

LBNL COMMUNITY ADVISORY GROUP (CAG)

CAG Meeting Summary

Monday, May 9, 2011

6:00 pm – 8:30 pm

North Berkeley Senior Center

CAG Members Present:

Christopher Adams, Berkeley Community Member

Andreas Cluver, Building & Construction Trades Council of California

Rebecca Daly, UC Berkeley (student)

John DeClercq, Berkeley Chamber of Commerce

Whitney Dotson, Community member

Marcos Gandara, Community member

Dan Marks, City of Berkeley Planning Department

Emily Marthinsen, UC Berkeley

Mark McLeod, Buy Local Berkeley

Dean Metzger, Berkeleyans for a Livable University Environment (BLUE)

Phil Price, LBNL (employee)

Phila Rogers, Community member

Carole Schemmerling, Strawberry Creek Watershed Council

Rich Sextro, Community member

Elizabeth Stage, Lawrence Hall of Science

Anne Wagley, Community member

CAG Members Absent:

LeRoy Blea, Berkeley Community Health Commission

Paul Licht, UC Botanical Garden

Welcome and Introductions

Daniel Iacofano of MIG welcomed Community Advisory Group (CAG) members, community members and staff. He acknowledged new CAG members Emily Marthinsen and Christopher Adams and asked all CAG members and Lab Staff to briefly introduce themselves and explain their relation to the CAG.

The evening's agenda included an update on the Second Campus and proposed and possible future capital construction projects. The agenda also included presentations and discussion on the User Test Bed Facility and the Lab Sustainability Plan. Presentations supplementing these conversations were available at the meeting and had been sent to CAG members in advance. They are also available on the CAG website (www.lbnl-cag.org).

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Brief Update on Status of Second Campus Planning Process

Sam Chapman updated the CAG members on the status of the Second Campus planning process. The Lab has selected six finalists for a possible second campus location. Site finalists were chosen based on which best demonstrated desirable attributes listed in the RFQ, including a location within 20 to 25 minutes of the original campus, land capacity to accommodate potential future growth, and easy access to public transportation and other amenities. The six sites being considered are:

- Alameda Point (City of Alameda)
- Berkeley Aquatic Park West (West Berkeley)
- Brooklyn Basin (just south of Jack London square along the Oakland estuary)
- Emeryville/Berkeley (includes properties currently occupied by the Lab in Emeryville and West Berkeley)
- Golden Gate Fields (Cities of Berkeley and Albany)
- Richmond Field Station (a site currently owned by the University of California).

The Lab will look more closely at each of the sites over the course of the coming months and will be scheduling public meetings in each of the communities surrounding the potential sites. The Lab hopes to hold these meeting in July and would like to identify a single preferred site by November 2011.

CAG Members contributed the following comments regarding the six sites:

- The West Berkeley location will be problematic because there is a group of people initiating a lawsuit regarding that site.
- Golden Gate Audubon Society recently wrote to the City of Berkeley asking them not to build on two parcels close to Aquatic Park (west of the tracks) due to the high numbers of migrating birds that use the park.
- The Alameda Point site could be an issue due to that area being home to the world's most successful breeding colony of Least Terns.
- Consider the ecology of all potential sites and the protection of organisms when selecting a Second Campus location.
- Proximity to the current LBNL site will be important for graduate students who work at the Lab.
- The Lab should take into account the longevity of the Second Campus buildings.
- Public transportation connections should be a major consideration in choosing the Second Campus location.

More details on the exact site locations and process updates will be posted on the Lab Second Campus webpage, which can be found via the LBNL CAG website or here: <http://www.lbl.gov/Community/second-campus/> CAG members also agreed to make the Second Campus a discussion topic at the July 14th CAG meeting.

Update on Currently Proposed and Possible Future Capital Construction Projects

Jerry O'Hearn provided a brief description and overview of the status of the following planned LBNL capital improvement projects:

- Seismic Phase 3 – Concept Design may begin 2012
- Solar Energy Research Project (SERC) – In Design; CEQA Approved; NEPA/Categorical Exclusion Approved
- User Test Bed Facility – In Preliminary Design
- BELLA – In Construction
- Computational Research and Theory facility (CRT) – Bid Evaluation
- Seismic Phase 2 – B74 in construction; B25 in demolition; GPL Bid Award
- Old Town Demolition – In demolition
- Bevatron Demolition– In demolition with possible Fall 2011 completion date

CAG member requests and concerns related to the projects reviewed included:

- Request for printouts of the Capital Projects chart at the meeting and sent out in advance of the meeting.
- Request for a map in order to better understand the location of each of these capital projects.
- Request to use italics to denote any change in the project status since the previous CAG meeting.

Presentation on the User Test Bed Facility

Richard Stanton and Steve Selkowitz, of LBNL, presented an overview of the User Test Bed Facility, a capital construction project currently in the preliminary design phase. The User Test Bed Facility construction is funded by \$15.7M in Federal Stimulus ARRA funds and will be accessible to users from all over the country. The facility will continue the longstanding work the Lab has been doing in measuring the performance of building systems under realistic conditions. The new facility will have up to ten new test beds with features such as interchangeable façade elements, flexible interior space, flexible HVAC systems and interchangeable lighting.

The User Test Bed Facility is intended to address key technical challenges for low-energy buildings and facilitate research and development on multiple building components and systems concurrently. A major goal in building this facility is to provide extreme flexibility to allow for testing various building systems components, and various combinations of these components, including envelope, lighting, HVAC and electrical systems. There will be automatic data collection, virtual modeling and “live” building systems optimization. This data will be applied at multiple levels in the building industry, from manufacturers to building owners and policy planners.

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Site analysis and selection have been completed and preliminary design is underway. The goal is to begin construction in Spring 2012 and complete construction by Spring 2013. The construction process will include the demolition of the existing trailers in front of Building 90.

CAG member requests and concerns related to the User Test Bed Facility presentation:

- CAG members questioned why the proposed buildings were only single-story and recommended that future construction minimize overall Lab footprint by building multi-story buildings.
- *Lab Comment:* The current trailer facilities take up 17,000 square feet, while the new proposed facility will take up only 7,500 square feet. In the case of the User Test Bed Facility, building multi-story facilities would incur greater costs and result in a loss of flexibility in testing.
- How was the building positioning chosen and why is the facility being constructed on-site, as opposed to a less dense zone off-site?
- *Lab Comment:* The technical reason the buildings are positioned the way they are is to minimize the casting of shadows one upon another. It is also important that the User Test Bed be built on-site because 20-40 people will be working there and the instrumentation will require frequent monitoring and adjustment.
- Will the User Test Bed Facility buildings be sustainable structures, for example will they use on-site PV?
- *Lab Comment:* The proposed buildings will be extremely well-insulated resulting in low heat loss. The Lab originally proposed PV panels, but federal funds did not allow for that option. Ultimately, this will be an experimental facility, and while the Lab will make the buildings as efficient as possible, the first priority will be to make these buildings as flexible as possible in order to do the best quality research. The overarching goal is to do the best science possible in order to improve building system efficiency around the world for years to come.
- How does the Lab share its findings with window manufacturers?
- *Lab Comment:* The Lab does extensive outreach and partnering to ensure findings are available to window manufacturers, to building designers and to consumers. The Lab has partnered with the Center for Sustainable Building Research and Alliance to Save Energy to create the website www.efficientwindows.com, and also offers downloadable software that can be customized to aid in the selection of the most efficient solutions based on a specific building type and location. The Lab also has 10-15 employees working specifically on building energy efficiency outreach. As part of their mission they present results to manufacturers at national conferences, provide access to existing lab test facilities and host Lab tours for those in the window industry.
- What is the expected lifetime of the project?
- *Lab Comment:* Currently there is no specific funding plan for operations, so it is difficult to say definitively, but the hope is 10-15 years, possibly as long as 20 years or longer.
- Request for a neutral color for the outside of the buildings as many community members will be able to see this facility from their homes.

- *Lab Comment:* The paint color for the buildings has not yet been decided and should not affect the functionality of the facility.
- Does the Lab have predictions for the amount of green house gas emissions the facility will generate?
- *Lab Comment:* At this point the potential green house gas production is not known, but the Lab expects that the impact of the work done at this facility will create energy savings thousands of times greater than the energy costs that might be incurred.

Presentation and Discussion on Lab Sustainability Plan

Blair Horst, LBNL Sustainability Coordinator/Energy Manager, and Melissa Summers, Carbon 2.0 Initiative Coordinator, presented the Lab's Sustainability Plan. The Lab's vision for the future is to continue performing world-class science, while reducing the Lab's ecological and carbon footprint. The Lab has partnered with both the public and private sectors in this effort, including joining the EPA's Federal Green Challenge and acting as one of the founding partners of the East Bay Green Corridor.

In Fiscal Year 2010, the Lab measured its emissions footprint to be 59,550 metric tons of CO₂ equivalent emissions, fifty percent of which comes from electric power usage. The Sustainability Plan goals are to reduce emissions to a 2000-level by 2014 (approximately an 18 percent reduction) and to a 1990-level by 2020 (approximately an 18 percent reduction). The Sustainability Plan includes the following elements:

- Energy
- Buildings
- Operations & Maintenance
- Water
- Waste
- Sustainable Transportation
- Business Policies

The presentation concluded with information about how CAG members and community members can learn more about the Sustainability Plan and on partnering programs at the website located here: <https://commons.lbl.gov/display/sustainlbl>

CAG Member Questions and Comments

CAG members raised the following questions or concerns related to the Lab's Sustainability Plan:

- What is the Lab currently doing to buy locally?
- *Lab Comment:* The Lab's new campus food provider has a commitment to sourcing food locally.
- CAG members recommended purchasing from the local Bay Area region and stated that recent research showed that one dollar spent locally can be worth up to 3 times as much to the local area, as compared to one dollar spent outside the local area.

- Which demolition projects are being diverted from landfills?
- *Lab Comment:* A large portion of the recently diverted materials came from the demolition of the Bevatron. This included the shielding which is now being used on another accelerator in another part of the country.
- The re-use of materials such as the Bevatron shielding is an excellent win-win for slightly radioactive materials.
- The Lab should focus on renovating and retrofitting old buildings and have a goal of no new buildings in the future.
- The Lab should measure how much energy a current building represents and how much the replacement building would represent and take that into consideration when deciding to build new and/or demolish an existing building.
- *Lab Comment:* Currently the Lab does consider the life cycle of buildings, but this will be an important consideration in the future.
- Is there a review process to verify whether or not green purchases are actually being made in procurement?
- *Lab Comment:* Yes, there is a tracking system in place and the Lab is reporting this information to the Department of Energy.
- How will possible price increases in alternative fuels (due to an end in federal subsidies) impact the Lab's goal of a 100 percent alternatively fueled fleet?
- *Lab Comment:* Biodiesel and electric vehicles can both be major components to the future fleet.
- With 50 percent of the Lab's greenhouse gas emissions coming from electrical power usage, and new projects on the line such as the CRT, how will the Lab reduce its overall gas emissions while continuing to grow?
- *Lab Comment:* The CRT is an example of how implementing numerous sustainable solutions can add up to significant energy savings. The Lab is currently designing an extremely efficient data center which will measure the Power Usage Effectiveness (PUE) at the CRT. It is also conceivable that the CRT will use little mechanical cooling due to optimization of the cooling tower and more efficient building systems for cooling.
- The Lab should be a leader in energy efficiency and retrofitting by applying its own research to Lab facilities and inviting representatives from cities and agencies to learn from the Lab's experience.
- Socializing the Sustainability Plan amongst the employees is important when considering that energy savings can come from numerous individuals making small changes such as turning off their computers at night. The Lab should continue its work on changing the culture of the Lab by engaging employees in making personal behavioral changes resulting in lower energy use.
- *Lab Comment:* The Lab IT department is investigating software solutions to the problem of computers being left on overnight.

- Which agency provides the Lab's power and what kind of flexibility does the Lab have in its generation mix?
- *Lab Comment:* All the facilities on the main Lab site are served by Western Area Power Authority (WAPA) power, and off-site facilities are served by PGE at market rates. The power mix from WAPA is officially unknown, but is better than the regional power mix, which is already quite sustainable compared to the rest of the country. The Lab can also arrange with WAPA to purchase any type of power. Over 8 percent of power purchased by the Lab last year was based on renewable energy credits from WAPA.
- The Lab should share its energy efficiency research and practices with the region, including monetizing the savings that local businesses might be able to achieve by implementing energy efficient solutions.
- *Lab Comment:* The User Test Bed Facility will allow for a lot of partnering and information sharing with the region and the rest of the country.

CAG Schedule Update

Daniel reviewed discussion from earlier in the meeting that would require some changes to previously proposed meeting agenda topics. In light of the desire to discuss the Second Campus at the July 14th meeting, the meeting schedule was revised as follows:

- July 14: Second Campus, Forest/Canopy and Fire Management & Wildlife Habitat Protection and Management Discussion
- September 22: Seismic Phase III and Surface Water and Creeks
- November 10: Air Quality at LBNL, Nano-research (safety measures) and Identification of CAG Meeting Topics for 2012

The CAG members and Lab staff agreed that roughly one hour would be spent discussing the Second Campus, a half hour for Wildlife Habitat Protection and Management and one hour for Forest/Canopy and Fire Management discussion.

Public Comment

- Pamela Sihvola requested copies of all available sample plans from Old Town buildings, including Building Groups 44 and 25.
- *Lab Comment:* Jerry O'Hearn will make that information available.
- How many buses is the Lab currently operating?
- *Lab Comment:* Blair Horst stated that there were previously 13 buses in the fleet, although he would have to check on current numbers. He added that all of the current buses are fueled by biodiesel.
- All six of the Second Campus site finalists were on former landfills and the Lab should take the potential for earthquakes into account in the site selection process.

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Next Steps

The next CAG meeting will take place on Thursday, July 14, 2011, at the North Berkeley Community Center (1901 Hearst Avenue, Berkeley) beginning at 6:00 pm.