

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



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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 ([www.upte.org](http://www.upte.org)):**
  - **Represents ~10300 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-management” 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. in partnership with UC Regents --- 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:**

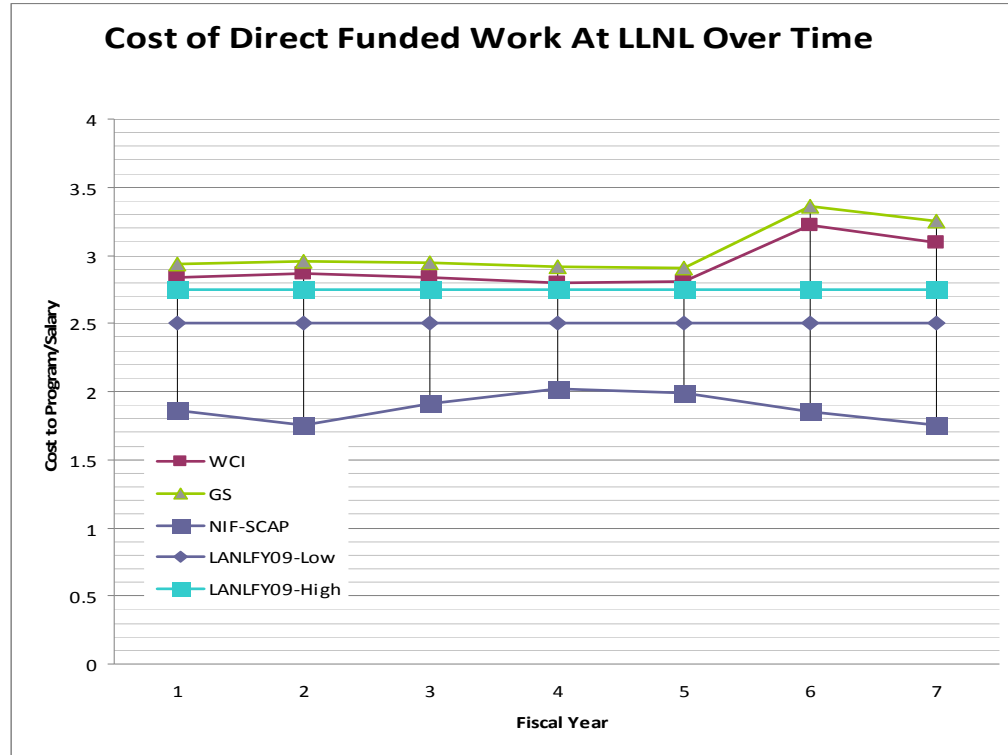
**Has the added cost added value?**

# Increased operating costs was main driver for LLNL layoffs

- “Workforce reductions” announced by both Lab Directors immediately after LLNL transition --- AFTER transitioning employees chose what to do with their UC pension funds
- In first year after transition ~2000 employees left LLNL, either voluntarily, via a Voluntary Separation Incentive Program (VSIP), or involuntarily (layoffs)
- More generous VSIP at LANL attracted more volunteers, layoffs ultimately deemed unnecessary
- First layoffs at LLNL since the early 1970’s
- 2008 LLNL 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**

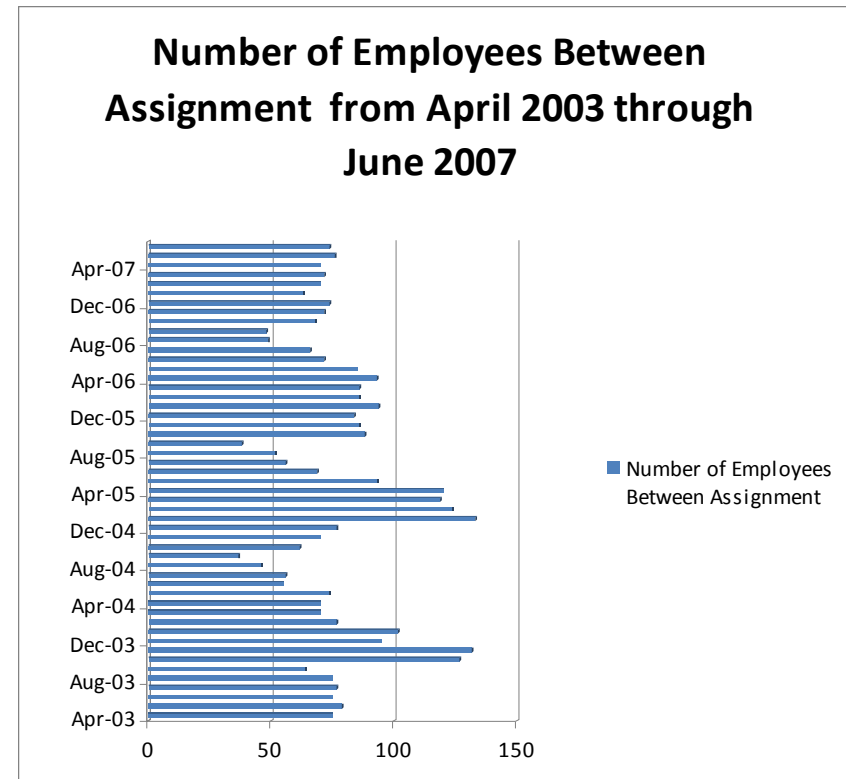
- **Focus shifted to meeting performance goals, earning maximum fee, maintaining funding flow**
- **A market-based business model in a distorted market construct – no competition to drive business efficiencies**
- **The shifted focus means there is much less tolerance for the open debate and discussion that is necessary for good science**
- **Employees lost protections of public-sector labor law, so only the “party line” is heard**
- **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**

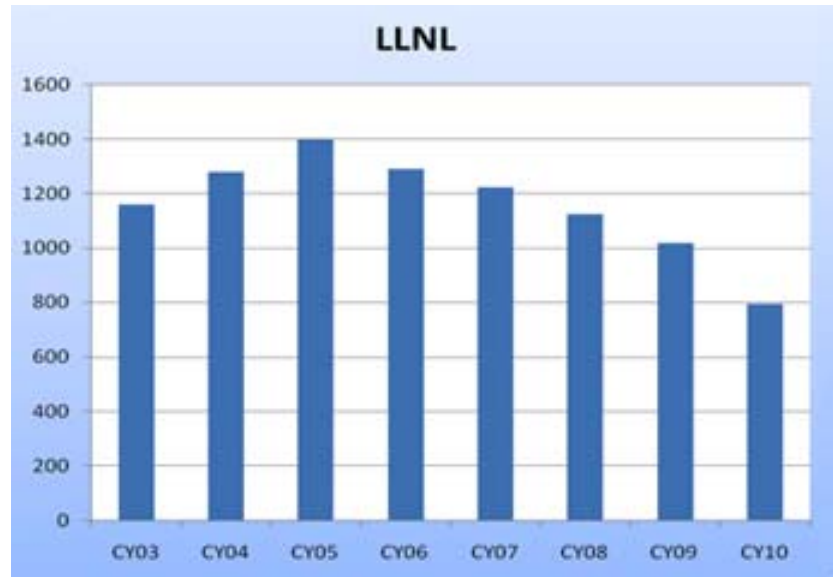
# Setback for retention

- **Erosion of benefits --- far fewer health plan choices than at UC**
- **Loss of post-Medicare-age retiree medical (at least at LLNL)**
- **Greatly increased cost of pre-Medicare-age retiree medical (~2x-3x)**
- **Salary erosion/stagnation**

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 – requests for data they receive from the companies as required in the management contracts

**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 (be aware of some overhead spending being labeled as “programmatic”)**
  - **Number of recordable safety incidents per full-time-equivalent (FTE)-year (be aware of pressures on employees not to report)**
  - **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**