

Effects of Privatization on the DOE/NNSA Labs' Science and National Security Missions



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at the Lawrence Livermore National Laboratory

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About me, about UPTE

- **About me:**
 - **Staff physicist at LLNL, previously at LANL**
 - **Principal author or co-author of ~60 science journal articles**
 - **Key accomplishments in science: design of “landmark” underground ICF experiment; co-developer of ignition double-shell target design; tamped-ablation technique for laser processing; Colvin equation (relates material strength to effective lattice viscosity)**
- **About UPTE:**
 - **Represents ~11000 Research Staff, Technicians, and Health Care professionals on all 10 UC campuses and at LBNL**
 - **Represents ~150 Skilled Trades employees at LLNL**
 - **~1000 non-represented members at UC, LANL, LLNL, and LBNL**
 - **I am elected Rep. of LLNL local to Systemwide Executive Board**

Background --- why we are here

- Security “incidents” at LANL: focused Congressional attention on UC “mis-mangement” of Labs
- FY04 Energy and Water Appropriations bill: put NNSA Labs’ management contracts up for competitive bid
- DOE/NNSA wrote RFP’s so that only specially constituted LLCs could bid
- LANS, LLC --- basically an offshoot of the Bechtel Corp. --- took over management of LANL in June 2006
- LLNS, LLC --- basically the same corporate entity --- took over management of LLNL in October 2007

One key promise of privatization --- introducing “market competition” to the enterprise --- was immediately dashed by selecting the same corporate entity to manage both Labs

Privatization added ~\$400M to operating costs of the two Labs

- Private entities subject to state gross receipts taxes in California and New Mexico --- added >\$100M/yr at each Lab
- Management fees: at LLNL, went from \$7M/yr to ~\$77M, more at LANL

The key question for NRC Study Committee:

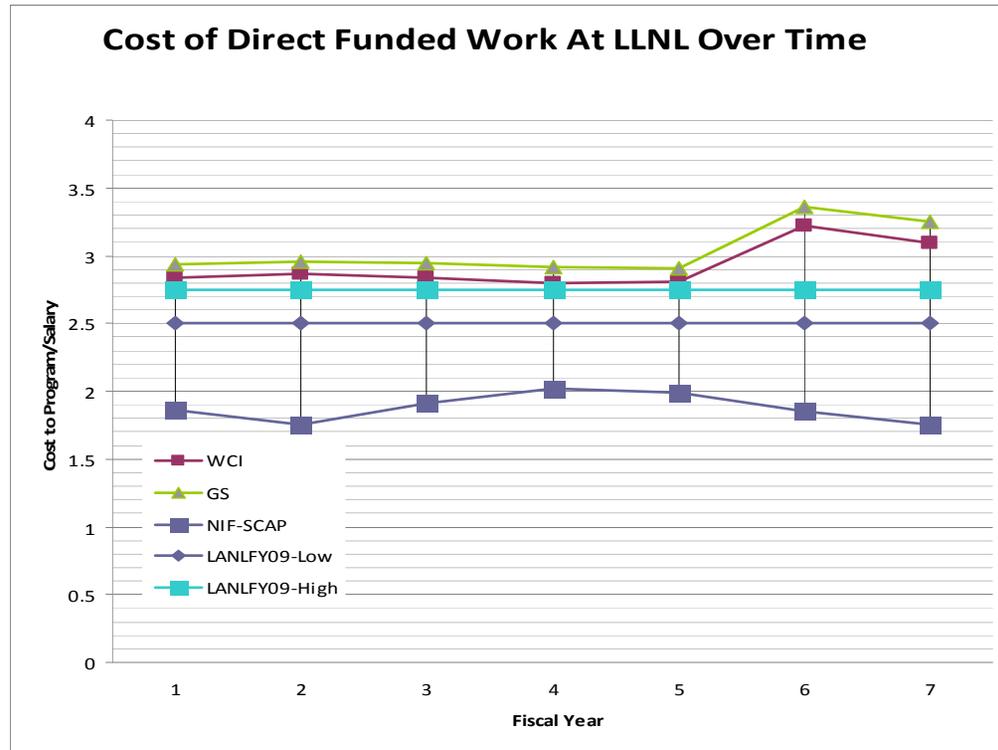
Has the added cost added value?

Increased operating costs was main driver for LLNL layoffs

- “Workforce reductions” announced by Director immediately after transition --- AFTER transitioning employees had to choose what to do with their UC pension funds
- In first year after transition ~2000 employees left LLNL, either voluntarily, via a Voluntary Separation Program (early retirement incentive), or involuntarily (layoffs).
- First layoffs at LLNL since the early 1970’s
- 2008 layoffs triggered the largest age-discrimination lawsuit in the history of the NNSA Labs --- more than 130 plaintiffs

Workforce morale plummeted dramatically in wake of 2008 layoffs, has not fully recovered

Overhead rates have not been reduced at either Lab



Overhead cost shifting from NIF to other programs at LLNL has hampered competition for WFO funding

Lab management decides their own management fees

- Management fee tied to *assessed* performance
- Management contracts set up “Performance-Based Incentive (PBI)” system --- fee (bonus) determined by how well company meets performance measures spelled out in contract.
- Management contracts also set up a system of performance self-assessment

Lab management evaluates their own performance --- effectively decide their own performance bonus

A new experience for the Labs: bloated executive compensation

- **Large management bonuses**
- **Special pension deals**
- **Car allowances**
- **Other perquisites**
- **Supplemental pay from the Company to get around DOE-imposed salary caps**

Not only more pay for managers: more of them

- **Privatization added two new layers of senior management**
 - **Board of Directors to which Lab Director reports**
 - **Principal Associate Directors in between Director and Associate Directors**
- **Parallel Operations and Programmatic Directorates**

**New management structure means much more
centralized decision-making**

One consequence: shift of R&D funding to fewer large projects

- ~6.5% of Lab budget set aside for discretionary R&D
- Project funding decided in a formal peer-reviewed proposal process
- Funding split between small (<\$500K/yr) individual-investigator-led projects (ERs) and large (>\$1M/yr) team projects (SIs).
- In the past, the larger fraction of total funding went to ERs
- Since the transition an ever-larger fraction of R&D funding goes to SIs

Increasingly difficult for individual scientists and engineers to get their research funded

New business model puts Labs' science missions in jeopardy

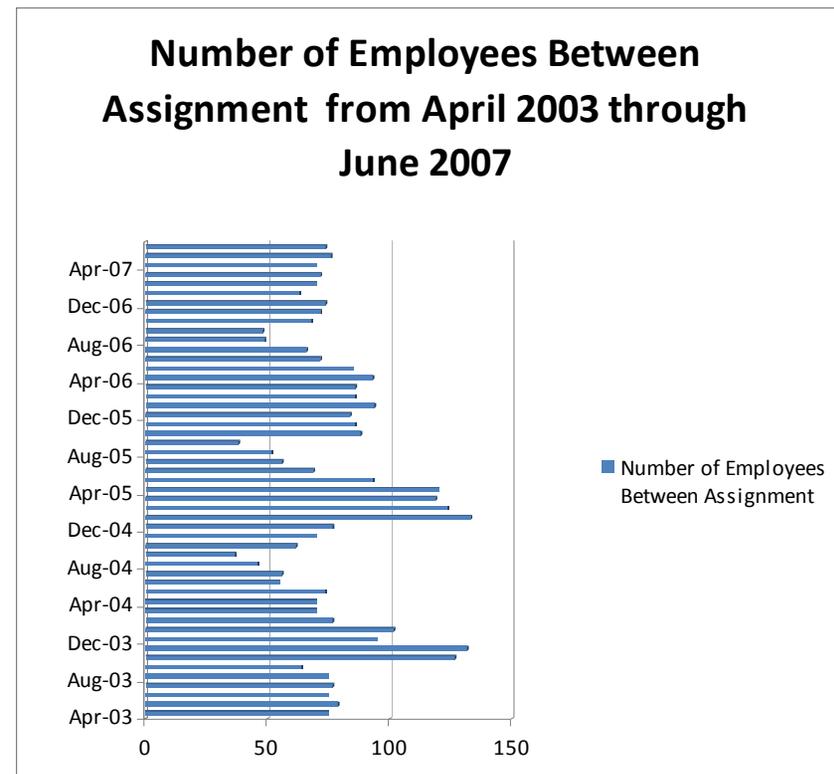
- **Focus shifted to meeting performance goals, earning maximum fee, maintaining funding flow**
- **A market-based business model in a distorted market construct – no competition to drive business efficiencies**
- **The shifted focus means there is much less tolerance for the open debate and discussion that is necessary for good science**
- **Environment for science has changed**
- **Environment for support work --- like facilities and equipment maintenance --- has also changed**

Changed environment has affected Labs' missions

- **Loss of individual project funding to squelch dissent**
- **Career damage from program misdirection**
- **ES&H shortcuts**
- **Loss of trained personnel**
- **Setback for recruitment**
- **Setback for retention**
- **Decline in science and engineering productivity**

Loss of project funding to squelch dissent

- At LLNL, employees who lose their project funding are shifted onto an overhead account for “Employees Between Assignments (EBA)” and tasked with getting other project funding
- Unsatisfactory PA’s are given for “failure to find project funding”
- EBA data since the transition has been unavailable, but anecdotal evidence suggests “background” level has not changed



Career damage from program misdirection

- **NNSA's Reliable Replacement Warhead (RRW) program --- funded at expense of the well-established Stockpile Life Extension Program (SLEP) --- killed by Congress, but not before several careers were run aground in pursuit of RRW funding**
- **The deuterium equation-of-state (EOS) controversy: when LLNL experiment results were not replicated at other labs, the tendency was to “circle the wagons” at LLNL and discredit internal critics of the LLNL experiments**

ES&H shortcuts

- **There are hundreds of buildings on each Lab site, many housing specialized labs containing hazardous, toxic, and/or radioactive materials.**
- **Lab facilities require continual maintenance to protect the environment and worker health and safety.**
- **The transition saw a major shift from regular routine maintenance to a “run to fail” facilities management model --- in order to save overhead costs.**
- **There has been a significant increase in the incidence of Be contamination at LLNL --- so far unexplained.**
- **Radiation exposure incident at LANL in 2008 cost the life of an employee.**

Loss of trained personnel

- **The 2008 layoffs at LLNL disproportionately affected senior technicians.**
- **Senior technicians are the people who maintain and operate much of the specialized laboratory instrumentation and equipment.**
- **Loss of these personnel meant loss of capability to get laboratory work done, and corresponding loss in productivity.**

Setback for recruitment

- **New employees at both Labs do not get a pension benefit: retirement security now gone**
- **Job security now gone, too:**
 - **CA State Constitution grants UC employees a “property right” to their jobs, with a “just cause” standard and due process for dismissals**
 - **With the LLCs, “just cause” standard is gone --- all employees are now “at will” employees**
 - **Due process procedures are still in place, but they can be (and have been) changed without prior notification**

Loss of both retirement security and job security has made the Labs much less attractive for recruitment

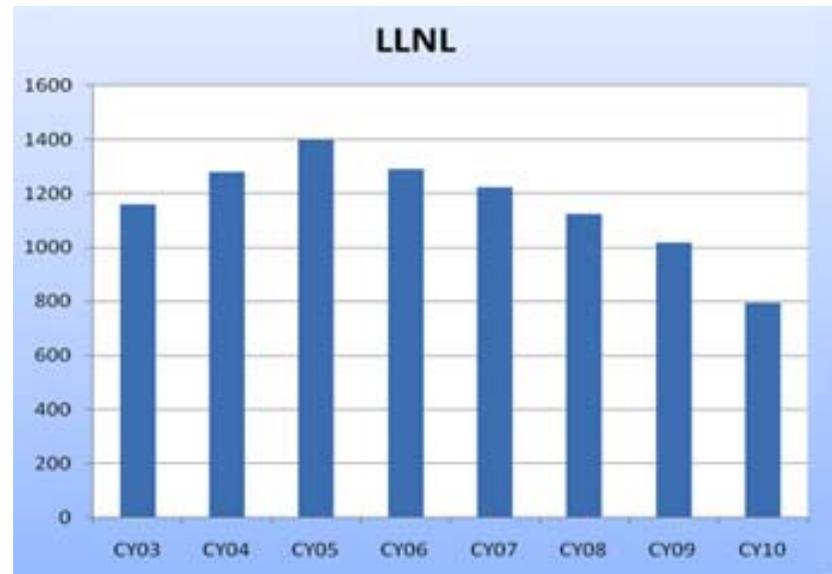
Setback for retention

- **Erosion of benefits --- far fewer health plan choices than at UC**
- **Loss of retiree medical (at least at LLNL)**
- **Salary erosion**

Less incentive for employees to stay at the Labs

Decline in science and engineering productivity

Publications is one measure of productivity --- data from ISI Web of Knowledge



Data not normalized because UPTE no longer has access to information from the Labs

Employees no longer have access to information

- Information on salaries, budgets, spending, hiring, etc. that was previously readily available via the California Public Records Act is now no longer available
- LANS and LLNS now consider all such information “company proprietary”
- Even FOIA requests to DOE/NNSA have been rebuffed

Openness and transparency --- so necessary to the success of the scientific enterprise --- is arguably the biggest loss in the privatization

The key contribution of the Study Committee

- Provide a quantitative answer to the key question:
has the added cost added value?
- The Committee can obtain the data we cannot
- We have proposed “metrics” for providing a quantitative answer to the key question

Metrics (1)

- **The science and national security missions of the Labs**
 - **Number of papers published in refereed journals, total and per scientist-year**
 - **Number of external awards, total and per scientist-year**
 - **Actual dollar cost to outside sponsors plus government entities for a meaningful unit of work, such as a person-day, in corresponding job categories**
 - **Ratio of programmatic budget to overall budget, including overhead**
 - **Number of recordable safety incidents per full-time-equivalent (FTE) year**
 - **Number of security incidents per FTE-year**

Metrics (2)

- **Recruitment and retention of a high-quality workforce**
 - **Number of graduates from top-rated universities recruited (set of universities to be determined), and ratio of this to total recruitments**
 - **Age and average number of years of service at retirement**
 - **Number of staff terminations per FTE-year (must apply a consistent definition of career-indefinite employee)**
 - **Number of staff grievance actions per FTE-year**
 - **Number of lawsuits brought against management per FTE-year**