

The Regents of the University of California

NATIONAL LABORATORIES SUBCOMMITTEE

November 14, 2018

The National Laboratories Subcommittee met on the above date at UCSF–Mission Bay Conference Center, San Francisco.

Members present: Regents Estolano, Morimoto, Napolitano, Tauscher, and Zettel; Advisory Member May; Chancellors Block, Christ, and Yang

In attendance: Regent Butler, Staff Advisor Klimow, Assistant Secretary Lyall, General Counsel Robinson, Provost Brown, Vice Presidents Brown and Budil, and Recording Secretary McCarthy

The meeting convened at 3:00 p.m. with Subcommittee Chair Tauscher presiding.

1. APPROVAL OF MINUTES OF PREVIOUS MEETING

Upon motion duly made and seconded, the minutes of the meeting of September 26, 2018 were approved.

2. AMENDMENT OF REGENTS POLICY 7104 – SELECTION OF LABORATORY DIRECTORS, REGENTS POLICY 7105 – APPOINTMENTS OF INDIVIDUALS TO THE EXECUTIVE COMMITTEES OF THE BOARDS OF GOVERNORS OF LOS ALAMOS NATIONAL SECURITY, LLC AND LAWRENCE LIVERMORE NATIONAL SECURITY, LLC, AND BYLAW 22.2 – SPECIFIC RESERVATIONS

The Chair of the National Laboratories Subcommittee and the President of the University recommended that:

- A. Policy 7104: Policy on Selection of Laboratory Directors be amended as shown in Attachment 1.
- B. Policy 7105: Policy on Appointments of Individuals to the Executive Committees of the Boards of Governors of Los Alamos National Security, LLC and Lawrence Livermore National Security, LLC be amended as shown in Attachment 2.
- C. Following service of notice, Bylaw 22.2: Specific Reservations be amended as shown in Attachment 3.

[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 Budil said these proposals for amendments to two Regents policies and one Bylaw would address two developments. First, several years prior the Regents Committee on Oversight of the Department of Energy National Laboratories had been changed to the

current National Laboratories Subcommittee. Second, the transition at Los Alamos National Laboratory (LANL) from Los Alamos National Security LLC (LANS) to Triad LLC, had occurred, so the existing policies and Bylaw needed to be updated to reflect these changes.

In addition, the item requested changes to increase flexibility in the event that the University should choose to bid on a management contract for a National Laboratory in addition to Lawrence Berkeley National Laboratory, Lawrence Livermore National Laboratory, and LANL. It would not change the nature of the policy, but it would give the Regents the opportunity to add companies without changing policy again.

Current Policy 7105: Policy on Appointments of Individuals to the Executive Committees of the Boards of Governors of Los Alamos National Security, LLC and Lawrence Livermore National Security, LLC required the UC-appointed chair of the LLC governing board to be a Regent. Approval of the proposed change to this Policy would allow the Regents to consider both Regents and qualified non-Regents for this important role. The Board of Regents would retain responsibility for selecting and appointing the chair of the LLC governing board but would have the option of appointing a non-Regent in that role, if that would better serve the purposes of the Regents, particularly given the specialized nature of the enterprise.

Subcommittee Chair Tauscher expressed her full support for these amendments. She said she had long been in favor of giving the Regents the option to appoint a qualified non-Regent to the chairmanship of the LLCs' governing bodies. This would provide the Regents the flexibility of having an outside expert who would report to the Board of Regents in that governing role. This was important in providing consistency of governance and in remaining competitive by having the ability to secure the services of the best people.

Regent Morimoto asked if an appointed LLC chair who was not a Regent would serve on this Subcommittee. Subcommittee Chair Tauscher said the chair of the LLC would report to the Subcommittee. A Regent would still chair the National Laboratories Subcommittee and if that Regent was not also the chair of the LLC governing boards, the appointed chair would report to the Subcommittee, giving the Subcommittee the proper governance oversight. Ms. Budil said an appointed LLC chair who was not a Regent could be a formal advisor to the Subcommittee or the Subcommittee might want to bring in other formal advisors with expertise in the National Laboratories.

Regent Estolano asked if a Regent would still serve on the governing board of the National Laboratory if a non-Regent were appointed LLC chair. Subcommittee Chair Tauscher commented that currently both she and Ms. Budil served on the boards of both Triad and Lawrence Livermore National Security LLC (LLNS). She said there would be other UC-related individuals on the LLC's governing boards, but not necessarily a Regent. Most likely Ms. Budil or her successor as Vice President of Laboratory Management would serve on the LLC board. Ms. Budil added that the Triad LLC had a board structure different from LLNS or the prior LANS. LLNS has a large board on which UC holds three of the six voting governor seats. A Regent was the chair of the LLC board, Ms. Budil was a voting

governor, and UC Davis Professor Robert Powell was a voting governor. In addition, LLNS has two non-voting advisory governors, of which one had historically been a UC Regent. Former Regent De La Peña was the last Regent in that seat.

The new Triad LLC would have a much smaller board, with each Triad partner having two voting seats on the board. Subcommittee Chair Tauscher was the chair and Ms. Budil was a voting member of the board. With this smaller board, the types of expertise available from board members would be more limited. With the addition of the new Triad LLC, the LANL and LLNL governing bodies would be two independent LLCs rather than two interlocking LLCs, resulting in a total of eight LLC board meetings a year, rather than four. A Regent chairing both boards would require an enormous time commitment, in addition to the commitment of Regents meetings. Ms. Budil expressed her view that this increased flexibility would be important for the Regents.

Regent Estolano stated that the oversight responsibilities of the Subcommittee would be ever more important and that the University was fortunate to have Subcommittee Chair Tauscher as a Regent, with her unique experience with the National Laboratories. Subcommittee Chair Tauscher emphasized that these changes would allow the Regents the flexibility to handle various Laboratory governance structures, while maintaining governance oversight, including the ability to change these policies and bylaws should it become necessary in the future.

Regent Butler asked if the LLC structure was central to this governance arrangement and where liability would rest. Subcommittee Chair Tauscher said the Regents and the Subcommittee were the central elements, while the governance structures of the National Laboratories could vary, as the LLNS and Triad governance structures would. In response to a further question from Regent Butler, Subcommittee Chair Tauscher said the chair of the governing board of the LLC would be chosen by the Regents. Ms. Budil confirmed the value for her of this Subcommittee's active engagement with the LANL contract negotiations and the National Laboratory enterprise.

General Counsel Robinson clarified that the LLC and the University are separate legal entities. There is no document giving the Regents direct control over the governance of the LLC or the chairs of the governing boards of the LLCs. The Regents have appointing authority and can exercise some control through their appointments, who serve at the Regents' pleasure. The Regents can express their expectations when they make appointments. The liabilities of the National Laboratories are isolated in the separate legal entities of the LLCs.

Ms. Budil added that when the LLCs were created, the University and its partners forged an operating agreement governing how each of the partner entities would work together. That operating agreement had been approved by the Regents and any changes that fundamentally alter the risk or liabilities attendant to the University or the nature of the relationship among the partners would have to be approved by the Regents. Regarding the performance guarantee, the LLCs are a mechanism of shielding the University from direct liability for the operations of the Laboratories, but the government requires that every entity

party to the operating agreement sign a performance guarantee. Each member of the LLC is individually responsible, although the LLCs have been constructed in a way to ensure maximum protection to the University. Financial reserves are held so that in the event a financial liability arises, the fees that UC would earn were being held in reserve at some level to ensure UC has the ability to pay those obligations.

Subcommittee Chair Tauscher stated that Texas A&M University, one of UC's partners in Triad, had asked her to visit and meet with the Texas A&M board to provide guidance about board governance structure. She said the Subcommittee should be comforted that UC had such a good governance structure that Texas A&M wanted to emulate it.

President Napolitano expressed support for the proposed amendments.

Upon motion duly made and seconded, the Subcommittee approved the Chair of the National Laboratories Subcommittee and the President's recommendation and voted to present it to the Board.

3. **LAWRENCE BERKELEY NATIONAL LABORATORY – UC BERKELEY COLLABORATION ON CLIMATE, ENERGY, AND THE ENVIRONMENT**

[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 Budil introduced Lawrence Berkeley National Laboratory (LBNL) Chief Development Officer Ivy Clift and UC Berkeley Professor in Residence in the Department of Earth and Planetary Science William Collins. Ms. Clift was also president of the Berkeley Lab Foundation, a 501(c)(3) dedicated to fundraising for LBNL and the first entity of its type in the National Laboratory system. Professor Collins was an internationally recognized expert in climate modeling and climate change science. In addition to his role at UC Berkeley, he was the director of LBNL's Climate and Ecosystem Sciences Division for the Earth and Environmental Sciences Area. They would discuss an exciting new partnership between the Laboratory and the Berkeley campus, an outstanding example of the interaction between these two parts of the UC system.

Professor Collins described this new initiative, the Environmental Resilience Accelerator (ERA), a collaboration between UC Berkeley and LBNL to tackle some of the biggest challenges from environmental change. The initiative was based on the values of achieving harmony with the natural world, with bountiful water, fertile farmlands and wildlands, and pristine air quality. These simple-sounding truisms were no longer guaranteed, as the Intergovernmental Panel on Climate Change had just reported, the world faces major challenges that must be addressed very quickly to maintain a healthy planet. He and other scientists think a new business model is necessary to move science from the laboratory into the field, to show people what to do rather than telling them what to do to address these challenges.

The idea behind the ERA is to demonstrate neighborhood-scale solutions in the Bay Area and then around the world, moving from a traditional academic research model to generating partnerships with those deeply engaged with surrounding communities, and to progress from technical readiness to societal readiness. This initiative would start to implement solutions rather than just talk about solutions. The partnership would bring together two institutions with complementary strengths. UC Berkeley brings extraordinary breadth of expertise across many disciplines needed by the Accelerator, such as law, social policy, health policy, and business. LBNL brings a similar depth of scientific expertise. Together they would launch the ERA to prototype and field test solutions needed for a better world. California is an ideal place to launch this endeavor, with its mix of community activism, State support, entrepreneurial spirit, and research excellence.

Professor Collins commented that the ERA had intentionally decided to abandon the institute or center model, because centers and institutes tend to accumulate faculty and become increasingly rigid in their functions. The ERA was designed to accelerate positive transformation of communities in partnership with those communities, while at the same time enhance the research mission of LBNL and the educational mission of UC Berkeley. The ERA intended to draw from the entire talent pool of both institutions. The ERA would take what might appear to be a technical problem and view its societal, health, economic, and environmental justice impacts. Every project would have a technology transfer partner; at the end of the project the ERA would transfer the intellectual property and the prototype itself to the partner to carry it forward and broaden its impact. Criteria for projects' success would be defined at their beginning. Professor Collins said he would alter projects if they were not succeeding and would terminate projects if necessary. Ideally, the ERA would launch a project every year and the project would sunset after five years. No projects would continue in perpetuity.

Professor Collins described three promising initial projects and a possible fourth. The project Oakland EcoBlock would deploy photovoltaic technology, energy storage, and grey water technology on a city block in Oakland where residents would otherwise not be able to afford the technology. The project would install about \$18 million in hardware in that community, which would become a showcase for renewable energy and greywater technology for the city. An accompanying financing mechanism would enable the project to be extended across the city and elsewhere in the Bay Area. EcoBlock was the only project still under active consideration by the California Energy Commission and Professor Collins anticipated hearing shortly whether the project had been selected for funding. ERA would seek to enhance existing housing stock, and also consider the construction of new housing to the same specifications to address issues of homelessness and housing shortages. The interest of California utilities in this model would be evaluated.

The second project would be the Port of Oakland Decarbonization, to improve the air quality, health, and environmental posture of the Port and the City of Oakland. The Natural Resources Defense Council in collaboration with Kaiser Permanente had shown that the particulate pollution from the Port was causing a 25 percent increase in pulmonary disease in the population of West Oakland. There was strong interest from the City and the Port to decarbonize. ERA would partner with the Goldman School of Public Policy at UC

Berkeley as a convening authority to consider the possibility of replacing power from all the bunker fuel in the ships in the Port with electrical charge points, completely decarbonizing the trucking fleet, and replacing the trucking fleet with either electrically operated vehicles or hydrogen fuel cells, and monitoring the impact on air quality and the health of the local population. This project would be not only technical, but also involved with environmental justice and health.

Professor Collins said the ERA was waiting for an opportunity from the Department of Energy to initiate the third project, a water energy hub to purify undrinkable water with highly scalable, portable water treatment plants. The ERA could play a unique role in solving the regulatory environment in order to take this project to scale.

The fourth project would address projections of a 100- to 300-percent increase in wildfires in California for each one degree Celsius increase in surface air temperature.

Professor Collins expressed optimism about the prospects for the ERA and the potential for expansion of its model.

Chancellor Block asked if the technology was already available to decarbonize the Port of Oakland. Professor Collins said this technology had already largely been developed. For example, as part of efforts to clean up the port of Long Beach, large charge points for ships had been installed on shore. He noted that the shipping industry was also considering decarbonizing the shipping fleet by operating ships from massive hydrogen fuel cells. The other area of interest is automating the trucking fleet performing the short-haul shipping of containers from the ships. The ERA had already been deeply engaged with the City of Oakland in measuring air quality, so a before and after picture could be drawn. The ultimate test would be whether the City of Oakland and its population agree that ERA projects improved the quality of their lives.

Regent Estolano noted that the implementation partners for these projects were public agencies and asked if the ERA would also seek public sector partners to help fund its projects. Professor Collins answered in the affirmative. The ERA was reviewing opportunities for both philanthropic and corporate partners. The premise underlying the EcoBlock project was that the electricity would be operated behind a microhub, which would be a particularly opportune way to electrify a city block. That microhub would ultimately be a product that would be a centerpiece of electronics. The ERA is seeking corporate manufacturing partners, such as General Electric. Partners would also likely be interested in the cybersecurity aspects of the project.

Regent Estolano said that the EcoBlock project would require Pacific Gas and Electric (PG&E) to transform its business model. Professor Collins agreed, but said the project would not take customers away from PG&E, but the utility would operate with customers at the micro-grid level rather than at the individual level. They would still be paying customers.

Regent Estolano observed that there would be labor implications of automating the port drayage operations. Professor Collins commented that the Goldman School of Public Policy was an excellent partner, citing their prior work around cap and trade, which involved significant environmental justice issues. Regent Estolano noted the excellent work of another potential partner, the UC Berkeley Labor Center.

Regent Zettel asked if the water energy resilience project would involve desalinization. Professor Collins said the project would involve water that required much less treatment.

Regent Morimoto asked how many projects would be launched at the ERA each year. Professor Collins anticipated five projects running concurrently, with one launching and one ending each year. The ERA would encourage knowledge transfer among the projects, with the newer projects learning from those near maturity.

Ms. Clift added that these big projects would encourage philanthropy. She was already seeing interest among potential funders.

Subcommittee Chair Tauscher expressed enthusiasm about this collaboration.

The meeting adjourned at 3:45 p.m.

Attest:

Secretary and Chief of Staff

Additions shown by underscoring; deletions shown by strikethrough

Regents Policy 7104: POLICY ON SELECTION OF LABORATORY DIRECTORS

POLICY SUMMARY/BACKGROUND

Policy 7104 outlines the procedures prescribed for the selection of Directors of ~~the three~~ University-affiliated National Laboratories: ~~Lawrence Berkeley National Laboratory, Lawrence Livermore National Laboratory, and Los Alamos National Laboratory.~~

POLICY TEXT

- A. Procedure for the Appointment of ~~a Directors of the Lawrence Berkeley National Laboratories~~ Managed Directly by the University
1. This procedure shall apply so long as the University directly holds the contract to manage and operate the Lawrence Berkeley National Laboratory (LBNL) or other University-affiliated National Laboratory. This policy shall not apply to short-term appointments of a Laboratory Director in an acting or interim capacity.
 - ~~1.2.~~ The President ~~will~~ shall engage in succession planning for the position of Laboratory Director of the Lawrence Berkeley National Laboratory in support of the systematic nationwide search that will be undertaken each time a vacancy occurs.
 - ~~2.3.~~ When a vacancy occurs or is imminent in the position of Laboratory Director of the Lawrence Berkeley National Laboratory, a joint Committee, including Regents and others, ~~will~~ shall be appointed to advise the President of the University. The Committee ~~will~~ shall consist of five Regents appointed by the Chair~~man~~ of the Board, five or more members appointed by the President of the University from the University's faculty, research scientists, and research administrators (including one employee of the respective National Laboratory and one Academic Senate member selected from a slate of faculty with appropriate expertise that is proposed by the Chair of the Academic Senate), and the Chair~~man~~ of the Board and the President of the University, ex officio. The President of the University ~~will~~ shall convene the Committee.
 - ~~3.4.~~ The President of the University ~~will~~ shall submit to the Committee for evaluation an appropriate list of highly qualified candidates (typically not fewer than five or more than fifteen) ~~not fewer than five nor more than fifteen names of candidates whom he or she considers promising~~. The Committee will evaluate these nominations of the President and may consider or suggest other names. It may interview candidates. It ~~will~~ may solicit the opinions of other interested groups in whatever manner it considers appropriate.
 - ~~4.5.~~ Both the Committee and the President shall be mindful of the University's firm commitment to diversity ~~in the employment of women and minorities in seeking out the most qualified candidates~~.
 - ~~5.6.~~ After the Committee has completed its evaluations and advised the President of the University, the President ~~will~~ shall make ~~his or her~~a recommendation to the

Regents through the National Laboratories Subcommittee~~Committee on Oversight of the Department of Energy Laboratories~~ for consideration and approval.

B. Procedure for ~~Nomination~~ Selection of Los Alamos National Security, LLC (LANS) and Lawrence Livermore National Security, LLC (LLNS) Laboratory Directors of National Laboratories Managed by Limited Liability Companies or Other Business Entities~~(and LLC Presidents)~~

1. This procedure shall apply so long as (1) the University participates as a member of a limited liability company or other business entity holding the contract to manage and operate the Los Alamos National Laboratory, Lawrence Livermore National Laboratory, or other University-affiliated National Laboratory and (2) the respective entity's operating agreement provides that the University appoints the Chair of the entity's governing board and allocates responsibility for executing the Laboratory Director search and selection process to the University or the University-appointed Chair. This policy shall not apply to short-term appointments of a Laboratory Director in an acting or interim capacity.
- ~~1.2.~~ The Chairman of the LANS and LLNS LLC entity's Board of Governors will~~shall~~ engage in succession planning for the position of Laboratory Director of the Los Alamos National Laboratory and the Director of the Lawrence Livermore National Laboratory in support of the systematic nationwide search that will be undertaken each time a vacancy occurs.
- ~~2.3.~~ When a vacancy occurs or is imminent in the position of the Laboratory Director of the Los Alamos National Laboratory or the Lawrence Livermore National Laboratory, the University-appointed Chairman of the LLC entity's Board~~board~~ of Governors and the President of the University, will~~shall~~ appoint a Committee to advise the Chairman of the LLC entity's Board~~board~~. The Committee will~~may~~ consist of members drawn from the LLC entity's Board of Governors, Regents, ~~and~~ members of the University of California faculty, as well as~~and~~ others with appropriate expertise and experience, and will~~shall~~ include one employee from the respective National Laboratory and one Academic Senate member selected from a slate of faculty with appropriate expertise that is proposed by the Chair of the Academic Senate. The Chairman of the LLC entity's Board~~board~~ will convene the Committee.
- ~~3.4.~~ The Chairman of the LLC entity's Board~~board~~ will submit to the Committee for evaluation an appropriate list of highly qualified candidates (typically not fewer than five or more than fifteen) ~~whom he or she considers promising~~. The Committee will~~shall~~ evaluate these nominations and may consider or suggest other names. It may interview candidates. It will~~may~~ solicit the opinions of other interested groups in whatever manner it considers appropriate.
- ~~4.5.~~ Both the Committee and the Chair of the LLC entity's Board~~board~~ shall be mindful of the University's ~~and the LLC's~~ firm commitment to diversity in the employment of women and minorities in seeking out the most qualified candidates.
- ~~5.6.~~ After the Committee has completed its evaluations and advised the Chairman of the LLC entity's Board, the Chairman of the LLC entity's Board will make his or her~~her~~ recommendation to ~~the Chairman of the Regents, the Chairman of the~~

~~Committee on Oversight of the Department of Energy Laboratories~~National Laboratories Subcommittee, and the President of the University for consideration and concurrence.

NO RIGHT OF ACTION

This policy is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the University of California or its Board of Regents, individual Regents, officers, employees, or agents.]

Additions shown by underscoring; deletions shown by strikethrough

REGENTS POLICY 7105: POLICY ON APPOINTMENTS OF INDIVIDUALS TO VOTING MEMBERS TO THE GOVERNING BOARDS OF THE BUSINESS ENTITIES MANAGING UNIVERSITY-AFFILIATED NATIONAL LABORATORIES~~THE EXECUTIVE COMMITTEES OF THE BOARDS OF GOVERNORS OF LOS ALAMOS NATIONAL SECURITY, LLC AND LAWRENCE LIVERMORE NATIONAL SECURITY, LLC~~

POLICY SUMMARY/BACKGROUND

~~[Optional. Use summary if policy text is lengthy (more than approximately 500 words). Enter text summarizing the purpose of the policy in a few sentences. This should be a high level executive summary. Also include any brief contextual background that explains the origins or goal of the policy if appropriate.]~~

POLICY TEXT

1. When a vacancy occurs or is imminent with respect to a University-appointed position ~~on voting member of the Executive Committee of the B~~governing board of ~~Governors the~~ limited liability company or other business entity holding the contract to manage and operate of Los Alamos National ~~Security~~Laboratory, LLC, or of Lawrence Livermore National Security, LLC~~Laboratory, or other University-affiliated National Laboratory,~~ the ~~Chairman~~ of the Board of Regents and the President of the University ~~will~~ shall identify one or more candidates for appointment to such position, along with any proposed terms or conditions of the appointment. Candidates may be drawn from the ranks of Regents, University officers and senior managers, or others having expertise and experience pertinent to the management and operation of the Department of Energy National Laboratories. ~~The Chairman of the Executive Committee of the Board of Governors shall be drawn from the ranks of Regents.~~ The President ~~wi~~shall confer with appropriate organizations within the University regarding the identification of candidates and applicable terms and conditions of the appointment.
2. Following such consideration, the Chair of the Board of Regents ~~man~~ and the President ~~will~~ shall recommend the selected candidate to The Regents through the National Laboratories Subcommittee ~~Committee on Oversight of the Department of Energy Laboratories~~ for consideration and approval.

Additions shown by underscoring; deletions shown by strikethrough

BYLAW 22.2: SPECIFIC RESERVATIONS

BYLAW TEXT

22.2 Specific Reservations.

The matters in the following areas are specifically reserved to the Board and/or its Committees for approval or other action, within parameters that may be specified in a Committee Charter or Regents Policy:

(b) Academic Matters

- Upon recommendation of the Academic Senate, approving criteria for University admissions and conferral of certificates and degrees
- Establishing or eliminating colleges, schools, graduate divisions and organized multi-campus research units
- Establishing or eliminating a session of instruction
- Approving the appointment of Regents Professors and University Professors
- Approving dismissal of academic appointees with tenure or security of employment
- Bidding on or entering into a prime contract to manage and operate a National Laboratory or other Comparable Facility (as defined in the Academic and Student Affairs Committee Charter)
- Creating a business entity to hold a prime contract to manage and operate a National Laboratory or other Comparable Facility
- Approving material changes in the type or scope of work for such a business entity
- Appointing voting members to a University position on the Executive Committee of the Board of Governors ~~the governing board~~ of such a business entity
