LLNL especially despite Herculean efforts by labs to broaden missions; new forms of hybrid war have been a successful new business for SNL. Ironically, lack of deliverables insulates labs from accountability and augurs for more of the same.

# Prospects

- A new era, almost a discontinuity in history due to rapid change across many fronts – all involving fewer available choices – is upon us. A Churchillian “period of consequences” has begun.
- Dangers:
  - Of nuclear war: high and growing, soon almost never higher due to fundamental material conflict, unlike Cold War, more an ideological conflict;
  - Of catastrophic climate change: we need only say that with nuclear deterrence we will be unlikely to address climate deterioration via conscious policy choices;
  - Resource limitations, particularly oil: these are now very sharp and growing, despite momentary apparent market glut created by financial requirements and investors;
  - Powerful problems of capitalism and governance are now pervasive, and as a result various
  - “Collapse phenomena” involving tightly-linked constraints have begun.

# Prospects, continued

- Yet new opportunities are at hand, some stemming from these dangers:
  - Resource issues: we can “make the trends our friends,” giving fresh impetus to long-desirable policy changes
  - Broad political renewal (not yet in U.S.), e.g. Syriza in Greece, making possible fresh nuclear policies
  - Management failures are opportunities, if nuclear institutions are not protected by inappropriate political “deals”
  - The international movement to ban possession, use of nuclear weapons led by ICAN is a particularly promising opportunity
- The greatest barriers to realizing these opportunities might be:
  - Denial and ignorance about the nature of U.S. political system and civil society on the part of would-be reformers, leading to futile strategies;
  - Inexperience and lack of the personal commitment that would provide it;
  - Social barriers, e.g. of class, leading to ignorance and bad leadership choices by elites, which would dissolve with more direct experience.