

Office of the President

TO MEMBERS OF THE COMMITTEE ON GROUNDS AND BUILDINGS:

ACTION ITEM

For Meeting of May 27, 2008

CERTIFICATION OF ENVIRONMENTAL IMPACT REPORT AND APPROVAL OF DESIGN, HELIOS ENERGY RESEARCH FACILITY, BERKELEY CAMPUS

EXECUTIVE SUMMARY

Campus:	Berkeley
Project:	Helios Energy Research Facility
Proposed Action:	Certify the Environmental Impact Report (EIR) and approve design.
Previous Action:	November 2006: Approval of 2007-08 State Budget for Capital Improvements including Helios Research Facility, at this time, a smaller project without the Energy Biosciences Institute. March 2007: Approval of project budget (\$159,400,000) for Helios Energy Research Facility including the Energy Biosciences Institute, funded from external financing (\$74,400,000) and interim financing (\$15,000,000). May 2008: Approval of budget augmentation and standby financing (\$38,846,000).

Executive Architect: SmithGroup, San Francisco, California

Project Summary: The project would construct a laboratory and office building of approximately 83,536 asf (144,000 gsf) comprised of wet and other specialized analytical research laboratories, laboratory support space, offices, and other support space for the Berkeley campus and LBNL Helios Research Program, including the new BP-funded Energy Biosciences Institute. The building cost per gsf is \$898 with an asf to gsf ratio of 58 percent.

Issues:

- Consideration of EIR certification and design approval was deferred from May 13, 2008 to May 27, 2008 to provide additional time to review and consider additional comments received from the public and local jurisdictions.
- Public concerns include: location of the proposed project and potential impacts to Strawberry Canyon (*e.g.*, potential degradation of a "cultural landscape"); recirculation (*e.g.*, due to selection of access road alternative); further analysis of off-site alternatives (*e.g.*, Richmond Field Station); potential biological resources impacts (*e.g.*, Alameda whipsnake habitat, tree removal); potential hazards impacts (*e.g.*, earthquake, wildland fire, genetically modified organisms, nano-materials); traffic and construction impacts; visual impacts; and partnership with BP

RECOMMENDATION

The President recommends that, upon review and consideration of the environmental consequences of the proposed project as described in the attached Environmental Impact Report, the Committee on Grounds and Buildings:

- (1) Certify the **Environmental Impact Report (EIR)**;
- (2) Adopt the **Mitigation Monitoring Program and attached Findings** and Statement of Overriding Considerations; and,
- (3) Approve the design of the Helios Energy Research Facility, Berkeley campus, revised to be consistent with the EIR Alternative 5 “Proposed Project with Alternate Access Road Alignment.”

BACKGROUND

In November 2006, The Regents approved the 2007-08 State Budget for Capital Improvements and Capital Improvement Program to include the Helios Research Facility. In March 2007, The Regents amended the 2006-07 and 2007-08 Budgets for Capital Improvements and Capital Improvement Program to increase the budget for the project to \$159,400,000 at CCCI 4890, to be funded from State lease revenue bonds (\$70,000,000), external financing (\$74,400,000) and gifts (\$15,000,000), and to incorporate the recently-funded Energy Biosciences Institute in the building program.

In January 2008, the appointment of SmithGroup of San Francisco, California as Executive Architect for this project was administratively approved by the Office of the President. At the May 13, 2008 meeting, an augmentation of \$38,846,000 was requested and approved and the new total project cost, as amended is \$198,246,000 to be funded from State lease revenue bonds (\$70,000,000), gifts (\$15,000,000) and external financing (\$113,246,000). The project is currently in the preliminary plans phase and completion of construction is scheduled for October 2011.

Project Site

The project is sited on approximately six acres of land largely located on the southeast portion of Lawrence Berkeley National Laboratory (LBNL) in the Lab’s “Research and Academic” land use zone. The proposed project includes: construction of a research building; a new access road; a parking area along the access road with 50 parking spaces; storm drainage improvements, including grassy swales and a hydro-modification pond; an underground water storage tank; wastewater disposal improvements; and other utility improvements.

As part of the proposed project, a portion of the existing LBNL fence which extends in a north-south direction west of the proposed building would be relocated to the east so that it is

coterminous with the building, allowing unrestricted public access to the Energy Biosciences Institute portion of the building.

Project Design

The project will construct a laboratory and office building of approximately 83,536 assignable square feet (144,000 gross square feet) comprised of wet and other specialized analytical research laboratories, laboratory support space, offices, and other support space for the Berkeley campus and the LBNL Helios Research Program, including the new BP-funded Energy Biosciences Institute (EBI).

The 144,000 gsf building is comprised of two research laboratory wings joined by an entry lobby and cafeteria element. The taller 5-story north wing (approximately 80,000-gsf) contains the EBI component of the program. The south wing (approximately 64,000-gsf) contains the Helios Program in a four story building that has a two story basement built into the hill with two stories above. This lower wing is set down-slope of the existing Molecular Foundry to preserve views from the Foundry and will feature a landscaped roof to help conserve energy and further integrate the building into the hillside. The structural system consists of a concrete frame at the basement levels and a combination of steel moment frames and braced frames above the concrete base to resist wind and seismic forces (see Floor Plans and Sections).

The rectilinear building will align with the adjacent Molecular Foundry and will share similar exterior materials including a cast-in-place concrete base. Above the base, the building will be clad in a combination of metal panel and glass curtain wall-system.

The University of California Berkeley Design Review Committee has reviewed the design of the Helios Energy Research Facility in accordance with University policy and the campus has conducted an independent cost and seismic review.

This project will comply with the *University of California Policy on Sustainable Practices*. As required by this policy, the project will achieve a minimum standard equivalent to a LEED™ “Certified” rating and the Laboratories for the 21st Century (Labs21) Environmental Performance Criteria (EPC), as appropriate, and will outperform the required provisions of the California Energy Code (Title 24) energy-efficiency standards by at least 20 percent. The design process will also include attention to energy efficiency for systems not addressed by the California Energy Code (Title 24). The project is expected to achieve LEED Silver equivalency while targeting LEED Gold equivalency and will reduce energy use to at least 30 percent below that of a standard Title 24 compliant lab building through the following design strategies:

- Architectural features such as windows, sunscreens and sunshades are designed to maximize natural daylight while minimizing heat gain.
- Utilization of natural ventilation through operable windows in office areas, oriented to take advantage of westerly prevailing winds.
- “Green” (landscaped) roofs over the Helios wing will reduce heat gain and storm water runoff.

- The roof of the EBI wing is designed to accommodate future photovoltaic arrays.
- Building mechanical and electrical infrastructure has been optimized through right-sizing based on the Labs 21 data base and metering actual use in existing comparable labs. The building is being designed to the Labs 21 and LEED for Labs guidelines for energy efficiency with a goal to be a best-in-class laboratory for energy efficiency.

UC Berkeley Facilities Services and staff from LBNL will manage the project with assistance from the executive design professional's project team, with outside consultants and testing agencies as necessary. The Campus Architect will perform project oversight. The delivery method for the project is Construction Management at Risk with construction site work expected to commence July 2008, with completion anticipated for October 2011.

While the Helios Final EIR includes analysis of a 250-seat auditorium that would accompany the Helios facility, the auditorium component is not proposed for approval at this time as sufficient funding is not available. It is anticipated that the auditorium may be proposed for construction in the future should funding become available.

Consistency with LRDP

The proposed project would be constructed on six acres of Regents' property, of which approximately 5.2 acres are within the boundary of the LBNL 2006 Long Range Development Plan (LRDP), and approximately 0.8 acres are within the boundary of the UCB 2020 LRDP. The approximate 5.2 -acre portion of the project site on LBNL is designated "Research and Academic" in the LBNL 2006 LRDP ("Land Use Zone" Figure 3.6). The approximate 0.8 acre portion of the project site on UCB is designated "Hill Campus, Study Site" in the 2020 UCB LRDP ("Hill Campus Land Use", Figure 10). The Helios project's proposed research and academic use and related uses are consistent with each LRDP's land use designation. The project's proposed square footage, 50 parking spaces and approximately 368 net new population were accounted for in the LBNL 2006 LRDP.

In July 2007, The Regents certified the LBNL 2006 LRDP EIR and approved the LBNL 2006 LRDP. The LBNL 2006 LRDP is the primary planning document applicable to the Helios project site, and the project has been planned consistent with this current LRDP. Litigation on the LBNL 2006 LRDP EIR is pending at this time. If the 2006 LRDP is set aside as a result of litigation, the LBNL 1987 LRDP will become the applicable plan for LBNL. In the event this happens, and to the extent that the University finds the Helios project not entirely consistent with the LBNL 1987 LRDP, LBNL would request future amendment of the 1987 LRDP supported by the analysis in the Helios Energy Research Facility EIR.

Environmental Impact Summary

Pursuant to State law and the University procedures for the implementation of California Environmental Quality Act (CEQA), an Environmental Impact Report (EIR) was prepared by the Lab for the proposed construction and operation of the Helios Energy Research Facility (Helios Facility) project. Although consistent with LBNL's 2006 Long Range Development Plan

(LRDP) and 2006 LRDP EIR (SCH# 2000102046), the Helios Facility EIR is not tiered from the LRDP EIR and was prepared as a “stand-alone” CEQA analysis.

The EIR described and analyzed site preparation, construction, and operation of the Helios Facility, its associated parking area and access roadway, and other proposed improvements. In addition, the Department of Energy (DOE) parcel leases would be modified, subject to approval by the President, so that no portion of the Helios project or associated parking and access roadway would occupy land leased by The Regents to the Department of Energy.

A Notice of Preparation was published on July 26, 2007, commencing a thirty-day public scoping period. A public scoping meeting for the EIR was held on August 8, 2007. Additional outreach conducted by LBNL in the summer and fall of 2007 included: scoping advertisements in Oakland Tribune and Daily Californian newspapers; advance alerting of city, county, and state elected officials and neighborhood association representatives; briefings of city of Berkeley leaders and staff about the Helios project and design; and, an informational “Community Leaders Breakfast” hosted by Lab Director Chu for local business and community leaders, including members of the City Council, City boards, and commissions.

A Draft EIR (SCH# 20078072107) was circulated for public and agency review between November 19, 2007 and February 1, 2008, for a total of 74 days. Notices of Availability were distributed to the public and posted in the Oakland Tribune, Berkeley Voice, and Daily Californian newspapers. Additionally, the Lab mailed nearly 500 printed Notices of Availability to a comprehensive mailing list that included applicable local and regional agencies, community groups, neighbors, and other individuals. Helios Facility Draft EIRs were placed at the Berkeley Public Library reference desk and the Lab's Building 50 Library and were posted online at the Lab's Community Relations website. Hard copy Draft EIRs and/or Compact Disks were sent to the State Clearinghouse, several agencies, active mailing list members, and to any members of the public who requested them.

A Public Hearing was held on December 17, 2007. Announcements of the Public Hearing were placed in the calendar sections of the local newspapers, and media advisories were sent to the local media. On December 12, 2007, Lab staff made a formal presentation of the Helios project to the Berkeley Planning Commission.

During the public review period, comments on the Draft EIR were received from two State agencies, two local agencies, eight organizations, and approximately twenty individuals. Approximately twenty-six individuals commented at the EIR Public Hearing. Comments included concerns about the nature of the Helios project research and its funding through BP Corporation; a request to site the project outside of the LBNL area; and concerns regarding aesthetics, air quality, cultural resources, seismicity, hydrology, hazards, public safety, transportation, and cumulative impacts.

The Draft EIR analyzed in detail the following five Helios Energy Research Facility alternatives: No Project Alternative, Reduced Facility Alternative, Split Design Alternative, Alternate LBNL Location Alternative, and the Proposed Project with Alternate Access Road Alignment. The

Reduced Facility Alternative was identified as the environmentally superior alternative. To reduce project environmental impacts (in particular, impacts to aesthetics, biological resources), it is proposed that The Regents consider approval of the Helios design that was analyzed in Alternative 5, Proposed Project with Alternate Access Road Alignment.

Project Impacts

The Draft EIR determined that the project, including the “Alternate Access Road Alignment” Alternative, would have the following significant and unavoidable project-specific and cumulative impacts:

- Aesthetics (due mainly to tree removal from the proposed access roadway alignment);
- Air quality (cumulative – due mainly to incremental contribution to diesel exhaust in the area); and,
- Transportation (cumulative – due to increase in commuter traffic on nearby intersections).

The Final EIR includes: the Draft EIR; refinements to the project description, including description of the “Proposed Project with Alternate Access Road Alignment” Alternative and summary of its impacts and mitigation measures; changes and corrections made to the EIR; transcripts from the public hearing; and detailed responses to all comments received on the Draft EIR. The Final EIR includes refinements to the project description regarding replacement of the originally proposed access roadway alignment with an alternative that would minimize tree removal and reduce the significant and unavoidable impact to visual quality.

To assure that all measures are implemented in accordance with CEQA, a Mitigation Monitoring and Reporting Program (MMRP) has been prepared and included in the Final EIR. LBNL and UCB would be responsible for implementing all Helios Facility Project EIR mitigation measures within jurisdiction of The Regents. The MMRP provides a reporting mechanism for the mitigation measures, and assigns mitigation measures to the appropriate campus or Lab based on campus or Lab areas of responsibility. For example, measures relevant to the construction of the facility are largely the responsibility of LBNL, and measures relevant to operational aspects of the project are UCB’s responsibility.

Findings

The **attached Findings** discuss the project's impacts, mitigation measures, and conclusions regarding certification of the EIR for the Helios Facility project in compliance with CEQA. The Findings also set forth overriding considerations for approval of the project in light of its unavoidable significant impacts.

(**Attachments**)

**PROJECT STATISTICS
HELIOS ENERGY RESEARCH FACILITY
CAPITAL IMPROVEMENT BUDGET
BERKELEY CAMPUS
CCCI 4890**

<u>Cost Category</u>	<u>Total Amount</u>	<u>% of Total</u>
Site Clearance	\$6,245,000	3.2%
Building	129,358,000	65.3%
Exterior Utilities	6,581,000	3.3%
Site Development	11,566,000	5.8%
A/E Fees ^(a)	12,637,000	6.4%
Campus Administration ^(b)	5,882,000	3.0%
Surveys, Tests	1,497,000	0.8%
Special Items ^(c)	16,835,000	8.5%
Contingency	<u>7,645,000</u>	<u>3.9%</u>
	\$198,246,000	100%
Groups 2 & 3 Equipment	0	
Total Project	<u>\$198,246,000</u>	

Statistics

Gross Square Feet (GSF) ^(d)	144,000
Assignable Square Feet (ASF) ^(d)	83,536
Ratio ASF/GSF (%)	58%
Building Cost/GSF	\$898

Comparable University Projects at CCCI 4890

<u>Project</u>	<u>Building Cost/GSF</u>	<u>Ratio ASF/GSF</u>	<u>Date of latest CIB Approval</u>
UCB - Davis Hall North	\$935	55%	5/12/2006
UCB - Biomedical and Health Sciences Building (all steps)	\$820	55%	5/31/2007
UC LA - CNSI Court of Sciences Building	\$645	63%	10/3/2006

(a) A/E fees include the executive architect's basic services contract fee of \$9,560,000, which represents 7.5 percent of the construction budget identified in the architect's contract.

(b) Campus Administration provides project management and inspection.

(c) Special items include special consultants, code compliance fees, hazardous materials assessment, advance planning and environmental reviews, and project reviews, totaling \$4,035,000, and interest expense totaling \$12,800,000.

(d) Gross square feet (GSF) is the total area, including usable area, stairways, and space occupied by the structure itself. Assignable square feet (ASF) is the net usable area.

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