

The Regents of the University of California

NATIONAL LABORATORIES COMMITTEE

July 20, 2021

The National Laboratories Committee met on the above date by teleconference meeting conducted in accordance with Paragraph 3 of Governor Newsom's Executive Order N-29-20.

Members present: Regents Cohen, Reilly, and Sures; Ex officio members Drake and Estolano; Advisory members Gauvain and Powell; Chancellors Hawgood, Khosla, and Larive; Staff Advisor Lakireddy

In attendance: Regents Butler, Elliott, Leib, Lott, and Sherman, Regent-designate Pouchot, Faculty Representative Horwitz, Secretary and Chief of Staff Shaw, General Counsel Robinson, Provost Brown, Executive Vice President and Chief Operating Officer Nava, Vice President Leasure, Laboratory Director Witherell, Chancellors Gillman, Muñoz, Wilcox, and Yang, and Recording Secretary Li

The meeting convened at 2:35 p.m. with Committee Chair Sures presiding.

Committee Chair Sures stated that the University's National Laboratories had a combined budget of \$7 billion, employed over 24,000 people, and provided UC students and professors with collaboration opportunities. UC's long-standing relationship with the National Laboratories was part of the University's teaching, research, and public service mission. UC's oldest National Laboratory, Lawrence Berkeley National Laboratory, was celebrating its 90th anniversary.

1. APPROVAL OF MINUTES OF PREVIOUS MEETING

Upon motion duly made and seconded, the minutes of the meeting of January 19, 2021 were approved, Regents Cohen, Drake, Estolano, Reilly, and Sures voting "aye."¹

2. ALLOCATION OF LLC FEE INCOME TO BE EXPENDED IN FISCAL YEAR 2021-22

The President of the University recommended that he be authorized to expend an estimated \$27.6 million from the University's net share of Triad National Security, LLC (Triad) and Lawrence Livermore National Security, LLC (LLNS) income earned in the respective LLC 2021 fiscal years (FY),² as projected by the LLCs, for the purposes and in the amounts described below:

¹ Roll call vote required by the Bagley-Keene Open Meeting Act [Government Code §11123(b)(1)(D)] for all meetings held by teleconference.

² The University also remains a member of Los Alamos National Security, LLC (LANS), which managed Los Alamos National Laboratory through October 31, 2018. It is not expected that LANS will earn any appreciable net fee income during this next fiscal year.

- A. An estimated \$1.6 million for the University's contractually-required share of compensation-related costs for LLC staff that are not reimbursed by the federal government under the prime contracts, including up to \$400,000 for the UC/Los Alamos National Laboratory (LANL) Entrepreneurial Postdoctoral Fellowship Program.
- B. Consistent with the approved FY 2021–22 Office of the President (UCOP) budget, an appropriation in the amount of \$7.33 million for FY 2021–22 to the UCOP budget for federally unreimbursed costs of University oversight of its interests at LANL and Lawrence Livermore National Laboratories (LLNL), paid or accrued July 1, 2021 through June 30, 2022, including, but not limited to, an allocable share of the costs of the President's Executive Office, the Provost, the Academic Senate, Human Resources, Compliance and Audit, Financial Accounting, UC National Laboratories (UCNL), Federal Governmental Relations, Office of Research and Graduate Studies, Office of the General Counsel, Office of the Secretary and Chief of Staff to The Regents, Office of the President facility charges, and the University-appointed Governors on the Boards of the LLCs. Any unspent funds allocated for this purpose will be transferred to the Capital and Campus Opportunity Fund (paragraph H).
- C. An appropriation in the amount of \$2 million to the LLNS/LANS Post-Contract Contingency Fund (PCCF) for FY 2021–22. Any income generated by the PCCF reserve fund under the University's Short Term Investment Pool (STIP) shall be reserved exclusively for the PCCF. In the event that the actual LLC income varies from the \$27.6 million projection, the President is authorized to revise the allocation to the PCCF, up or down, in his discretion.
- D. No appropriation for FY 2021–22 to the fully funded LLC Fee Contingency Fund. Any income generated by the LLC Fee Contingency Fund under the University's STIP shall be reserved exclusively for the LLC Fee Contingency Fund.
- E. An appropriation in the amount of \$10 million for FY 2021–22 for the UC Laboratory Fees Research Program and other research relevant to the missions of the National Laboratories and the University, including the UC–National Laboratory Graduate Student Fellowship Program. In the event all or part of this funding for the UC Laboratory Fees Research Program is not spent in FY 2021–22, the funding will be carried over to FY 2022–23 for the same purpose. In the event that the actual LLC income varies from the \$27.6 million projection, the President is authorized to revise this allocation, up or down, in his discretion.
- F. An appropriation in the amount of \$300,000 to fund the affiliation agreement between the University and the Livermore Lab Foundation (LLF). In the event all or part of this funding for LLF is not spent in FY 2021–22, the funding will be carried over to FY 2022–23 for the same purpose.

- G. An appropriation in the amount of \$1 million for FY 2021–22 for the Accelerating Therapeutic Opportunities for Medicine (ATOM) collaboration.
- H. An appropriation in the amount of \$1.7 million for FY 2021–22 for the Capital and Campus Opportunity Fund (CCOF). Consistent with the approved FY 2021–22 UCOP budget, the President is authorized to spend up to \$1 million of CCOF funds on the SoCal Hub initiative and \$200,000 of CCOF funds on the UC Postdoctoral Fellowship in Technology and International Security program, a collaboration of UCSD and UC-affiliated National Laboratories. Any income generated by this fund under the University’s STIP shall be reserved exclusively for this fund. In the event that the actual LLC income varies from the \$27.6 million projection, the President is authorized to revise the allocation to the CCOF, up or down, in his discretion.
- I. An appropriation in the amount of \$2 million in FY 2021–22 for the Triad Reserve Fund. Any income generated by this fund under the University’s STIP shall be reserved exclusively for this fund. In the event that the actual LLC income varies from the \$27.6 million projection, the President is authorized to revise the allocation to the Triad Reserve Fund, up or down, in his discretion.
- J. Consistent with the approved FY2021–22 UCOP budget, an appropriation in the amount of \$1.67 million for FY 2021–22 for the purpose of business development, which would support the University’s efforts to explore and develop opportunities to participate in the management of one or more U.S. Department of Energy National Laboratories and other Federally Funded Research and Development Centers (FFRDCs) in addition to the three current UC-affiliated National Laboratories. Formal bids on specific Laboratory or FFRDC contracts would be subject to further Regental approval. Any unspent funds appropriated for this purpose will be transferred to the Capital and Campus Opportunity Fund (paragraph H).

[Background material was provided to Regents in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Vice President Leasure briefly explained the item. UC National Laboratories projected that its net share of fee income earned by the limited liability companies (LLCs) of Los Alamos National Laboratory and Lawrence Livermore National Laboratory would be \$27.6 million in fiscal year 2021. This year’s recommendation for allocation of that fee income was consistent with those of prior years. If approved, the Post-Contract Contingency Fund (PCCF) would be used for one or more upcoming contract competitions. The current balance of the Triad Reserve Fund, which was similar to the PCCF, was about \$4 million, with a goal of a \$10 million balance at the end of the Triad National Security, LLC contract. The \$1.7 million allocated to the Capital and Campus Opportunity Fund (CCOF) would go toward the SoCal Hub initiative, revitalizing Hertz Hall at Lawrence Livermore National Laboratory, and the UC Postdoctoral Fellowship in Technology and International Security program.

Upon motion duly made and seconded, the Committee approved the President's recommendation and voted to present it to the Board, Regents Cohen, Drake, Estolano, Reilly, and Sures voting "aye."

3. **STATE OF THE LAWRENCE BERKELEY NATIONAL LABORATORY**

[Background material was provided to Regents in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Director of Lawrence Berkeley National Laboratory (LBNL) Michael Witherell stated that he previously served as vice chancellor of research and was a physics professor at UC Santa Barbara. The nation needed scientific solutions to national priorities from LBNL, such as energy and climate, resilience, the environment, health, and the economy. LBNL also engaged in discovery science; had national user facilities and advanced instrumentation; managed large research teams; developed important technologies, especially clean energy technology; responded to national emergencies; and developed a diverse group of highly trained individuals working together on these grand national challenges. LBNL was a multi-purpose science laboratory that was part of a network of Department of Energy (DOE) National Laboratories. Laboratory Director Witherell contrasted the all-male radiation laboratory team of 1939 with the more diverse LBNL research staff of the present day. He presented a chart of LBNL's research portfolio; the DOE funded about 90 percent of the Laboratory's nearly \$1 billion research budget, which included LBNL's strong presence in renewable energy research. LBNL engaged in strategic partnership projects, which were not DOE-funded, with the National Institutes of Health, industry, foundations, the California Energy Commission, and others. Laboratory Director Witherell presented a slide featuring award-winning LBNL scientists. The Laboratory prioritized the career development of its early- and mid-career scientists.

National user facilities at LBNL included the Advanced Light Source, which was used to research the structure of SARS-CoV-2; the Molecular Foundry, which has been used to develop infinitely recycled plastic; the Joint Genome Institute; Perlmutter, a high-performance computing system that was the fifth fastest supercomputer in the world; and ESnet, a secure computing network for the DOE system. The strategic priorities of the Laboratory were chemistry and materials science, discovery science in fundamental physics, computing sciences enabling scientific discovery, biological and environmental science for the emerging bioeconomy, infrastructure renewal, and, most importantly, attracting, recruiting, and retaining a diverse workforce.

LBNL was the largest Laboratory in the country that engaged in quantum information science and technology. Academic and industry researchers brought their devices to LBNL's Advanced Quantum Testbed for testing and validation, and LBNL also managed the Quantum Systems Accelerator. The Laboratory was also accelerating the development of clean energy technology to address the climate crisis through participation in the National Alliance for Water Innovation, the Energy Storage Center, the Carbon Negative Initiative, the production of hydrogen as a fuel source, and advancing deployment at scale. Relevant LBNL disciplines included the study of polymers and solar fuels, decarbonization

and soil management, efficient buildings, energy-efficient water treatment, and manufacturing. With regard to the Carbon Negative Initiative, LBNL has dedicated Laboratory-directed research and development funds to six new projects with early-career scientists who were innovating carbon capture, storage, and usage. A massive effort to rebuild the Laboratory was under way and included the removal of core infrastructure, cleaning up legacy sites, seismic retrofits, new research facilities, and rebuilding the Centennial Bridge that led to UC Berkeley. These projects were being funded by the University, indirect funds, and the DOE, which was investing \$600 million.

LBNL has developed new programs in its aim to develop a diverse workforce, such as internships for veterans; resource groups for African American, Asian Pacific Islander, early career, Native American, Latino(a), LGBTQ, veteran, women, and disabled employees; equity advisors for hiring committees; postdoctoral and early-career enrichment programs, mentorship, and internships with local community colleges. LBNL was the first National Laboratory to have a Chief Diversity, Equity, and Inclusion Officer when Laboratory Director Witherell appointed Lady Idos for the position. During the COVID-19 pandemic, LBNL's Inclusion, Diversity, Equity, and Accountability (IDEA) has denounced racial violence and met with the Asian Pacific Islander resource group to discuss the rise of anti-Asian racism. Laboratory Director Witherell believed that LBNL's resilience was attributed to its institutional culture. In the last year, about 1,500 people worked at the Laboratory while about 3,000 successfully worked remotely. The Laboratory developed new models of remote, shift, and hybrid work and created programs for employees' psychological well-being. In that time, LBNL has not had a single case of COVID-19 transmitted on site. Given its success, LBNL has launched a campaign to discuss its stewardship values of service, innovation, team science, respect, and trust, with a goal to embed these values through concrete behaviors.

Committee Chair Sures asked about LBNL research related to wildfires. Laboratory Director Witherell stated that LBNL partnered with UC Berkeley on a research program regarding resilience and wildfires. Some wildfire-related initiatives were funded by the State. LBNL had a national leadership role in modeling extreme weather events.

President Drake praised the prescience of focusing on diversity and inclusion as a driver of even better solutions, making LBNL a national leader in this regard. Laboratory Director Witherell replied that LBNL had been trying to diversify its workforce for years and had a long way to go. He believed it was his role to lead the way as a UC representative of the Laboratory.

Staff Advisor Lakireddy recalled meeting Ms. Idos during her visit to LBNL. She wished to learn more about what Ms. Idos has implemented at LBNL. Laboratory Director Witherell shared that Ms. Idos had been invited to help develop the diversity, equity, and inclusion program at the Department of Energy headquarters.

Regent Estolano underscored the Laboratory's continued critical role in confronting the climate crisis, citing the Carbon Negative Initiative as an example.

The meeting adjourned at 3:10 p.m.

Attest:

Secretary and Chief of Staff