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**BERKELEY
LAB**

2021 Annual Financial Report

Front Cover:

Collage displaying artists rendering of the future Biological and Environmental Program Integration Center (BioEPIC) building with the Advanced Light Sources (ALS) in the background, and members of the Berkeley Lab leadership and science groups involved with BioEPIC in the foreground posing for a photograph during the BioEPIC groundbreaking ceremony. Left to Right: Susan Hubbard, Associate Laboratory Director for Earth & Environmental Sciences, Michael Brandt, Deputy Director for Operations Mike Witherell, Laboratory Director, Carol Burns, Deputy Director for Research, Paul Adams, Associate Laboratory Director for Biosciences. For information about BioEPIC, visit: www.lbl.gov/

2021 Annual Financial Report

ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY

UNIVERSITY OF CALIFORNIA · BERKELEY, CALIFORNIA · JANUARY 2022

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Key Terms:

Throughout this document, \$K means dollars in thousands,
\$M means dollars in millions, and \$B means dollars in billions.

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BERKELEY LAB

MESSAGE FROM THE CFO

Lawrence Berkeley National Laboratory (LBNL) continued to successfully operate during the ongoing COVID pandemic, providing world-class science facilities to both researchers and scientific users in its five national user facilities. The dedication and commitment of the Lab community to continuing the Lab's mission has been unparalleled during this difficult time. Due to the diligence of the Lab's Operations teams and each person who came on site, the Lab was able to safely operate these facilities.

In December, the Lab received its annual appraisal from the U.S. Department of Energy (DOE). The Lab received "A" grades for each of the performance goals which include mission accomplishment, leadership, health and safety, security and emergency management, business systems, and facilities. The University of California manages the Lab on behalf of the DOE.

OCFO Mission: High-value financial and procurement services and strategic solutions that contribute to Berkeley Lab's research and stewardship mission

FY2021 financial results highlight another year of robust funding – \$1.2B, a slight increase over FY2020 – for the Lab under the steady and focused leadership of Laboratory Director Michael Witherell and Deputy Lab Directors Michael Brandt, Operations, and Carol Burns, Research, who joined the leadership team following the announcement that Horst Simon was stepping down from the role.

The DOE continues to demonstrate its trust in the Lab to carry out its scientific mission through substantial investments in large-scale scientific research programs, improving the reliability of our aging infrastructure, constructing a new research facility, and completing the cleanup at our Old Town site. In yet another extraordinary year of challenge, the Lab achieved many noteworthy accomplishments:

- The Dark Energy Spectroscopic Instrument project - DESI - which measures the effect of dark energy on the expansion of the universe - returned its first data. The project has already created the largest 3D map of the cosmos with the first survey showing the location of 7.5 million galaxies up to distances of 10 billion light-years. The project is scheduled to operate through 2026.

- The National Energy Research Scientific Computing Center (NERSC) 9 project, which installed the next generation high-performance supercomputing system to support the complex computing needs for simulation and data analysis, completed its Phase 1 implementation.
- The DOE Laboratory Directed Research and Development (LDRD) program continues to provide tantalizing glimpses into future discoveries. The program provides seed funding for innovative science and new research in support of the Lab's strategic direction.
- We obtained Critical Decision 2 (CD-2) approval on the Advanced Light Source (ALS) upgrade project to replace the existing electron storage ring. The new ring will use compact magnets arranged in a dense, circular array called a multibend achromat lattice. This, along with other changes, will produce bright, steady beams of high-energy light to probe matter with unprecedented detail.
- The ground was broken for the construction of BioEPIC, the Biological and Environmental Program Integration Center building. When completed, the building will house complementary research programs in Biosciences and Earth and Environmental Sciences.
- Removal of buildings from Old Town was completed, leaving an available site that can be prepared for future construction.
- Planned utility upgrades continued as one facet of upgrading the Lab's aging infrastructure. These methodical improvements to the power system at the Lab will provide the needed energy to continue to support the Lab's scientific mission.
- The Lab's mission - to serve humankind through science - was strengthened by the introduction of the Lab's core values of service, innovation, trust, respect, and team science. The core values guide decisions and behaviors of Lab citizens in support of protecting the people, research, and resources that encompass the Lab.

Once again, the Lab community demonstrated resilience and commitment to the Lab and its mission as the organization adjusted to the changes in public health guidelines in response to pandemic conditions over time. The pivots will continue this year. When conditions allow more employees to return to Lab sites, the Lab will implement the Future of Work that acknowledges the pandemic has forever changed the way we approach work. Employees will be placed in one of four work modes - remote, on site, full-time telework or hybrid - that best fits the needs of their role at the Lab. This change in the way we work will call on employees and supervisors to be innovative, flexible, and agile in their approach to work and to working with others.

The adaptability and resilience of teams across the Lab have enabled a robust partnership between Operations and Science to revise work practices that allow for scientific collaborations in this new environment. While continuing to maximize the telework posture, the Office of the Chief Financial Officer (OCFO) team continues to actively engage in executing and implementing the Operations Area's three key strategies of Leadership as One Lab, Operational Excellence, and Investing in our people as we deliver our many services to the Lab community. I am extremely proud of not just the OCFO team, but the entire Lab community's dedication and resilience in the face of prolonged adversity. Together, we are implementing the Lab's stewardship vision, caring for our people, research and resources.

MINH AGON HUEBNER
Chief Financial Officer

Organization as of September 30, 2021

ORGANIZATION OF BERKELEY LAB

Organization as of September 30, 2021

ORGANIZATION OF THE OFFICE OF THE CHIEF FINANCIAL OFFICER

INSTITUTIONAL INFORMATION

The Advanced Light Source dome seen from the area near Buildings 30, 33, and 26 during lab standby in response to the shelter-in-place (SIP) order due to the COVID-19 pandemic, at Berkeley Lab.

Credit: Kelly Owen/Berkeley Lab

ALS-U is an ongoing upgrade of the Advanced Light Source (ALS) at Berkeley Lab that will endow the ALS with revolutionary x-ray capabilities. Shown is a cutaway rendering of the ALS dome showing the layout of three electron-accelerating rings with beamlines.

Credit: Berkeley Lab

For information about ALS-U, visit:
als.lbl.gov/als-u/overview

WHERE DID YOUR PROGRAM DOLLARS GO IN FY2021?

Figure 1.1

Expenses	DOE Operating Costs	DOE Integrated Contractors Costs	Construction and Equipment	SPP Non-DOE
DIRECT				
DIRECT LABOR				
UC Labor (a)	\$0.35	\$0.46	\$0.34	\$0.36
Contract Labor	\$0.00	\$0.00	\$0.02	\$0.00
Organization/Area Burdens	\$0.05	\$0.06	\$0.04	\$0.06
Subtotal Direct Labor	\$0.41	\$0.52	\$0.40	\$0.42
OTHER DIRECT				
Services	\$0.18	\$0.10	\$0.23	\$0.12
Materials	\$0.08	\$0.02	\$0.25	\$0.07
Utilities	\$0.01	\$0.00	\$0.00	\$0.00
Other Expenses (b)	\$0.01	\$0.01	\$0.01	\$0.01
Recharges (c)	\$0.02	\$0.05	\$0.01	\$0.05
Travel	\$0.00	\$0.00	\$0.00	\$0.00
Subtotal Other Direct	\$0.30	\$0.17	\$0.50	\$0.25
Total Direct	\$0.71	\$0.69	\$0.90	\$0.67
INDIRECT				
Procurement	\$0.01	\$0.01	\$0.02	\$0.01
Travel	\$0.00	\$0.00	\$0.00	\$0.00
G&A (Other Inst.)	\$0.28	\$0.30	\$0.08	\$0.31
Total Indirect	\$0.29	\$0.31	\$0.10	\$0.33
Total Expenses	\$1.00	\$1.00	\$1.00	\$1.00
Note: Minor variances may occur due to rounding. (a) UC Labor includes salary and benefits for Scientists/Engineers, Administrators, Students/Graduate Student Research Assistants (GSRAs) and Campus Labor. (b) Includes misc. expenses (stipends, sales tax, freight, etc.). (c) Distributed activities used by direct funded programs. Includes recharges credited back to direct operating accounts such as Advanced Light Source (ALS) and ESnet.

COST TRENDS BY EXPENSE CATEGORY, FY2017 - FY2021 (\$M AND % OF TOTAL)

Table 1.1

Expenses	FY2017		FY2018		FY2019		FY2020		FY2021	
	\$M	%	\$M	%	\$M	%	\$M	%	\$M	%
DIRECT										
DIRECT LABOR										
UC Labor (a)	283.1	33.0%	289.2	31.9%	315.0	33.3%	347.1	34.7%	379.5	35.7%
Contract Labor	1.0	0.1%	0.8	0.1%	1.4	0.1%	1.3	0.1%	2.7	0.3%
Organization/Area Burdens	48.2	5.6%	47.7	5.3%	50.9	5.4%	54.0	5.4%	57.5	5.4%
Subtotal Direct Labor	332.3	38.7%	337.7	37.2%	367.3	38.8%	402.4	40.2%	439.8	41.3%
OTHER DIRECT										
Services	174.3	20.3%	217.6	24.0%	200.6	21.2%	192.9	19.3%	191.1	18.0%
Materials	77.2	9.0%	74.5	8.2%	83.4	8.8%	101.6	10.2%	100.9	9.5%
Utilities	6.8	0.8%	7.6	0.8%	7.3	0.8%	5.7	0.6%	5.8	0.5%
Other Expenses (b)	5.5	0.6%	6.3	0.7%	8.1	0.9%	7.0	0.7%	7.2	0.7%
Recharges (c)	22.4	2.6%	23.4	2.6%	27.2	2.9%	23.5	2.3%	24.2	2.3%
Travel	11.9	1.4%	12.4	1.4%	13.8	1.5%	6.2	0.6%	0.9	0.1%
Subtotal Other Direct	298.1	34.7%	341.6	37.7%	340.3	36.0%	336.9	33.7%	330.1	31.0%
Total Direct	630.4	73.5%	679.3	74.9%	707.6	74.8%	739.3	73.8%	769.9	72.4%
INDIRECT										
Procurement	9.6	1.1%	9.6	1.1%	10.7	1.1%	13.0	1.3%	14.5	1.4%
Travel	1.1	0.1%	1.1	0.1%	1.1	0.1%	0.6	0.1%	0.1	0.0%
G&A (Other Inst.)	217.0	25.3%	217.1	23.9%	226.4	23.9%	248.3	24.8%	279.4	26.3%
Total Indirect	227.7	26.5%	227.9	25.1%	238.2	25.2%	261.9	26.2%	293.9	27.6%
Total Expenses	858.1	100.0%	907.2	100.0%	945.8	100.0%	1,001.3	100.0%	1,063.8	100.0%

Note: Minor variances may occur due to rounding.

(a) UC Labor includes salary and benefits for Scientists/Engineers, Administrators, Students/GSRAs and Campus Labor.

(b) Includes misc. expenses (stipends, sales tax, freight, etc.)

(c) Distributed activities used by direct funded programs. Includes recharges credited back to direct operating accounts such as ALS and ESnet.

DIRECT COST TRENDS BY AREA AND DIVISION, FY2017 - FY2021 (\$K)

Table 1.2

Area and Division	FY2017	FY2018	FY2019	FY2020	FY2021
Biosciences	170,286	162,458	175,991	182,202	201,776
Biological Systems & Engineering	43,767	38,719	46,520	46,584	49,984
Environmental Genomics & System Biology	15,834	16,894	19,111	21,999	37,744
Joint Genome Institute	71,642	65,904	68,210	75,972	84,367
Molecular Biophysics & Integrated Bioimaging	39,043	40,941	42,150	37,648	29,681
Computing Sciences	172,732	183,308	183,225	227,959	219,367
Computational Research	37,666	43,796	47,646	55,569	64,191
National Energy Research Scientific Computing Center	95,180	99,264	87,495	99,202	75,405
Scientific Networking	39,886	40,248	48,084	73,188	79,771
Directorate & Operations (a) (b) (c) (d)	42,947	74,699	73,070	78,106	88,366
ALS-U			23,931	36,627	45,191
Environment, Health, and Safety	29	69	282	47	137
Facilities	33,231	69,834	4,425		
Human Resources		777	923	988	1,506
Information Technology	4,200	3,891	3,790	4,432	3,309
Laboratory Directorate	219	92	196	137	705
Office of the CFO (e)	162	37	43	70	33
Projects and Infrastructure Modernization			39,480	31,937	32,891
Public Affairs	1,459				
Security and Emergency Services	3,648			3,868	4,594
Earth & Environmental Sciences	65,432	66,794	71,703	75,859	86,242
Climate & Ecosystems	36,659	35,345	38,066	41,445	43,569
Energy Geosciences	28,774	31,449	33,636	34,415	42,673
Energy Sciences (f)	164,136	172,134	179,235	175,076	191,575
Advanced Light Source	73,900	79,054	70,281	69,534	74,869
Chemical Sciences	26,702	25,985	27,764	27,194	27,535
Material Sciences	31,553	33,346	42,289	41,636	48,501
Molecular Foundry	31,981	33,750	38,901	36,712	40,671
Energy Technologies	113,137	110,305	122,252	124,626	129,616
ETA Area Office				140	112
Building Technologies & Urban Systems	38,218	34,223	40,242	42,963	44,808
Cyclotron Road	2,937	2,629	3,059	1,343	1,463
Energy Analysis & Environmental Impacts	40,649	42,270	44,221	47,030	50,864
Energy Storage & Distributed Resources	31,333	31,183	34,730	33,150	32,369
Physical Sciences	129,444	137,486	140,305	137,425	146,847
Physical Sciences Area Office					12
Accelerator Technology & Applied Physics	43,590	42,353	38,566	41,522	38,862
Engineering	1,375	2,153	1,764	3,455	2,126
Nuclear Science	32,130	32,565	37,437	38,464	43,003
Physics	52,349	60,416	62,537	53,984	62,844
AREA AND DIVISION TOTAL	858,115	907,185	945,781	1,001,254	1,063,789

Note: Minor variances may occur due to rounding.

(a) Directorate & Operations reorganized in FY2018, Protective Services moved into Facilities, and Public Affairs moved into the Laboratory Directorate.

(b) ALS-U became a separate division in FY2019 (previously reported under Energy Sciences, Advanced Light Source).

(c) Directorate & Operations reorganized in FY2019, Projects and Infrastructure Modernization was created and moved out of Facilities.

(d) Directorate & Operations reorganized in FY2020, Security and Emergency Services was created (formerly Protective Services) and moved out of Facilities.

(e) Office of the CFO includes Inter-Entity Work Orders (IEWO) for the Bay Area Site Office (BASO).

(f) Energy Sciences reorganization in FY2017, Molecular Foundry division created (formerly in Materials Sciences division).

COST BY DIRECT FUNDING SOURCE BY AREA AND DIVISION, FY2021 (\$K)

Table 1.2a

Area and Division	FY2021						
	DOE Operating	DOE Integrated Contractors Costs	WFO Federal	WFO Non-Federal	Operating Subtotal	Capital and Equipment	Total
Biosciences	159,559	1,921	27,416	12,868	201,763	13	201,776
Biological Systems & Energy	38,852	504	7,723	2,905	49,984		49,984
Environmental Genomics & System Biology	29,303	177	5,019	3,244	37,744		37,744
Joint Genome Institute	84,208			146	84,354	13	84,367
Molecular Biophysics & Integrated Bioimaging	7,196	1,239	14,674	6,572	29,681		29,681
Computing Sciences	183,253	25,152	6,895	1,831	217,131	2,236	219,367
Computational Research	37,955	18,716	6,865	655	64,191		64,191
National Energy Research Scientific Computing Center	69,180	3,960		29	73,169	2,236	75,405
Scientific Networking	76,118	2,476	30	1,147	79,771		79,771
Directorate & Operations	25,674	144	-	44	25,862	62,504	88,366
ALS-U						45,191	45,191
Environment, Health, and Safety	137				137		137
Human Resources	1,506				1,506		1,506
Information Technology	3,309				3,309		3,309
Laboratory Directorate	550	111		44	705		705
Office of the CFO (a)		33			33		33
Projects and Infrastructure Modernization	15,577				15,577	17,313	32,891
Security and Emergency Services	4,594				4,594		4,594
Earth & Environmental Sciences	68,588	6,901	1,190	9,563	86,242	-	86,242
Climate & Ecosystems	37,722	3,736	1,113	998	43,569		43,569
Energy Geosciences	30,866	3,166	77	8,564	42,673		42,673
Energy Sciences	162,015	392	1,016	15,864	179,287	12,288	191,575
Advanced Light Source	65,401	7	-	1,035	66,442	8,427	74,869
Chemical Sciences	26,384	58	-	169	26,611	924	27,535
Materials Sciences	35,578	22	240	12,654	48,494	7	48,501
Molecular Foundry	34,652	306	777	2,006	37,740	2,930	40,671
Energy Technologies	106,819	3,094	6,368	13,335	129,616	-	129,616
ETA Area Office	112				112		112
Building Technology & Urban Systems	40,184		343	4,281	44,808		44,808
Cyclotron Road	847		376	241	1,463		1,463
Energy Analysis & Environmental Impacts	39,878	1,160	4,987	4,839	50,864		50,864
Energy Storage & Distributed Resources	25,799	1,934	663	3,974	32,369		32,369
Physical Sciences	97,200	10,491	7,451	3,039	118,181	28,665	146,847
Physical Sciences Area Office		12			12		12
Accelerator Technology & Applied Physics	18,923	4,468		812	24,203	14,659	38,862
Engineering	18	577	7	1,524	2,126		2,126
Nuclear Science	27,646	1,191	6,317	246	35,400	7,603	43,003
Physics	50,613	4,244	1,127	457	56,441	6,403	62,844
Area and Division Total	803,108	48,095	50,336	56,544	958,083	105,706	1,063,789

Note: Minor variances may occur due to rounding.

(a) Office of the CFO includes Inter-Entity Work Orders (IEWO) for the Bay Area Site Office (BASO).

COST BY DIRECT FUNDING SOURCE BY AREA AND DIVISION, FY2020 (\$K)

Table 1.2b

Area and Division	FY2020						
	DOE Operating	DOE Integrated Contractors Costs	SPP Federal	SPP Non- Federal	Operating Subtotal	Capital and Equipment	Total
Biosciences	140,740	2,065	24,805	13,864	181,473	729	182,202
Biological Systems & Energy	34,106	1,094	6,807	4,576	46,584		46,584
Environmental Genomics & System Biology	14,169	119	4,895	2,816	21,999		21,999
Joint Genome Institute	75,167			76	75,243	729	75,972
Molecular Biophysics & Integrated Bioimaging	17,298	851	13,103	6,396	37,648	(0)	37,648
Computing Sciences	190,473	22,920	4,476	2,181	220,050	7,909	227,959
Computational Research	32,955	17,095	4,454	1,065	55,569		55,569
National Energy Research Scientific Computing Center	87,478	3,335		480	91,293	7,909	99,202
Scientific Networking	70,040	2,489	22	637	73,188		73,188
Directorate & Operations (a)	23,279	168	4	-	23,451	54,655	78,106
ALS-U	1	6			7	36,620	36,627
Environment, Health, and Safety	47				47		47
Human Resources	988				988		988
Information Technology	4,365	68			4,432		4,432
Laboratory Directorate	108	25	4		137		137
Office of the CFO (b)		70			70		70
Projects and Infrastructure Modernization	13,902				13,902	18,035	31,937
Security and Emergency Services	3,868				3,868		3,868
Earth & Environmental Sciences	61,275	6,252	677	7,656	75,859	-	75,859
Climate & Ecosystems	36,330	3,219	676	1,220	41,445		41,445
Energy Geosciences	24,945	3,033	1	6,436	34,415		34,415
Energy Sciences	151,543	507	1,878	12,477	166,406	8,670	175,076
Advanced Light Source	62,125	31		1,023	63,178	6,356	69,534
Chemical Sciences	26,697	326	45	126	27,195	(1)	27,194
Materials Sciences	31,631	11	380	9,475	41,496	139	41,636
Molecular Foundry	31,090	139	1,453	1,854	34,536	2,176	36,712
Energy Technologies	105,260	2,306	4,352	12,707	124,626	-	124,626
ETA Area Office	140				140		140
Building Technology & Urban Systems	38,317	161	572	3,913	42,963		42,963
Cyclotron Road	881	-	219	242	1,343		1,343
Energy Analysis & Environmental Impacts	38,588	803	3,409	4,230	47,030		47,030
Energy Storage & Distributed Resources	27,333	1,342	152	4,322	33,150		33,150
Physical Sciences	79,954	11,891	7,308	4,230	103,384	34,041	137,425
Accelerator Technology & Applied Physics	16,683	7,073		926	24,683	16,839	41,522
Engineering		1,393	39	2,023	3,455		3,455
Nuclear Science	23,228	1,030	6,522	846	31,625	6,839	38,464
Physics	40,043	2,396	748	434	43,621	10,363	53,984
Area and Division Total	752,525	46,109	43,499	53,116	895,249	106,004	1,001,254

Note: Minor variances may occur due to rounding.

(a) Directorate & Operations reorganized in FY2020, Security and Emergency Services was created (formerly Protective Services), and moved out of Facilities, hence Facilities has no direct funding.

(b) Office of the CFO includes Inter-Entity Work Orders (IEWO) for the Bay Area Site Office (BASO).

COST BY DIRECT FUNDING SOURCE BY AREA AND DIVISION, FY2019 (\$K)

Table 1.2c

Area and Division	FY2019						
	DOE Operating	DOE Integrated Contractors Costs	SPP Federal	SPP Non-Federal	Operating Subtotal	Capital and Equipment	Total
Biosciences	127,723	2,098	28,513	16,863	175,197	794	175,991
Biological Systems & Energy	33,311	948	7,414	4,847	46,520		46,520
Environmental Genomics & System Biology	10,325		5,911	2,875	19,111		19,111
Joint Genome Institute	67,939			271	68,210		68,210
Molecular Biophysics & Integrated Bioimaging	16,147	1,150	15,188	8,870	41,356	794	42,150
Computing Sciences	154,614	21,989	2,221	1,914	180,738	2,487	183,225
Computational Research	27,285	17,680	2,182	499	47,646		47,646
National Energy Research Scientific Computing Center	82,154	1,658		1,196	85,008	2,487	87,495
Scientific Networking	45,174	2,651	39	220	48,084		48,084
Directorate & Operations (a) (b)	23,321	177	147	-	23,644	49,426	73,070
ALS-U	1,863	14			1,877	22,054	23,931
Environment, Health, and Safety	280	2			282		282
Facilities	4,425				4,425		4,425
Human Resources	923				923		923
Information Technology	3,673	118			3,790		3,790
Laboratory Directorate	49		147		196		196
Office of the CFO (c)		43					43
Projects and Infrastructure Modernization	12,108				12,108	27,372	39,480
Earth & Environmental Sciences	57,234	6,652	414	7,245	71,545	157	71,703
Climate & Ecosystems	33,166	3,143	336	1,422	38,066		38,066
Energy Geosciences	24,068	3,509	78	5,823	33,479	157	33,636
Energy Sciences	152,998	444	2,316	12,707	168,465	10,769	179,235
Advanced Light Source	62,526	38		2,148	64,713	5,568	70,281
Chemical Sciences	26,018	332	200	248	26,798	966	27,764
Materials Sciences	32,744	39	106	8,448	41,338	951	42,289
Molecular Foundry	31,710	34	2,010	1,862	35,617	3,284	38,901
Energy Technologies	97,144	1,696	3,602	19,810	122,252	-	122,252
Building Technology & Urban Systems	32,997	179	550	6,516	40,242		40,242
Cyclotron Road	2,502		286	272	3,059		3,059
Energy Analysis & Environmental Impacts	33,037	1,031	2,593	7,561	44,221		44,221
Energy Storage & Distributed Resources	28,609	487	173	5,461	34,730		34,730
Physical Sciences	71,616	14,018	6,319	5,730	97,683	42,622	140,305
Accelerator Technology & Applied Physics	16,101	11,924		1,216	29,241	9,325	38,566
Engineering		400	18	1,340	1,758	6	1,764
Nuclear Science	22,661	878	5,244	2,283	31,066	6,371	37,437
Physics	32,854	816	1,058	890	35,618	26,919	62,537
Area and Division Total	684,649	47,075	43,532	64,270	839,525	106,256	945,781

Note: Minor variances may occur due to rounding.

(a) ALS-U became a separate division in FY2019 (previously reported under Energy Sciences, Advanced Light Source).

(b) Directorate & Operations reorganized in FY2019, Projects and Infrastructure Modernization was created and moved out of Facilities.

(c) Office of the CFO includes Inter-Entity Work Orders (IEWO) for the Bay Area Site Office (BASO).

COST BY DIRECT FUNDING SOURCE BY AREA AND DIVISION, FY2018 (\$K)

Table 1.2d

Area and Division	FY2018						
	DOE Operating	DOE Integrated Contractors Costs	SPP Federal	SPP Non-Federal	Operating Subtotal	Capital and Equipment	Total
Biosciences	114,387	1,544	28,818	17,174	161,924	534	162,458
Biological Systems & Energy	25,842	309	8,406	4,162	38,719		38,719
Environmental Genomics & System Biology	7,861	12	5,631	3,391	16,894		16,894
Joint Genome Institute	65,233			137	65,370	534	65,904
Molecular Biophysics & Integrated Bioimaging	15,452	1,223	14,781	9,485	40,941		40,941
Computing Sciences	154,269	19,275	2,135	1,199	176,878	6,430	183,308
Computational Research	25,793	15,649	2,094	259	43,796		43,796
National Energy Research Scientific Computing Center	91,548	545		741	92,834	6,430	99,264
Scientific Networking	36,928	3,081	41	198	40,248		40,248
Directorate & Operations (a)	23,424	286	17	-	23,727	50,972	74,699
Environment, Health, and Safety	69				69		69
Facilities	18,862				18,862	50,972	69,834
Human Resources	770	7			777		777
Information Technology	3,694	197			3,891		3,891
Laboratory Directorate	30	45	17		92		92
Office of the CFO (b)		37			37		37
Earth & Environmental Sciences	53,052	5,961	566	7,099	66,677	117	66,794
Climate & Ecosystems	30,302	3,467	387	1,081	35,236	110	35,345
Energy Geosciences	22,750	2,495	179	6,018	31,442	7	31,449
Energy Sciences	151,530	438	2,458	10,574	165,000	7,134	172,134
Advanced Light Source	73,603	34		1,787	75,424	3,629	79,054
Chemical Sciences	23,997	221	240	1,010	25,468	517	25,985
Materials Sciences	25,446	35		6,868	32,349	997	33,346
Molecular Foundry	28,484	148	2,218	909	31,759	1,991	33,750
Energy Technologies	81,568	2,352	4,768	21,617	110,305	-	110,305
Building Technology & Urban Systems	23,861	579	1,738	8,045	34,223		34,223
Cyclotron Road	2,480		123	26	2,629		2,629
Energy Analysis & Environmental Impacts	30,788	615	2,408	8,459	42,270		42,270
Energy Storage & Distributed Resources	24,439	1,158	499	5,087	31,183		31,183
Physical Sciences	70,862	17,576	7,911	4,955	101,304	36,182	137,486
Accelerator Technology & Applied Physics	19,927	16,181		1,321	37,429	4,924	42,353
Engineering		323	131	1,129	1,583	571	2,153
Nuclear Science	20,508	480	6,770	2,071	29,829	2,735	32,565
Physics	30,426	593	1,009	435	32,463	27,953	60,416
Area and Division Total	649,093	47,432	46,674	62,618	805,816	101,369	907,185

Note: Minor variances may occur due to rounding.

(a) Directorate & Operations reorganized in FY2018, Protective Services moved into Facilities, and Public Affairs moved into the Laboratory Directorate.

(b) Office of the CFO includes Inter-Entity Work Orders (IEWO) for the Bay Area Site Office (BASO).

COST BY DIRECT FUNDING SOURCE BY AREA AND DIVISION, FY2017 (\$K)

Table 1.2e

Area and Division	FY2017						
	DOE Operating	DOE Integrated Contractors Costs	SPP Federal	SPP Non- Federal	Operating Subtotal	Capital and Equipment	Total
Biosciences	126,222	969	26,570	15,680	169,441	845	170,286
Biological Systems & Energy	32,152	120	6,671	4,824	43,767		43,767
Environmental Genomics & System Biology	6,435		6,313	3,086	15,834		15,834
Joint Genome Institute	70,546			251	70,797	845	71,642
Molecular Biophysics & Integrated Bioimaging	17,089	849	13,586	7,519	39,043		39,043
Computing Sciences	154,620	14,021	3,735	356	172,732	-	172,732
Computational Research	26,290	9,461	1,725	190	37,666		37,666
National Energy Research Scientific Computing Center	92,953	169	1,995	62	95,180		95,180
Scientific Networking	35,377	4,390	15	104	39,886		39,886
Directorate & Operations	24,912	567	1	-	25,481	17,466	42,947
Environment, Health, and Safety	29				29		29
Facilities	15,773				15,773	17,459	33,231
Information Technology	3,861	338			4,200		4,200
Laboratory Directorate	150	67	1		219		219
Office of the CFO (a)		162			162		162
Protective Services	3,641				3,641	8	3,648
Public Affairs	1,459				1,459		1,459
Earth & Environmental Sciences	52,165	5,080	1,299	6,721	65,265	167	65,432
Climate & Ecosystems	30,998	3,506	735	1,252	36,491	167	36,659
Energy Geosciences	21,167	1,574	564	5,468	28,774		28,774
Energy Sciences (b)	145,620	578	2,382	9,845	158,425	5,711	164,136
Advanced Light Source	67,228	135	11	1,692	69,066	4,834	73,900
Chemical Sciences	25,586	69	9	1,038	26,702		26,702
Material Sciences	24,648	162		6,743	31,553	(0)	31,553
Molecular Foundry	28,158	212	2,362	372	31,104	877	31,981
Energy Technologies	85,644	1,748	6,404	19,341	113,137	-	113,137
Building Technologies & Urban Systems	28,346	59	1,873	7,941	38,218		38,218
Cyclotron Road	2,932		5		2,937		2,937
Energy Analysis & Environmental Impacts	28,659	979	3,407	7,605	40,649		40,649
Energy Storage & Distributed Resources	25,707	710	1,120	3,796	31,333		31,333
Physical Sciences	68,019	18,480	7,740	5,425	99,664	29,780	129,444
Accelerator Technology & Applied Physics	17,848	17,647		2,158	37,652	5,938	43,590
Engineering		218	65	977	1,260	115	1,375
Nuclear Science	21,153	168	7,080	2,118	30,519	1,610	32,130
Physics	29,018	448	595	172	30,232	22,117	52,349
Area and Division Total	657,202	41,444	48,131	57,368	804,145	53,970	858,115

Note: Minor variances may occur due to rounding.

(a) Office of the CFO includes Inter-Entity Work Orders (IEWO) for the Bay Area Site Office (BASO).

(b) Energy Sciences reorganization in FY2017, Molecular Foundry division created (formerly in Materials Sciences division).

INDIRECT BUDGET COSTS BY DIVISION, FY2021 (\$K)

Table 1.3

	Distributed Support Costs			Institutional Costs							Total (c)
Area and Divison	ALD/ Org. Burden	Service Centers (a)	Other (b)	LDRD	IGPP	TCR	G&A	Site Support	Procurement Burden	Travel Burden	
Biosciences	13,685	5,891		4,934							24,511
Bioscience Area Office	13,685	1,238									14,923
Biological Systems & Energy		2,766		1,572							4,338
Environmental Genomics & System Biology				1,597							1,597
Joint Genome Institute		792		1,017							1,809
Molecular Biophysics & Integrated Bioimaging		1,095		748							1,843
Computing Sciences	8,811	2,622		4,517							15,950
Computing Sciences ALD	3,926	2,622									6,548
Computational Research	2,822			3,939							6,760
National Energy Research Scientific Computing Center	1,444			303							1,747
Scientific Networking	620			276							895
Directorate & Operations	10,700	24,883	336		23,477	8,008	102,487	123,713	18,358	58	312,020
Laboratory Directorate		1,253	336				25,770	387			27,747
Environment, Health, and Safety								25,265			25,265
Facilities	5,767	8,902						68,645	2,355		85,669
Human Resources		5,402					14,655				20,057
Information Technology	3,016	9,074					37,852				49,943
Office of the CFO		251					9,610		16,003	58	25,922
Operations						8,008	10,899				18,907
Projects & Infrstrcture Mod	1,917				23,477		3,701	16,837			45,933
Security and Emergency Service								12,579			12,579
Earth & Environmental Sciences	5,605	68		2,693				21			8,387
Earth & Environmental Science ALD	5,605	39						21			5,666
Climate & Ecosystems				1,300							1,300
Energy Geosciences		28		1,393							1,422

Note: Minor variances may occur due to rounding.

(a) Service Centers includes recharge cost centers that default to Budget & Reporting (B&R) YN01 (project type Overhead Recharge (OHRCH)) only and GSRA pass through cost.

(b) Includes: LBNL's Office of National & Homeland Security (formerly known as Nuclear Non-Proliferation).

(c) Summation of indirect budget costs provided only to show magnitude of dollars being managed and does not equate to total indirect costs since there are overlaps between indirect budgets. For example, some organization burden costs are included in G&A and Recharges.

INDIRECT BUDGET COSTS BY DIVISION, FY2021 (\$K) CONTINUED

Table 1.3

	Distributed Support Costs			Institutional Costs							Total (c)
Area and Division	ALD/ Org. Burden	Service Centers (a)	Other (b)	LDRD	IGPP	TCR	G&A	Site Support	Procurement Burden	Travel Burden	
Energy Sciences	11,062	587		5,437							17,086
Energy Sciences ALD	1,066										1,066
Advanced Light Source	2,997			841							3,837
Chemical Sciences	2,233			1,379							3,612
Materials Sciences	2,968	587		2,180							5,735
Molecular Foundry	1,798			1,037							2,835
Energy Technologies	8,626	3,644		3,501							15,771
ETA Area Office	8,626										8,626
Building Technology & Urban Systems		1,405		587							1,993
Energy Storage & Distributed Resources		893		2,155							3,048
Energy Analysis & Environmental Impacts		1,346		759							2,105
Physical Sciences	13,003	2,857		3,454			3,707				23,022
Physical Sciences ALD	507										507
Accelerator Technology & Applied Physics	1,989			730							2,719
Engineering	6,801	2,481		166			3,707				13,155
Nuclear Science	1,809	376		1,022							3,206
Physics	1,898			1,536							3,434
Grand Total	71,494	40,552	336	24,536	23,477	8,008	106,194	123,734	18,358	58	416,747

Note: Minor variances may occur due to rounding.

(a) Service Centers includes recharge cost centers that default to B&R YN01 (project type OHRCH) only and GSRA pass through cost.

(b) Includes: LBNL's Office of National & Homeland Security (formerly known as Nuclear Non-Proliferation).

(c) Summation of indirect budget costs provided only to show magnitude of dollars being managed and does not equate to total indirect costs since there are overlaps between indirect budgets. For example, some organization burden costs are included in G&A and Recharges.

AVERAGE FULL-TIME EQUIVALENT (FTE) BREAKDOWN BY DIVISION, FY2021

Table 1.4

Area and Division	Direct Funded FTEs				Indirect Funded FTEs				Total FTEs
	DOE Direct Operating	Other Direct Operating (b)	Capital & Equipment	Direct Funded Total	ALD/ Org. Burden	Service Centers (c)	Operations Overhead (d)	Indirect Funded Total	
Biosciences	383.1	101.9	-	485.0	79.9	18.6	20.1	118.5	603.5
Biological Systems & Energy	94.8	30.1		125.0	2.9	6.9	3.8	13.6	138.5
Bioscience Area Office				-	72.0	6.9		78.9	78.9
Environmental Genomics & System Biology	76.3	25.0		101.3	2.8		7.1	9.8	111.1
Joint Genome Institute	189.3	0.6		189.9	(0.0)	0.5	5.7	6.2	196.1
Molecular Biophysics & Integrated Bioimaging	22.7	46.1		68.8	2.2	4.3	3.6	10.1	78.9
Computing Sciences	282.9	77.6	-	360.5	43.6	-	17.3	60.9	421.4
Computational Research	84.8	63.3		148.1	12.3		15.2	27.5	175.6
Computing Sciences ALD				-	19.1			19.1	19.1
National Energy Research Scientific Computing Center	107.4	11.8		119.2	7.8		0.7	8.5	127.7
Scientific Networking	90.7	2.5		93.2	4.5		1.3	5.8	99.0
Directorate & Operations	24.1	0.4	139.6	164.2	42.6	32.3	761.0	835.8	1,000.0
ALS-U			129.4	129.4				-	129.4
Office of the CFO (a)		0.0		0.0		0.3	144.9	145.2	145.2
Environment, Health, Safety	0.0			0.0			102.9	102.9	103.0
Facilities	0.4			0.4	22.8	2.2	181.5	206.5	206.9
Human Resources	4.0			4.0			66.9	66.9	70.9
Information Technology	6.2			6.2	12.3	26.0	85.2	123.5	129.8
Laboratory Directorate	1.1	0.4		1.5		3.8	99.1	103.0	104.5
Operations				-			24.4	24.4	24.4
Projects and Infrastructure Modernization	5.2		10.2	15.4	7.5		35.5	43.0	58.4
Security and Emergency Services	7.2			7.2			20.5	20.5	27.7
Earth & Environmental Sciences	154.7	42.1	-	196.8	22.5	0.2	12.2	34.9	231.7
Climate & Ecosystems	88.9	16.0		104.9			6.5	6.5	111.4
Earth & Environmental Science ALD				-	22.5	0.0	0.1	22.7	22.7
Energy Geosciences	65.7	26.2		91.9		0.1	5.6	5.7	97.6

Notes: Minor variances may occur due to rounding. FTEs are calculated based on translating labor hours charged into work-months and dividing by division's Paid Leave Factor (PLF). FTE calculation does not include Contract Labor or Campus Labor. Total FTE excludes 36.9 FTEs from non-contract projects (University of California Contract Supported Research (UCCSR), Inter-Jurisdictional Employee Exchange (JE), Inter-Governmental Personnel Assignment (IPA), Multiple Location Appointment (MLA), Royalties, and UC Construction Projects).

(a) Office of the CFO includes Inter-Entity Work Orders (IEWO) for the Bay Area Site Office.

(b) Other Operating includes DOE Integrated Contractors, Non-DOE Fellowships, and Cooperative Research and Development Agreements (CRADAs).

(c) Service Centers includes recharge cost centers that default to B&R YN01 (project type OHRCH) only.

(d) Operations Overhead includes: G&A, LDRD, Site Support, Payroll Burden, Procurement, Travel, IGPP, Safeguard & Security (S&S), TCR, and LBNL's Office of National and Homeland Security.

Area and Division	Direct Funded FTEs				Indirect Funded FTEs				Total FTEs
	DOE Direct Operating	Other Direct Operating (b)	Capital & Equipment	Direct Funded Total	ALD/ Org. Burden	Service Centers (c)	Operations Overhead (d)	Indirect Funded Total	
Energy Sciences	467.4	44.5	10.9	522.8	51.3	1.8	28.1	81.2	604.0
Advanced Light Source	157.0	0.6	10.9	168.5	12.6		3.6	16.2	184.6
Chemical Sciences	92.9	0.8		93.7	11.1		6.6	17.7	111.4
Energy Sciences ALD				-	3.3			3.3	3.3
Material Sciences	128.6	26.7		155.3	14.0	1.8	10.2	26.0	181.3
Molecular Foundry	88.9	16.5		105.4	10.4		7.7	18.1	123.5
Energy Technologies	264.0	52.4	-	316.4	35.8	21.8	15.7	73.3	389.8
Building Technology & Urban Systems	87.9	12.4		100.3		7.4	2.6	10.1	110.4
Cyclotron Road	1.2	1.1		2.4				-	2.4
Energy Analysis Environmental Impact	91.8	22.4		114.3		8.7	3.0	11.7	125.9
Energy Storage & Distribution	82.5	16.5		99.0		5.7	10.0	15.7	114.7
ETA Area Office	0.5			0.5	35.8			35.8	36.4
Physical Sciences	206.4	56.3	46.4	309.2	62.8	10.6	22.8	96.2	405.3
Accelerator Technology & Applied Physics	45.6	16.6	30.5	92.7	10.3		3.3	13.5	106.2
Engineering	0.0	4.9		4.9	30.5	9.7	7.1	47.3	52.2
Nuclear Science	65.3	22.3	7.9	95.5	9.6	0.8	5.9	16.4	111.9
Physical Sciences ALD	1.1	0.0		1.1	1.6			1.6	2.8
Physics	94.4	12.5	8.0	115.0	10.8		6.5	17.3	132.2
TOTAL	1,782.7	375.3	196.9	2,354.9	338.7	85.1	877.0	1,300.8	3,655.7

Notes: Minor variances may occur due to rounding. FTEs are calculated based on translating labor hours charged into work-months and dividing by division's PLF factor. FTE calculation does not include Contract Labor or Campus Labor. Total FTE excludes 36.9 FTEs from non-contract projects (CSRUC, IJE, IPA, MLA, Royalties, and UC Construction Projects).

(b) Other Operating includes DOE Integrated Contractors, Non-DOE Fellowships, and CRADAs.

(c) Service Centers includes recharge cost centers that default to B&R YN01 (project type OHRCH) only.

(d) Operations Overhead includes: G&A, LDRD, Site Support, Payroll Burden, Procurement, Travel, IGPP, S&S, TCR, and LBNL's Office of National and Homeland Security.

FUNDS HELD FOR OTHERS COST TRENDS, FY2017 - FY2021 (\$K)

Table 1.5

Funding Source	FY2017	FY2018	FY2019	FY2020	FY2021
Royalty	3,240	2,793	1,713	1,737	1,141
Contractor Supported Research (CSR)	3,050	3,135	4,780	5,172	5,531
Inter-Location Appointments (ILA)	2,957	2,970	3,265	3,981	3,872
UC Construction Projects	185	-	-	-	-
Other	252	161	292	137	29
Total	9,684	9,059	10,050	11,027	10,573
Note: Royalty project costs decreased by 39% or (\$1,081K) in FY2019, primarily due to the Zheng ETEM Microscope purchased in FY2018 and the winding down of the Flexlab improvements project in FY2019. Contractor Supported Research increased by 52% or \$1,645K in FY2019, primarily due to \$1,300K one time purchase.					

DIRECT FUNDING & REIMBURSABLE WORK

NERSC's next supercomputer was (July 2021) installed at the center's facility in Shyh Wang Hall at Berkeley Lab. The system is named in honor of Saul Perlmutter, an astrophysicist at Berkeley Lab who shared the 2011 Nobel Prize in Physics for the ground shaking discovery that the rate at which the universe expands is accelerating.
Credit: Thor Swift/Berkeley Lab

A view from an aerial photography drone showing Building 59, home of the National Energy Research Scientific Computing Center (NERSC) in the foreground.
Credit: Thor Swift/Berkeley Lab

For information about this supercomputer, visit:
www.nersc.gov/systems/perlmutter

TOTAL LABORATORY FUNDING AND COSTS

TOTAL LABORATORY FUNDING - \$1,207M

With over \$1B in annual funding, the researchers at Lawrence Berkeley National Laboratory continue to seek science solutions to solve some of the greatest problems facing the world. Berkeley Lab's FY2021 funding increased \$15M over FY2020 levels to \$1,207M.

Office of Science funding remained essentially flat, with the largest contributing programs being Advanced Scientific Computing Research (ASCR) and Basic Energy Sciences (BES). ASCR funding was primarily in support of the Department of Energy's dedicated Energy Sciences Network (ESnet) and National Energy Research Scientific Computing Center (NERSC). ASCR increased their support (\$9M) for Quantum research at LBNL in FY2021 to accelerate the development of quantum information science for national competitiveness. Funding for Basic Energy Sciences programs remained constant, with continued support to User Facilities, including the Advanced Light Source (ALS) and the Molecular Foundry (MF). BES also provided significant funding in support of Lab's ALS Upgrade project which will endow the ALS with revolutionary x-ray capabilities.

The minor Office of Science increases were almost entirely offset by Fusion Energy Sciences (FES) experiencing a modest FY2021 decrease of \$5M, as a result of receiving offsetting forward funding in FY2020.

Funding outside of the Office of Science increased by \$3M, including a \$4M increase in National Nuclear Security Agency (NNSA), as well as a \$3M increase in Fossil Energy. The NNSA increase returns LBNL funding levels closer to historical norms after an FY2020 minor decrease (\$3M). Increases were offset by an overall funding decrease in Energy Efficiency and Renewable Energy (EERE, \$6M). The Building and Equipment Standards area within Building Technologies increased by \$12M due to funds received for multi year projects. This was offset by a funding decrease in Advanced Manufacturing (\$17M), as the National Alliance for Water Innovation (NAWI) project received significant forward funding in FY2020.

The National Institutes of Health (NIH) and Department of Defense (DOD) continue to be our largest Federal sponsors outside of the Department of Energy. The lab had a modest increase in funding (\$7M) related to work being performed for the Intelligence Advanced Research Projects Activity (IARPA).

TOTAL LABORATORY COSTS - \$1,064M

In an extraordinarily challenging year, Laboratory spending grew to \$1,064M, approximately \$63M over FY2020 levels. Faced with a global pandemic, the laboratory community persevered, and continued to execute on our critically important scientific mission.

Office of Science spending increased by \$36M. Most notable are the following:

- Basic Energy Sciences (BES) costs increased by \$21M, including \$9M of capital spending related to the Advanced Light Source Upgrade. Spending at the BES User Facilities also increased; \$5M at the Advanced Light Source, largely in support of Accelerator Improvement projects, and \$4M at the Molecular Foundry for nanoscience research.
- Advanced Scientific Computing Research (ASCR) experienced a net spending decrease of \$13M. This includes an increase in ESnet spending, as there was growth in both the Program (\$2M) and the ESnet-6 Project (\$3M). We also experienced growth in spending related to Quantum research. These increases were offset by a spending decrease at NERSC, largely related to schedule changes on the NERSC-9 Project.
- The Laboratory experienced growth in Biological Environmental Research (\$16M), as spending at the Joint Genome Institute (JGI, \$8M) and the Joint BioEnergy Institute (JBEI, \$3M) increased as compared to FY2020.
- Finally, High Energy Physics (HEP) increased by \$7M in total. HEP operations increased by \$13M, while capital expenditures declined by \$6M. This shift is largely related to equipment fabrications, such as Dark Energy Spectroscopic Instrument (DESI) and LUX-ZEPLIN (LZ), that were completed in FY2020 and have since transitioned to operations.

Outside of the Office of Science, the largest contributor to the spending increase was Energy Efficiency and Renewable Energy, which increased by \$15M. This increase was spread across a number of projects, most notably the National Alliance for Water Innovation (NAWI, \$5M) project funded by the Advanced Manufacturing Office (AMO).

The Lab continued to support the pandemic response by performing COVID-19 specific research projects, funded by both DOE and other sponsors, which began in FY2020 and continued in FY2021 with a total cost across the two fiscal years of \$13M.

Finally, spending related to Sponsored Partnership Projects increased by \$12M, primarily related to work we perform for the Department of Defense (DOD) and the National Institutes of Health (NIH).

Refer to Section 1, Institutional Information, for more information regarding how Program dollars were spent in FY2021.

HISTORICAL TREND: FUNDING, COST, AND CARRYOVER BY YEAR (\$M)

Chart 2.1

Available FY2021 Funding includes final FY2020 Carryover of \$1,142M plus new annual funding of \$1,207M.

BERKELEY LAB FUNDING TRENDS (BA) BY FUNDING SOURCE (\$K)

Table 2.1

	FY2017	FY2018	FY2019	FY2020	FY2021
DOE DIRECT OPERATING					
Administrator for National Nuclear Security Administration	10,853	9,918	10,548	7,380	10,436
Advanced Research Projects Agency - Energy	9,276	580	5,653	3,077	2,511
Assistant Secretary for Electricity Delivery & Energy Reliability	10,289	7,002	4,540	2,168	3,172
Assistant Secretary for Energy Efficiency and Renewable Energy	106,908	111,062	100,414	158,472	152,394
Office of Energy Information	-	-	-	72	-
Assistant Secretary for Environmental Management	9,072	40,900	34,920	31,430	30,779
Assistant Secretary for Fossil Energy	13,972	18,829	9,296	6,164	8,899
Assistant Secretary for Nuclear Energy	3,596	3,396	3,713	3,776	3,645
Assistant Secretary for International Affairs	3,826	473	(259)	(6)	647
Office of Technology Transitions	-	-	80	198	190
Office of Energy and Threat	226	86	149	171	175
Office of Energy Policy & Systems Analysis	650	(2)	(1)	-	261
Office of Environment, Health, Safety and Security	40	525	342	321	261
Office of Indian Energy Policy & Programs	-	-	-	-	200
Office of Legacy Management	250	-	-	263	336
Office of Cybersecurity, Energy Security and Emergency	-	-	225	-	900
Office of Science	558,594	613,485	633,304	675,588	694,283
Office of the Chief Financial Officer	-	-	-	-	401
Office of the Chief Information Officer	-	-	1,998	-	-
Total DOE Direct Operating	727,551	806,255	804,921	889,074	909,490
OTHER DIRECT OPERATING					
Federal Agencies	49,042	47,924	44,958	49,671	56,435
Non-Federal Sponsors (a)	55,063	56,152	61,568	58,824	59,549
Cooperative Research and Development Agreements	2,685	2,936	2,024	1,531	1,648
DOE Integrated Contractors (b)	41,444	47,432	47,075	46,109	48,095
Total Other Direct Operating	148,234	154,444	155,625	156,135	165,727
TOTAL OPERATING	875,786	960,700	960,546	1,045,209	1,075,217
DOE PLANT AND CAPITAL EQUIPMENT					
Basic Equipment/Major Items of Equipment					
Administrator for National Nuclear Security Administration	1,428	1,190	425	-	800
Office of Science	39,915	56,585	56,809	37,813	28,577
Total DOE Capital Equipment	41,342	57,775	57,234	37,813	29,377
General Plant Projects					
Office of Science	9,000	16,400	(10)	15,000	15,000
Accelerator Improvement Projects					
Office of Science	2,000	8,700	4,400	9,021	-
Line-Item Construction					
Office of Science	20,098	54,333	65,000	85,500	87,500
Total DOE Plant	31,098	79,433	69,390	109,521	102,500
TOTAL DOE PLANT AND CAPITAL EQUIPMENT	72,440	137,209	126,624	147,334	131,877
TOTAL LABORATORY	948,226	1,097,908	1,087,170	1,192,543	1,207,094

Note: Minor variances may occur due to rounding.

Data Source: Budget Authority as provided in the Berkeley Lab final contract modification for the fiscal year.

(a) Includes both funding and deobligations for Non-Federal Sponsors who are precluded by law from paying an advance under the WN program.

(b) Total funding for Integrated Contractors is assumed to be equal to cost incurred.

BERKELEY LAB COST TRENDS BY FUNDING SOURCE (\$K)

Table 2.2

	FY2017	FY2018	FY2019	FY2020	FY2021
DOE DIRECT OPERATING					
Administrator for National Nuclear Security Administration	11,404	8,956	9,924	9,330	8,562
Advanced Research Projects Agency - Energy	2,623	4,392	4,434	3,831	4,383
Assistant Secretary for Electricity Delivery & Energy Reliability	8,639	7,671	6,525	5,149	4,716
Assistant Secretary for Energy Efficiency and Renewable Energy	80,750	78,272	95,978	110,643	125,112
Assistant Secretary for Environmental Management	15,987	16,187	12,370	14,214	16,161
Assistant Secretary for Fossil Energy	8,083	9,134	13,055	12,203	10,686
Assistant Secretary for Nuclear Energy	2,096	2,417	5,201	4,120	3,755
Assistant Secretary for International Affairs	2,865	3,374	2,146	915	381
Office of Energy and Threat	167	147	171	172	195
Office of Energy Policy & Systems Analysis	934	641	197	53	81
Office of Environment, Health, Safety and Security	388	42	86	119	543
Office of Indian Energy Policy & Programs	1	0	-	-	5
Office of Legacy Management	58	141	87	74	153
Office of Technology Transitions	-	-	49	104	155
Office of Science	523,098	517,636	534,312	591,243	627,197
Office of Cybersecurity, Energy Security and Emergency	-	-	-	12	332
Office of the Chief Financial Officer	-	-	-	-	364
Office of the Chief Information Officer	110	81	115	323	275
Office of Energy Information	-	-	-	18	52
Total DOE Direct Operating	657,202	649,093	684,649	752,525	803,108
OTHER DIRECT OPERATING					
Federal Agencies	48,131	46,674	43,532	43,499	50,336
Non-Federal Sponsors (a)	54,923	60,252	61,559	51,654	55,334
Cooperative Research and Development Agreements	2,446	2,366	2,711	1,462	1,210
DOE Integrated Contractors	41,444	47,432	47,075	46,109	48,095
Total Other Direct Operating	146,943	156,723	154,876	142,724	154,975
TOTAL OPERATING	804,145	805,816	839,525	895,249	958,083
DOE PLANT AND CAPITAL EQUIPMENT					
Basic Equipment/Major Items of Equipment					
Administrator for National Nuclear Security Administration	1,597	1,146	455	49	39
Assistant Secretary for Energy Efficiency and Renewable Energy	(0)	-	-	-	-
Office of Science	32,334	48,791	53,684	43,956	33,960
Total DOE Capital Equipment	33,930	49,937	54,138	44,005	33,998
General Plant Projects					
Office of Science	2,009	7,010	4,607	6,400	7,353
Accelerator Improvement Projects					
Office of Science	731	460	2,691	7,344	9,204
Line-Item Construction					
Office of Science	17,300	43,962	44,819	48,255	55,151
Total DOE Plant	20,040	51,432	52,117	61,999	71,708
TOTAL DOE PLANT AND CAPITAL EQUIPMENT	53,970	101,369	106,256	106,004	105,706
TOTAL LABORATORY (b)	858,115	907,185	945,781	1,001,254	1,063,789

Note: Minor variances may occur due to rounding.

Data Source: Berkeley Lab published Fiscal Year End Costs.

(a) Includes costs for Non-Federal Sponsors who are precluded by law from paying an advance under the WN program.

(b) FY2021 costs do not include various adjustments. Examples of these adjustments include bridge funding, inventory, suspense items, and DOE's Federal Administrative Charge. The total of these adjustments for FY2021 is \$984K.

BERKELEY LAB FUNDING AND COSTS BY FUNDING SOURCE (\$K)

Table 2.3

Funding and Cost by Source (\$K)	FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
DOE DIRECT OPERATING				
Administrator for National Nuclear Security Administration	6,574	10,436	8,562	8,449
Advanced Research Projects Agency - Energy	7,086	2,511	4,383	5,213
Assistant Secretary for Electricity Delivery & Energy Reliability	7,450	3,172	4,716	5,906
Assistant Secretary for Energy Efficiency & Renewable Energy	174,560	152,394	125,112	201,842
Assistant Secretary for Environmental Management	90,116	30,779	16,161	104,734
Assistant Secretary for Fossil Energy	14,604	8,899	10,686	12,817
Assistant Secretary for Nuclear Energy	1,519	3,645	3,755	1,409
Assistant Secretary for International Affairs	112	647	381	378
Office of Technology Transitions	124	190	155	160
Office of Energy & Threat	21	175	195	1
Office of Energy Policy & Systems Analysis	75	261	81	255
Office of Environment, Health, Safety and Security	984	261	543	702
Office of Energy Information Administration	54	-	52	2
Office of Indian Energy Policy and Programs	-	200	5	195
Office of Legacy Management	210	336	153	393
Office of Cybersecurity, Energy Security and Emergency	213	900	332	781
Office of Science	563,418	694,283	627,197	630,504
Office of the Chief Financial Officer	-	401	364	36
Office of the Chief Information Officer	1,561	-	275	1,286
Total DOE Direct Operating	868,683	909,490	803,108	975,065
OTHER DIRECT OPERATING				
Federal Agencies	58,815	56,435	50,336	65,177
Non-Federal Sponsors (a)	35,935	59,549	55,334	40,855
Cooperative Research and Development Agreements	1,135	1,648	1,210	1,588
DOE Integrated Contractors (b)	-	48,095	48,095	-
Total Other Direct Operating (c)	95,885	165,727	154,975	107,620
TOTAL OPERATING	964,568	1,075,217	958,083	1,082,685

Note: Minor variances may occur due to rounding.

(a) Includes funding and deobligations for Non-Federal Sponsors who are precluded by law from paying an advance under the WN program.

(b) Total funding for Integrated Contractors is assumed to be equal to cost incurred.

(c) The sum of FY2021 Beginning Uncosted Obligations, FY2021 Funds, minus FY2021 Costs does not equal FY2021 Ending Uncosted Obligations due to various adjustments not reflected in the FY2021 Costs column. Examples of these adjustments include bridge funding, inventory, suspense items, and DOE's Federal Administrative Charge. The total of these adjustments for FY2021 is \$984K.

BERKELEY LAB FUNDING AND COSTS BY FUNDING SOURCE (\$K) CONTINUED

Table 2.3

Funding and Cost by Source (\$K)	FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
DOE PLANT AND EQUIPMENT				
Basic Equipment/Major Items of Equipment				
Administrator for National Nuclear Security Administration	5	800	39	766
Office of Science	46,020	28,577	33,960	40,637
Total Capital Equipment	46,024	29,377	33,998	41,403
General Plant Projects				
Office of Science	20,371	15,000	7,353	28,018
Accelerator Improvement Projects				
Office of Science	13,874	-	9,204	4,670
Line-Item Construction				
Office of Science	97,381	87,500	55,151	129,730
Total DOE Plant	131,626	102,500	71,708	162,418
TOTAL DOE PLANT AND CAPITAL EQUIPMENT	177,650	131,877	105,706	203,821
TOTAL LABORATORY	1,142,218	1,207,094	1,063,789	1,286,506

Note: Minor variances may occur due to rounding.

FY2021 FUNDING AND COSTS BY DOE PROGRAMS (\$K)

Table 2.4

OFFICE OF SCIENCE		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
AT10	Burning Plasma Science: Foundations	1,878	874	837	1,914
AT40	Discovery Plasma Science	4,383	1,277	2,029	3,631
FS10	Safeguards and Security - Science	4,428	9,479	8,024	5,884
KA21	Energy Frontier Experimental Physics	4,436	6,832	7,269	3,999
KA22	Intensity Frontier Experimental Physics	1,854	2,737	2,034	2,557
KA23	Cosmic Frontier Experimental Physics	20,227	30,825	27,563	23,490
KA24	Theoretical, Computational, and Interdisciplinary Physics	10,881	11,627	10,692	11,817
KA25	Advanced Technology R&D	11,264	14,596	15,992	9,867
KA26	Accelerator Stewardship	1,829	1,956	1,418	2,367
KB01	Medium Energy Physics	393	1,534	1,383	544
KB02	Heavy-Ion Physics	4,420	4,446	6,081	2,785
KB03	Nuclear Theory	2,632	2,439	3,557	1,514
KB04	Low Energy Physics	6,904	9,744	12,039	4,609
KC02	Materials Sciences and Engineering	25,991	39,172	34,881	30,282
KC03	Chemical Sciences, Geosciences, and Biosciences	28,685	36,960	35,264	30,381
KC04	Scientific User Facilities	40,024	98,382	97,444	40,963
KC09	BES COVID Support	235	50	212	73
KJ04	Mathematical, Computational, and Computer Sciences Research	45,965	49,234	25,289	69,911
KJ05	High Performance Computing and Network Facilities	237,332	194,262	151,930	279,664
KJ07	ASCR COVID Support	934	(169)	306	459
KL10	Internships and Visiting Faculty Activities at DOE Labs	1,873	1,325	1,506	1,691
KL15	Outreach	35	5	-	40
KP15	Biological Research	35	-	1	34
KP16	Biological Systems Science	71,569	139,747	143,992	67,324
KP17	Earth and Environmental Systems Sciences	30,946	36,846	33,769	34,022
KP18	COVID19 Support - Biological & Environmental Research (BER)	2,953	-	2,696	257
KX03	Field Offices	-	20	-	20
ST50	Isotope Research	1,304	84	988	399
ST60	Isotope Production	6	-	-	6
Total Operating		563,418	694,283	627,197	630,504

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Note: Minor variances may occur due to rounding.

OFFICE OF SCIENCE		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
CAPITAL EQUIPMENT					
AT10	Burning Plasma Science: Foundations	3,978	-	1,078	2,900
AT40	Discovery Plasma Science	366	-	325	41
KA21	Energy Frontier Experimental Physics	14,060	12,198	14,490	11,768
KA23	Cosmic Frontier Experimental Physics	2,088	(2,072)	17	0
KA24	Theoretical, Computational, and Interdisciplinary Physics	-	550	-	550
KA25	Advanced Technology R&D	2,210	2,850	1,891	3,170
KA26	Accelerator Stewardship	7	(0)	7	0
KB02	Heavy-Ion Physics	61	-	-	61
KB04	Low Energy Physics	5,904	6,600	7,603	4,901
KC02	Materials Sciences and Engineering	10	-	7	3
KC03	Chemical Sciences, Geosciences, and Biosciences	704	555	924	336
KC04	Scientific User Facilities	10,430	4,100	5,368	9,162
KJ04	Mathematical, Computational, and Computer Sciences Research	-	2,509	-	2,509
KJ05	High Performance Computing and Network Facilities	3,170	2,000	2,236	2,934
KJ07	ASCR COVID Support	31	(31)	-	-
KP16	Biological Systems Science	2,169	(683)	-	1,486
KP18	COVID19 Support - BER	831	-	13	818
Total Capital Equipment		46,020	28,577	33,960	40,637
GENERAL PLANT PROJECTS					
KG07	Facilities and Infrastructure	20,371	15,000	7,353	28,018
Total General Plant Projects		20,371	15,000	7,353	28,018
ACCELERATOR IMPROVEMENT PROJECTS					
KA25	Advanced Technology R&D	2,895	-	2,860	35
KC04	Scientific User Facilities	10,979	-	6,344	4,635
Total Accelerator Improvement Projects		13,874	0	9,204	4,670
LINE-ITEM CONSTRUCTION					
39KC	Basic Energy Sciences	77,326	62,000	45,191	94,135
39KG	Science Laboratories Infrastructure	20,055	25,500	9,960	35,595
Total Line-Item Construction		97,381	87,500	55,151	129,730
TOTAL DOE PLANT		131,626	102,500	71,708	162,418
TOTAL OFFICE OF SCIENCE		741,064	825,360	732,864	833,560

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Note: Minor variances may occur due to rounding.

FY2021 FUNDING AND COSTS BY DOE PROGRAMS (\$K) CONTINUED

Table 2.4

ASSISTANT SECRETARY FOR ENERGY EFFICIENCY AND RENEWABLE ENERGY		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
BM01	Biomass Biofuels Energy Systems	14,660	10,821	11,493	13,989
BT01	Residential Buildings Integration	1,570	3,134	2,590	2,114
BT02	Commercial Buildings Integration	11,042	7,386	10,604	7,823
BT03	Emerging Technologies	16,657	22,934	19,936	19,655
BT04	Equipment and Buildings Standards	19,247	25,441	16,552	28,136
EB21	Solar Energy	17	-	-	17
EB40	Geothermal Technologies	19	-	0	19
EB57	Energy Efficiency and Renewable Energy EERE Program Support	19	-	-	19
ED20	Industrial Technical Assistance	13,242	4,110	7,032	10,319
ED27	Next Generation Manufacturing R&D Projects	7,127	4,250	3,991	7,386
ED28	Advanced Manufacturing R&D Facilities	39,228	31,772	6,638	64,362
EL17	Federal Energy Management Program	3,897	3,888	4,812	2,973
GT01	Enhanced Geothermal Systems	10,285	1,450	4,722	7,013
GT02	Low Temperature and Co-produced Resource	1,910	468	1,322	1,056
GT03	Hydrothermal	3,676	686	1,377	2,985
GT04	Systems Analysis	327	150	136	341
HT01	Fuel Cell Systems R&D	1,143	2,468	1,939	1,672
HT02	Hydrogen Fuel R&D	3,474	4,671	4,487	3,658
HT03	Systems Analysis	243	58	107	193
HT07	Manufacturing R&D	0	-	-	0
HT08	Technology Validation	2	-	1	1
HT11	Technology Acceleration	353	350	190	514
HT12	Hydrogen Infrastructure R&D	376	811	711	476
PG03	Strategic Priorities and Impact Analysis	1,776	1,054	1,552	1,278
PG04	Technology-to-Market	1,397	500	470	1,427
PG05	International	38	-	8	30
SL01	Concentrating Solar Power	183	-	175	7
SL02	Photovoltaic R&D	1,877	1,130	1,296	1,710
SL03	Systems Integration Balance of Systems and Power Electronics	1,112	491	656	946
SL04	Balance of Systems Soft Cost Reduction	4,980	4,655	2,200	7,435
SL05	Innovations in Manufacturing Competitiveness	123	-	91	31
VT02	Outreach	59	-	4	55
VT04	Advanced Combustion and Engine R&D	24	-	0	24
VT05	Materials Technology	0	-	-	0
VT06	Fuels Technology	97	-	12	85
VT12	Batteries and Electrification Technologies	7,434	12,910	12,533	7,811
VT13	Vehicle & Systems Simulation and Testing	82	-	64	18

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ASSISTANT SECRETARY FOR ENERGY EFFICIENCY AND RENEWABLE ENERGY		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
VT15	Energy Efficient Mobility Systems	2,241	4,373	4,069	2,545
VT16	Advanced Engine and Fuel Technologies	26	180	112	94
VT17	Materials Technology	25	300	115	210
VT18	Analysis	217	250	267	200
WC01	Water Power Program	179	-	167	12
WI03	State Energy Program Grants	2,156	215	722	1,648
WI07	Weatherization Assistance Program	110	75	151	33
WI12	Weatherization Innovation	0	-	0	-
WW02	Technology Viability	1	-	1	0
WW06	Technology RD&T and Resource Characterization	61	-	55	6
WW08	Mitigate Market Barriers	745	13	553	205
WW09	Modeling & Analysis	1,104	13	913	204
WW10	Offshore Wind	-	66	-	66
WW20	Land-Based Wind	-	994	4	990
WW40	Grid Integration and Analysis	-	332	283	49
Total Operating		174,560	152,394	125,112	201,842
CAPITAL EQUIPMENT					
BT04	Equipment and Buildings Standards	0	-	-	0
Total Capital Equipment		0	-	0	0
TOTAL DOE PLANT		0	0	0	0
TOTAL ASSISTANT SECRETARY FOR ENERGY EFFICIENCY AND RENEWABLE ENERGY		174,560	152,394	125,112	201,843
ASSISTANT SECRETARY FOR ENVIRONMENTAL MANAGEMENT		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
EY40	Defense Site Acceleration Completion - Technology Development and Deployment	751	949	569	1,131
EY60	NNSA Sites and Nevada Off-Sites	-	15	12	2
EZ50	Non-Defense Environmental Cleanup - Small Sites	89,365	29,816	15,579	103,601

Note: Minor variances may occur due to rounding.

FY2021 FUNDING AND COSTS BY DOE PROGRAMS (\$K) CONTINUED

Table 2.4

Total Operating		90,116	30,779	16,161	104,734
TOTAL ASSISTANT SECRETARY FOR ENVIRONMENTAL MANAGEMENT		90,116	30,779	16,161	104,734
ASSISTANT SECRETARY FOR FOSSIL ENERGY		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
AA30	Sequestration	246	(0)	238	8
AA60	Advanced Energy Systems	84	1,402	121	1,365
AA65	Carbon Capture	3,222	485	1,373	2,334
AA70	Carbon Storage	6,572	2,290	4,002	4,861
AA90	Cross-cutting Research	1,494	1,778	1,983	1,288
AA95	NETL Coal Research and Development	6	6	5	6
AB05	Natural Gas Technologies	1,461	1,472	1,515	1,418
AC10	Oil Technology	53	(0)	45	8
BD00	Unconventional Fossil Energy Technologies from Petroleum - Oil Technologies	1,467	1,467	1,405	1,529
Total Operating		14,604	8,899	10,686	12,817
TOTAL ASSISTANT SECRETARY FOR FOSSIL ENERGY		14,604	8,899	10,686	12,817
ADMINISTRATOR FOR NATIONAL NUCLEAR SECURITY ADMINISTRATION					
		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
CT84	Emergency Response	5	370	259	115
DN20	DNN Research and Development	2,781	7,735	6,264	4,252
DN40	Nonproliferation and Arms Control	36	778	593	221
DN50	National Technical Nuclear Forensics R&D	-	50	48	2
DP09	Infrastructure and Operations Formerly RTBF	1,608	650	513	1,745
DP15	Advanced Simulation and Computing	40	(40)	-	-
DP21	Weapon Technology and Manufacturing Maturation	221	250	305	166
M001	Cyber Security	1,531	(1)	579	951
M002	Enterprise Security Computing	353	643	0	996
Total Operating		6,574	10,436	8,562	8,449
CAPITAL EQUIPMENT					
DN20	DNN Research and Development	5	800	39	766
Total Capital Equipment		5	800	39	766
TOTAL ADMINISTRATOR FOR NATIONAL NUCLEAR SECURITY ADMINISTRATION		6,579	11,236	8,600	9,214

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Note: Minor variances may occur due to rounding.

ASSISTANT SECRETARY FOR ELECTRICITY DELIVERY & ENERGY RELIABILITY		FY2021 Beginning Uncosted	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted
OPERATING					
TE11	Transmission Reliability and Resilience	2,980	1,657	2,628	2,009
TE12	Resilient Distribution Systems	1,500	1,265	1,295	1,470
TE13	Cyber Security for Energy Delivery Systems	152	-	30	121
TE14	Energy Storage Research	770	-	194	577
TE15	Transformer Resilience and Advanced Components	18	-	15	3
TF00	Transmission Permitting and Technical Assistance	2,001	250	538	1,713
TG01	Infrastructure Security and Energy Restoration	29	-	17	12
Total Operating		7,450	3,172	4,716	5,906
TOTAL ASSISTANT SECRETARY FOR ELECTRICITY DELIVERY & ENERGY RELIABILITY		7,450	3,172	4,716	5,906
ASSISTANT SECRETARY FOR NUCLEAR ENERGY		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
AF58	Fuel Cycle Research and Development	72	(0)	(7)	78
DF01	First Repository	15	-	2	13
FT01	Materials Recovery and Waste Form Development	37	-	34	3
FT06	Used Nuclear Fuel Disposition UNFD	1,250	3,373	3,623	1,000
KK05	Program Direction - Nuclear Energy	0	(0)	-	-
NT01	Crosscutting Technology Development	40	74	38	75
NT08	Joint Modeling and Simulation Program	106	199	64	240
Total Operating		1,519	3,645	3,755	1,409
TOTAL ASSISTANT SECRETARY FOR NUCLEAR ENERGY		1,519	3,645	3,755	1,409

→

Note: Minor variances may occur due to rounding.

FY2021 FUNDING AND COSTS BY DOE PROGRAMS (\$K) CONTINUED

Table 2.4

ADVANCED RESEARCH PROJECTS AGENCY - ENERGY		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 End- ing Uncosted Obligations
OPERATING					
CJ01	ARPA-E Projects	7,085	2,486	4,383	5,187
CJ02	Program Direction	1	25	-	26
Total Operating		7,086	2,511	4,383	5,213
TOTAL ADVANCED RESEARCH PROJECTS AGENCY - ENERGY		7,086	2,511	4,383	5,213
THE OFFICE OF CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
TG01	Infrastructure Security and Energy Restoration	-	900	123	777
TI02	Electricity Delivery & Energy Reliability	213	-	208	4
Total Operating		213	900	332	781
TOTAL OFFICE OF CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE		213	900	332	781
OFFICE OF ENVIRONMENT, HEALTH, SAFETY & SECURITY		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
HQ10	Employee Compensation	30	-	15	16
HS01	Employee Compensation	85	15	-	100
HS02	Operating Expenses - AU - EHSS	236	246	230	252
HU10	Corporate Safety Program	633	-	298	335
Total Operating		984	261	543	702
TOTAL OFFICE OF HEALTH SAFETY AND SECURITY		984	261	543	702

→

Note: Minor variances may occur due to rounding.

FY2021 FUNDING AND COSTS BY DOE PROGRAMS (\$K) CONTINUED

Table 2.4

ASSISTANT SECRETARY FOR INTERNATIONAL AFFAIRS		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
WA20	Economic Impact and Diversity Program Direction	-	640	328	312
WA22	Office of International Affairs - Program Direction	112	7	52	67
Total Operating		112	647	381	378
TOTAL ASSISTANT SECRETARY FOR INTERNATIONAL AFFAIRS		112	647	381	378
OFFICE OF ENERGY AND THREAT		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
GD60	Energy and Threat-Program	21	175	195	1
Total Operating		21	175	195	1
TOTAL OFFICE OF ENERGY AND THREAT		21	175	195	1
OFFICE OF LEGACY MANAGEMENT		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
LM01	Legacy Management Activities - Defense	210	336	153	393
Total Operating		210	336	153	393
TOTAL OFFICE OF LEGACY MANAGEMENT		210	336	153	393

→

Note: Minor variances may occur due to rounding.

FY2021 FUNDING AND COSTS BY DOE PROGRAMS (\$K) CONTINUED

Table 2.4

OFFICE OF ENERGY POLICY & SYSTEMS ANALYSIS		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
EP01	EPSA Program Direction	75	261	81	255
Total Operating		75	261	81	255
TOTAL OFFICE OF ENERGY POLICY & SYSTEMS ANALYSIS		75	261	81	255
OFFICE OF THE CHIEF INFORMATION OFFICER		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
CP20	Corporate IT Planning and Architecture IM-20	1,561	-	275	1,286
Total Operating		1,561	0	275	1,286
TOTAL OFFICE OF THE CHIEF INFORMATION OFFICER		1,561	-	275	1,286
OFFICE OF ENERGY INFORMATION ADMINISTRATION		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
TA01	National Energy Information System Neis Program Support	54	-	52	2
Total Operating		54	-	52	2
TOTAL OFFICE OF ENERGY INFORMATION ADMINISTRATION		54	-	52	2
OFFICE OF TECHNOLOGY TRANSITIONS		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
TT10	Energy I-Corps	-	60	18	42
TT10	COVID-19 Technical Assistance Program	-	60	-	60
TT10	Headquarter Actions	97	-	68	29
TT10	Contractual Support Services	-	70	51	19
TT10	Other	27	-	17	11
Total Operating		124	190	155	160
TOTAL OFFICE OF TECHNOLOGY TRANSITIONS		124	190	155	160

→

Note: Minor variances may occur due to rounding.

OFFICE OF THE CHIEF FINANCIAL OFFICER		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
WF30	Information Management Systems And Operations	-	401	364	36
Total Operating		0	401	364	36
TOTAL OFFICE OF THE CHIEF FINANCIAL OFFICER		0	401	364	36
OFFICE OF INDIAN ENERGY POLICY AND PROGRAMS		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
OPERATING					
IO10	Technical Assistance	-	200	5	195
Total Operating		0	200	5	195
TOTAL OFFICE OF INDIAN ENERGY POLICY AND PROGRAMS		0	200	5	195
All DOE Programs (\$K)		FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
TOTAL OPERATING		868,683	909,490	803,108	975,065
TOTAL CAPITAL EQUIPMENT		46,024	29,377	33,998	41,403
TOTAL GENERAL PLANT PROJECTS		20,371	15,000	7,353	28,018
TOTAL ACCELERATOR IMPROVEMENT PROJECTS		13,874	-	9,204	4,670
TOTAL LINE ITEM CONSTRUCTION		97,381	87,500	55,151	129,730
TOTAL FUNDING AND COSTS		1,046,333	1,041,367	908,814	1,178,886

Note: Minor variances may occur due to rounding.

FY2021 BERKELEY LAB FUNDING AND COSTS BY FUNDING SOURCE (\$K)

Table 2.5

Funding Source	FY2021 Beginning Uncosted Obligations	FY2021 Funds	FY2021 Costs	FY2021 Ending Uncosted Obligations
REIMBURSABLE WORK				
Federal Agencies				
Department of Defense	17,748	16,702	14,845	19,672
Department of Homeland Security - Domestic Nuclear Detection Office	342	-	298	45
Department of Homeland Security - Other	250	1,273	41	1,483
Department of Homeland Security - Science & Technology	658	487	400	745
Department of State - Other	789	(70)	176	548
Department of The Interior	1,075	91	917	276
Department of Transportation	817	922	573	1,183
Environmental Protection Agency	561	520	683	418
National Aeronautics And Space Administration	3,896	3,739	4,166	3,591
National Institutes of Health	28,211	22,063	24,463	25,825
Nuclear Regulatory Commission	20	(20)	0	0
Other Federal Agencies	4,447	10,726	3,775	11,392
Total Federal Agencies	58,815	56,435	50,336	65,177
Non-Federal Agencies (a)				
Foreign Governments	331	940	894	403
Domestic and Foreign Industry	15,743	23,682	25,431	14,666
State and Local Governments & NPO's	12,083	21,946	15,465	18,559
Universities and Institutes	7,778	12,981	13,544	7,227
Total Non-Federal Agencies	35,935	59,549	55,334	40,855
Cooperative Research and Development Agreements				
CRADA - Other	998	1,230	972	1,292
CRADA - Small Business	136	418	238	296
Total Cooperative Research and Development Agreements	1,135	1,648	1,210	1,588
Total Reimbursable Work	95,885	117,632	106,880	107,620
DOE INTEGRATED CONTRACTORS				
Work Performed for Other DOE Locations (b)	-	48,095	48,095	-
Total DOE Integrated Contractors	-	48,095	48,095	-
Total Other Direct Operating (c)	95,885	165,727	154,975	107,620
Note: Minor variances may occur due to rounding. (a) Includes funding obligations and deobligations for Non-Federal Sponsors who are precluded by law from paying an advance under the WN program. (b) Total funding for Integrated Contractors is assumed to be equal to cost incurred. (c) The sum of FY2021 Beginning Uncosted Obligations and FY2021 Funds, minus FY2021 Costs does not equal FY2021 Ending Uncosted Obligations due to various adjustments not reflected in the FY2021 Costs column. Examples of these adjustments include bridge funding, inventory, suspense items, and DOE's Federal Administrative Charge. The total of these adjustments for FY2021 is \$984K.				

FY2021 FUNDING AND COST TRENDS BY OTHER DIRECT OPERATING SOURCE (\$M)

Figure 2.1

Note: Minor variances may occur due to rounding.
(a) Includes funding obligations and deobligations for non-federal sponsors precluded by law from paying an advance under the WN program.

TOTAL FUNDING AMOUNTS BY AREA AND DIVISION FOR EACH FISCAL YEAR (\$K)

Table 2.6

Area and Division	FY2017	FY2018	FY2019	FY2020	FY2021
Biosciences	179,747	183,508	185,951	199,255	197,532
Biological Systems & Energy	45,481	51,228	49,694	47,925	48,268
Environmental Genomics & System Biology	22,596	18,964	23,408	27,228	39,637
Joint Genome Institute	70,715	70,386	71,196	81,025	77,277
Molecular Biophysics & Integrated Bioimaging	40,956	42,930	41,653	43,078	32,350
Computing Sciences	189,990	231,880	252,473	276,526	293,249
Computational Research	43,737	51,844	54,165	66,747	82,474
National Energy Research Scientific Computing Center	93,814	96,181	107,494	115,138	113,626
Scientific Networking	52,439	83,855	90,815	94,641	97,148
Earth & Environmental Sciences	79,953	72,940	79,905	111,464	109,401
Climate & Ecosystems	42,308	39,452	41,837	39,652	47,379
Energy Geosciences	37,646	33,487	38,068	71,812	62,022
Energy Sciences	176,437	208,425	176,679	184,560	185,482
Advanced Light Source	74,279	97,548	69,618	73,472	70,113
Chemical Sciences	29,204	27,238	30,129	27,514	28,440
Material Sciences	37,195	43,334	37,674	45,215	48,337
Molecular Foundry	35,759	40,305	39,258	38,358	38,592
Energy Technologies	140,598	128,323	121,883	134,571	139,938
Building Technologies & Urban Systems	44,214	44,554	41,008	47,755	47,050
Cyclotron Road	3,982	1,750	2,017	2,189	1,990
Energy Analysis & Environmental Impacts	56,664	46,522	41,939	50,880	54,440
Energy Storage & Distributed Resources	35,738	35,497	36,919	33,747	36,458
Physical Sciences	134,738	167,653	159,460	142,507	137,022
Accelerator Technology & Applied Physics	43,386	56,326	49,792	40,490	32,242
Engineering	1,519	1,496	1,936	4,015	3,037
Nuclear Science	32,882	39,744	38,922	39,495	38,627
Physics	56,951	70,087	68,810	58,507	63,116
Directorate & Operations	46,763	105,180	110,818	143,660	144,471
Advanced Light Source Upgrade (a)			62,014	62,006	62,000
Environment, Health, Safety & Security			102	100	100
Facilities	37,458	99,597	4,079		
Human Resources		1,118	1,298	1,591	1,330
Information Technology	4,029	4,383	3,537	3,563	4,380
Laboratory Directorate	165	44	80	222	1,278
Office of the CFO (b)	(21)		23	70	53
Operations	162	37			
Projects & Infrastructure Modernization			39,685	71,130	70,316
Protective Services	3,673				
Public Affairs	1,298				
Security and Emergency Services				4,979	5,014
Grand Total	948,226	1,097,908	1,087,169	1,192,543	1,207,094

(a) ALS-U became a separate division in FY2019 (previously reported under Energy Sciences, Advanced Light Source).

(b) Office of the CFO includes IEWO for BASO.

INDIRECT BUDGETS

Biochemist Jennifer Doudna, a professor at UC Berkeley and faculty scientist in the Molecular Biophysics and Integrated Bioimaging Division, was awarded the 2020 Nobel Prize in Chemistry for the development of a method for genome editing.

For information about the Jennifer Doudna's Nobel Prize, visit:
biosciences.lbl.gov/2020/10/07/doudna-awarded-2020-nobel-prize-in-chemistry

INDIRECT BUDGETS - FY2021 COSTS (\$M)

Figure 3.1

Indirect Budgets (a)	FY2021 Costs (\$M)
G&A (Includes Site Support)	229.9
ALD & Organizational Burdens	71.5
Service Centers (b)	40.6
LDRD	24.5
Procurement	18.4
IGPP	23.5
TCR	8.0
Travel	0.1
Other (c)	0.3
Total	416.7

(a) Summation of indirect budget provided only to show magnitude of dollars being managed and does not equate to total indirect costs since there are overlaps between indirect budgets. For example, some organization burden costs are included in G&A and Recharges. In FY2021, LDRD cost includes \$4.9M Site Support assessed on LDRD projects.

(b) Service Centers includes recharge cost centers that default to B&R YN01 (project type OHRCH) only.

(c) Includes Office of National & Homeland Security Charge.

INSTITUTIONAL OVERHEAD COSTS AS A PERCENT OF TOTAL OPERATING COSTS, FY2017 - FY2021

Figure 3.2

Notes:

(1) Chart represents the institutional cost structure for each fiscal year with adjustments for indirect double count of G&A on LDRD projects. Institutional overhead costs include G&A, Site Support, IGPP, LDRD, TCR, Travel, and Procurement. Percent is the percentage of indirect cost to total operating cost.

(2) Total Operating Costs are used as the denominator in the chart above because this is more representative of ongoing scientific program costs. Including Construction and Equipment costs, which are generally procurement intensive and one-time in nature, would create significant anomalies in overhead comparisons for prior years. Thus, Construction and Capital Equipment costs are excluded from this chart. This differs from Table 1.1.

(3) Overhead Costs as a percentage of Total Operating Costs represented in the chart above does not account for functional costs. Functional costs are an all inclusive accounting of support cost (even if they are funded directly such as Safeguards & Securities activities funded by the Field Security (FS) B&R). Functional costs are prescribed by DOE's annual Institutional Cost Report (ICR) process. The ICR equivalent metric in FY2021 is 35.2%.

INSTITUTIONAL COSTS BY DIVISION, FY2021 (\$K)

Table 3.1

Division	G&A (a)	LDRD (b)	Procurement	Travel	IGPP	TCR	Total
Lab Directorate	26,157						26,157
LDRD		24,536					24,536
Associate Lab Director for Operations							
Deputy Director for Operations	3,735						3,735
Project Infrastructure Management Division	20,541				23,477		44,017
Office of Institutional Assurance and Integrity	1,488						1,488
Project Management Office	641						641
Security & Emergency Services	12,321						12,321
Environment, Health & Safety	25,265						25,265
Facilities	68,901		2,355				71,256
Human Resources	14,655						14,655
IT Division	37,836						37,836
Office of the CFO	9,571		16,003	58			25,632
Engineering	3,707						3,707
Earth Sciences	21						21
General Lab (c)	5,050						5,050
UC Management Costs						8,008	8,008
Total	229,889	24,536	18,358	58	23,477	8,008	304,326
Note: Minor variances may occur due to rounding. (a) Includes General Services and Site Support Activities. (b) LDRD costs include \$4.9M of Site Support assessment. (c) Includes FY2021 YN01 B&R year-end accrual of \$3.2M.							

INSTITUTIONAL FTES CHARGED BY DIVISION, FY2021
Table 3.2

Division	G&A (a)	LDRD (b)	Procurement	Travel	IGPP	TCR	Total
Lab Directorate	101.6						101.6
LDRD		106.2					106.2
Associate Lab Director for Operations							-
Deputy Director for Operations	10.8						10.8
Project Infrastructure Management Division	24.7				11.2		35.9
Office of Institutional Assurance and Integrity	7.5						7.5
Project Management Office	1.7						1.7
Security & Emergency Services	20.5						20.5
Environment, Health & Safety	103.0						103.0
Facilities	169.2		12.1				181.3
Human Resources	66.9						66.9
IT Division	85.2						85.2
Office of the CFO	55.7		85.6	0.4			141.7
Engineering	6.2						6.2
Earth Sciences	0.1						0.1
General Lab	2.6						2.6
UC Management Costs						1.7	1.7
Total	655.9	106.2	97.7	0.4	11.2	1.7	873.0

Note: Minor variances may occur due to rounding.

(a) Includes General Services and Site Support Activities.

(b) LDRD projects conducted by multiple divisions as reflected in Table 1.3.

PAYROLL BURDEN SUMMARY (\$M)

Figure 3.3

GROSS PAYROLL SUMMARY (\$M)

Figure 3.4

AREA AND ORGANIZATIONAL BURDEN COSTS AND FTES

Table 3.3

Area/organization burden includes costs for the management and supervision of area/division activities and is distributed over labor costs including campus and contract labor.

Area and Division Cost Pools	FY2021	
	Cost \$K	Avg FTE
Biosciences	13,685	79.9
Computing Sciences	8,811	43.6
Computational Research	2,822	12.3
Computing Sciences Area	3,926	19.1
National Energy Research Scientific Computing Center	1,444	7.8
Scientific Networking	620	4.5
Earth & Environmental Sciences (a)	5,605	22.5
Energy Sciences	11,062	51.3
Advanced Light Source	2,997	12.6
Chemical Sciences	2,233	11.1
Energy Sciences Area	1,066	3.3
Materials Sciences	2,968	14.0
Molecular Foundry	1,798	10.4
Energy Technologies Area (a)	8,626	35.8
Physical Sciences	13,003	62.8
Accelerator Technology & Applied Physics	1,989	10.3
Engineering	6,801	30.5
Nuclear Science	1,809	9.6
Physical Sciences Area	507	1.6
Physics	1,898	10.8
Directorate & Operations	10,700	42.6
Facilities	5,767	22.8
Information Technology	3,016	12.3
Projects and Infrastructure Modernization	1,917	7.5
Total	71,494	338.7
Note: Minor Variances may occur due to rounding. (a) Earth & Environmental Sciences Area and the Energy Technologies Area only have Area burdens, and do not have stand alone divisional Organizational Burdens.		

SERVICE CENTER COSTS AND FTES BY AREA/DIVISION

Table 3.4

Certain Laboratory services are provided by recharges that recover operational costs through various cost-allocation mechanisms; e.g., assigning a dollar value to the work performed (a unit charge based on an hourly rate) or the products produced (unit charge per item).

Area and Division (a)	FY2021	
	Cost \$K	Avg FTE
Biosciences Area	1,238	6.9
Biological Systems & Energy	2,766	6.9
Computing Sciences Area	2,622	-
Earth & Environmental Science Area	39	0.0
ETA Area Office	3,644	21.8
Energy Geosciences	28	0.1
Engineering	2,481	9.7
Facilities	8,902	2.2
Human Resources (b)	5,402	-
Information Technology	9,074	26.0
Joint Genome Institute	792	0.5
Laboratory Directorate	1,253	3.8
Materials Sciences	587	1.8
Molecular Biophysics & Integrated Bioimaging	1,095	4.3
Nuclear Science	376	0.8
Office of the CFO	251	0.3
Total	40,552	85.1
Note: Minor Variances may occur due to rounding. (a) Service Centers includes recharge cost centers that default to B&R YN01 (project type OHRCH) only and GSRA pass through costs. (b) Includes: GSRA pass-through costs.		

DISTRIBUTED RECHARGES BY RESOURCE CATEGORY TRENDS, FY2017- FY2021 (\$K)

Table 3.5

Distributed Recharge (a, b)	FY2017	FY2018	FY2019	FY2020	FY2021
Vehicle	883	938	928	860	895
MSD Facility	259	141	90	80	86
Animal Care	605	532	495	511	555
Creative Services	1,040	926	996	901	678
FAM Facility Recharge	41	32	16	0	0
ESD Sample Analysis Recharge	82	68	62	20	39
Warehouse Storage Recharge	98	217	169	186	251
88-Inch Accelerator Operations	1,065	862	1,363	447	61
JBEI Non-Material Recharge	775	640	776	702	808
JBEI Material Recharge	5,477	5,518	1,618	1,134	1,320
BCSB	1,258	1,300	1,986	1,324	1,089
Telephone Services	5,108	5,475	5,953	6,455	6,510
ETA Recharge	2,787	2,808	3,060	3,169	3,250
Computer/Net Recharges	1,473	1,448	1,787	1,955	2,095
Flexlab Recharge	303	210	249	202	456
Engineering Shop	622	745	888	801	1,126
CAD	669	901	1,075	1,254	1,419
ALS Proprietary Recharge	774	947	831	643	897
JGI Production Sequencing	84	56	36	0	0
NERSC Sponsored Storage Recharge	220	372	0	0	0
Scientific Networking	3,492	3,338	3,737	2,489	3,003
CRT HPC Recharge	3,387	3,792	4,073	3,223	2,622
JGI Occupancy Labor Recharge	151	150	119	0	0
JGI Occupancy Material Recharge	4,275	3,716	3,549	1,613	659
Electricity	8,820	9,816	9,360	7,919	8,393
Sustainability Recharge	921	1,304	1,421	1,229	1,151
GSRA - Material Recharge	3,491	3,959	4,641	4,942	5,416
Applied Nuclear Physics Recharge		215	358	321	277
EGD TOUGH Code Recharge			28	30	28
CXRO Recharge				378	499
SDL Recharge				72	90
JGI WFO Administrative Charge					21
PHENIX Recharge					658
Misc. Recharges					2
Total Recharges	48,161	50,423	49,662	42,859	44,352

Note: Minor variances may occur due to rounding.

(a) Includes recharges credited back to direct operating accounts such as ALS, ESnet, JGI, etc.

(b) Does not include Procurement and Travel recharges.

FINANCIAL STATEMENT

The Quantum Systems Accelerator will optimize a wide range of advanced qubit technologies available today. Berkeley Lab uses sophisticated dilution refrigerators to cool and operate superconducting quantum processor circuits. Credit: Thor Swift/Berkeley Lab

The QSA center will strengthen the nation's quantum research ecosystem and help train the workforce needed to keep the nation at the forefront of quantum information science. Credit: Peter DaSilva/Berkeley Lab

For information about the QSA project, visit: quantumsystemsaccelerator.org

BALANCE SHEET COMPARATIVE STATEMENT OF FINANCIAL POSITION (\$K)

Table 4.1

	FY2021	FY2020
ASSETS:		
CURRENT ASSETS		
Cash	4,928	6,199
Accounts Receivable	30,761	31,997
Inventories	405	381
Other Current Assets	324	748
Total Current Assets	36,418	39,325
Net Plant & Equipment	968,240	892,544
TOTAL ASSETS	1,004,658	931,869
LIABILITIES AND EQUITY:		
LIABILITIES		
CURRENT LIABILITIES		
Drafts Payable	4,682	4,861
Accounts Payable	10,381	24,179
Accounts Payable - Payroll	2,833	47,031
Inter/Intra DOE Payable	1,197	961
Accrued Expenses	129,515	123,333
Capital Lease Liability - Current	278	258
Unearned Revenues	76,965	69,659
Other	108	109
Total Current Liabilities	225,959	270,391
Environmental Liabilities (Note 2)	1,633,271	1,106,261
Capital Lease Liability - Noncurrent	429	782
Post-Retirement Benefits (Note 2)	631,396	695,900
Pension Plan Liability (Note 2)	1,674,401	2,135,795
TOTAL LIABILITIES	4,165,456	4,209,129
EQUITY:		
Beginning Equity	(3,277,260)	(2,900,343)
Change in Equity (Note 2)	116,462	(376,917)
ENDING EQUITY	(3,160,798)	(3,277,260)
TOTAL LIABILITIES AND EQUITY	1,004,658	931,869
See accompanying Note 1: Summary of Significant Accounting Policies on pages 53-54. Note 2 can be found on page 55.		

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Note 1

BASIS OF PRESENTATION

This financial statement has been prepared to report the financial position of the Lawrence Berkeley National Laboratory (the Laboratory) in accordance with the Laboratory's accounting policies.

REPORTING ENTITY

The Laboratory is a national research facility operated by the University of California (UC) for the Department of Energy (DOE) under the terms of Contract DE-AC02-05CH11231 (Contract 31). The Laboratory's reporting entity status is that of an integrated contractor, meaning its accounts are integrated with those of DOE through the use of reciprocal accounts.

BASIS OF ACCOUNTING

The financial records of the Laboratory conform to generally accepted accounting principles (GAAP), and cost accounting standards (CAS), the provisions of the DOE accounting directives for Management and Operating (M&O) Contractors and are in compliance with Contract 31 between UC and DOE.

FINANCIAL SOURCES

The Laboratory receives funding from DOE in accordance with the provisions of Contract 31. The Laboratory receives authorization to incur costs and conduct operations through modifications to the contract.

In addition to DOE-funded work, reimbursable work is performed for other federal and non-federal entities. Costs for reimbursable work are recorded and billed to the requesting entity by the Laboratory. Cash collected from these billings is transmitted to the U.S. Department of the Treasury and deposited in the DOE account. Non-federally-funded work performed at the Laboratory must be funded in advance.

LETTER OF CREDIT

The Laboratory received authority for expenditures according to a checks-paid letter of credit from the U.S. Department of the Treasury; Letter of Credit Contract Number DE-AC02-05CH11231 with Wells Fargo Bank (WFB). The WFB letter of credit was executed on November 1, 2019 for a three year term and may be extended for two additional periods of one year each through October 31, 2024.

CASH

The Laboratory considers all balances in demand deposit accounts to be cash. Demand deposit cash accounts are non-DOE sources of funds including strategic partnership projects and royalty.

ACCOUNTS RECEIVABLE

Accounts receivable include reimbursements due from federal sponsors, short term investments held by the University of California Office of the President (UCOP), and other receivables. Other receivables include receivables related to inter-location appointments, intellectual property licensing agreements, and amounts due from non-federal sponsors.

INVENTORIES

The Laboratory identifies three types of inventory: operating materials, precious metals and nuclear materials. For operating materials, only those materials meeting a materiality threshold will be accounted for as an asset on the financial statements. Operating materials that do not meet the materiality threshold are accounted for using the purchase method, which allows items to be expensed when purchased. Precious materials procurement through the inter-DOE procurement process are accounted for as an asset. Nuclear materials are accounted for as an asset.

OTHER CURRENT ASSETS

Other current assets primarily consist of prepaid expenses. The Laboratory accounts for prepaid expenses as balance sheet assets if the amortization of costs will occur over a period exceeding twelve months and amortization is deemed material.

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**Note 1****NET PLANT AND EQUIPMENT**

Plant and equipment are purchased, constructed, or fabricated in-house and include major modifications or improvements. The capitalization threshold is \$500K for items with an anticipated service life of two years or more. Plant and equipment items meeting these criteria are capitalized. Costs of construction and fabrication are capitalizable expenses and are recorded initially as construction/fabrication work in process. Upon in-service or occupancy, the value is transferred to the appropriate fixed-assets account. Depreciation is computed using the straight-line method over the estimated useful life of the asset.

LIABILITIES

Current liabilities include drafts payable, accounts payable, inter/intra DOE payable, and accrued expenses (including accrued payroll and vacation). Current liabilities also include the current portion of our capital lease liability as well as unearned revenue related to advances received for reimbursable work and funds held for others.

Accounts payable - payroll represents the amount due to University of California for the payroll outlay on behalf of the Laboratory. As of July 2020, UCPath (University of California system-wide HR application for payroll, employee benefits and other transactions) was implemented at the Laboratory.

Long term liabilities include the long-term portion of capital lease liabilities, environmental liabilities, and pension plan and post-retirement benefit liabilities.

Environmental liabilities include future clean up, restoration activities, and Environment, Health & Safety (EH&S) liabilities to bring facilities and operations into compliance with existing laws. There were changes in the contingency rates and a re-evaluation of facilities' buildings resulting in an increase to the Laboratory's environmental liabilities balance in FY2021. These liabilities are not funded by current appropriations, but are booked as adjusting entries at the direction of DOE.

Pension plan and post-retirement benefit liabilities are determined through coordination between UC and DOE. Both current employees and retirees at the Laboratory participate in the University of California Retirement Plan (UCRP).

NOTE 2: FY2021 YEAR-END ADJUSTMENTS

Note 2

DOE made adjustments to record FY2021 Post-Retirement Benefit and Pension Plan obligation. These amounts will be reflected in the Laboratory's actuals for October 2021. These adjustments are the result of coordination and approval by both DOE and UC.

The adjustment for the Pension Plan is primarily due to a significant gain in investment return in FY2021 than expected (20% compared to 6% expected) and a higher discount rate (from 2.5% in 2020 to 2.7% in 2021) resulting in a lower obligation.

The adjustment for the Post Retirement Plan that resulted in a lower obligation is primarily due to lower medical and dental plan costs. Claim assumptions and trend rates were impacted by the removal of temporary effect of COVID-19 and the repeal of Health Insurance Fee for fully-insured plans. The increase in the discount rate from 2.5% in 2020 to 2.7% in 2021 further contributed to the lower obligation.

The adjustment for Environmental Liabilities that resulted in an increased obligation is primarily due to a correction in the facilities database.

THE FOLLOWING IS THE ADJUSTED BALANCE SHEET FOR FY2021:

	Adjusted Balance Sheet (\$K)		
	FY2021	YE Adjustments	Adjusted FY2021
ASSETS:			
Current Assets			
Cash	4,928		4,928
Accounts Receivable	30,761		30,761
Inventories	405		405
Other Current Assets	324		324
Total Current Assets	36,418		36,418
Net Plant & Equipment	968,240		968,240
TOTAL ASSETS	1,004,658		1,004,658
LIABILITIES AND EQUITY:			
LIABILITIES			
CURRENT LIABILITIES			
Drafts Payable	4,682		4,682
Accounts Payable	10,381		10,381
Accounts Payable - Payroll	2,833		2,833
Inter/Intra DOE Payable	1,197		1,197
Accrued Expenses	129,515		129,515
Capital Lease Liability - Current	278		278
Unearned Revenues	76,965		76,965
Other	108		108
Total Current Liabilities	225,959		225,959
Environmental Liabilities	1,598,013	35,258	1,633,271
Capital Lease Liability - Noncurrent	429		429
Post-Retirement Benefits	695,899	(64,503)	631,396
Pension Plan Liability	2,135,795	(461,394)	1,674,401
TOTAL LIABILITIES	4,656,095	(490,639)	4,165,456
EQUITY:			
Beginning Equity	(3,277,260)		(3,277,260)
Change in Equity	(374,177)	490,639	116,462
ENDING EQUITY	(3,651,437)	490,639	(3,160,798)
TOTAL LIABILITIES AND EQUITY	1,004,658	0	1,004,658

NOTE 2: FY2020 YEAR-END ADJUSTMENTS

Note 2

DOE made adjustments to record FY2020 Post-Retirement Benefit and Pension Plan obligation. These amounts will be reflected in the Laboratory's actuals for October 2020. These adjustments are the result of coordination and approval by both DOE and UC.

The adjustment for the Pension Plan is primarily due to a lower discount rate (from 3% in 2019 to 2.5% in 2020) resulting in a higher obligation.

The adjustment for the Post Retirement Plan that resulted in a lower obligation is primarily due to lower medical plan costs and changes to the medical, dental and mortality trend rates offset by the lower discount rate.

THE FOLLOWING IS THE ADJUSTED BALANCE SHEET FOR FY2020:

	Adjusted Balance Sheet (\$K)		
	FY2020	YE Adjustments	Adjusted FY2020
ASSETS:			
CURRENT ASSETS			
Cash	6,199		6,199
Accounts Receivable	31,997		31,997
Inventories	381		381
Other Current Assets	748		748
Total Current Assets	39,325		39,325
Net Plant & Equipment	892,544		892,544
TOTAL ASSETS	931,869		931,869
LIABILITIES AND EQUITY:			
LIABILITIES			
CURRENT LIABILITIES			
Drafts Payable	4,861		4,861
Accounts Payable	24,179		24,179
Accounts Payable - Payroll	47,031		47,031
Inter/Intra DOE Payable	961		961
Accrued Expenses	123,333		123,333
Capital Lease Liability - Current	258		258
Unearned Revenues	69,659		69,659
Other	109		109
Total Current Liabilities	270,391		270,391
Environmental Liabilities	1,106,261		1,106,261
Capital Lease Liability - Noncurrent	782		782
Post-Retirement Benefits	730,509	(34,609)	695,900
Pension Plan Liability	1,682,014	453,781	2,135,795
TOTAL LIABILITIES	3,789,957	419,172	4,209,129
EQUITY:			
Beginning Equity	(2,900,343)		(2,900,343)
Change in Equity	42,255	(419,172)	(376,917)
ENDING EQUITY	(2,858,088)	(419,172)	(3,277,260)
TOTAL LIABILITIES AND EQUITY	931,869	0	931,869

PROCUREMENT & PROPERTY MANAGEMENT

A view of the South Pole Telescope, one of the existing instruments at the South Pole site where the Cosmic Microwave Background Stage 4 (CMB-S4) will be built.
Credit: Argonne National Lab

For information about CMB-S4, visit:
cmb-s4.org

PURCHASES PLACED USING PURCHASE ORDERS/SUBCONTRACTS

Table 5.1

Total POs	(\$K)	# Actions
\$0 - \$25,000	\$65,145	55,634
\$25,001 - \$150,000	\$99,876	1,650
\$150,001 - \$1,000,000	\$152,753	501
\$1,000,001 +	\$128,658	53
Total	\$446,432	57,838

PROCUREMENT PURCHASE ORDER DOLLAR AMOUNT BY AREA

Table 5.2

Division	PO (\$K)
Directorate & Operations	\$174,207
Computing Sciences	\$66,500
Biosciences	\$59,169
Physical Sciences	\$53,851
Energy Sciences	\$37,642
Energy Technologies	\$32,896
Earth & Environmental Sciences	\$22,167
Total	\$446,432

PROCUREMENT OBLIGATIONS BY CHANNEL

Figure 5.1

LABORATORY SOCIOECONOMIC PERFORMANCE

Figure 5.2

CYCLE TIME FOR PURCHASE ORDERS ≤\$25K* FY2021

Figure 5.3

*62% of all new Subcontracts/POs

PROCUREMENT COST SAVINGS

Figure 5.4

Note = ePro \$12M; eBuy \$5M

Cost savings represents total savings from negotiations, rebates, leveraged agreements.

PROPERTY MANAGEMENT ACTIVITY

Table 5.3

Asset Flag	# of Assets	Acquisition Value (\$K)	
Equipment	7,260	\$711,937	
Attractive	19,484	\$70,067	
High Risk	27	\$343,330	
Totals Lab Wide	26,771	\$1,125,334	
IT Assets	# of Assets	Acquisition Value (\$K)	
Laptops	7,981	\$15,372	
Computer Desktops	6,239	\$13,037	
Tablets	1,360	\$68,079	
Total	15,580	\$96,487	
Inventory Campaign	Number of Assets Per Inventory Campaign	Positive Resolutions Per Inventory Campaign	% Positive
Attractive	8,299	8,199	98.80%
Controlled	414	414	100.00%
High Risk	28	28	100.00%
Final Results	8,741	8,641	98.86%
Validation Size	No validation scheduled as of 10-1-21	No validation scheduled as of 10-1-21	0.00%
Top 3 Inventory Resolutions	Number of Assets Per Inventory Campaign	Positive Resolutions Per Inventory Campaign	% Positive
Assets Scanned	8,741	3,805	43.53%
BigFix	8,741	2,860	32.72%
Inventory Affidavit	8,741	1,872	21.42%
Area and Division	Total Assets for Area and Division	Acquisition Value for Area and Division (\$K)	
BIOSCIENCES			
Biological Systems & Energy	1,345	\$28,480	
Bioscience Area Office	857	\$24,366	
Environmental Genomics & System Biology	474	\$7,269	
Joint Genome Institute	917	\$16,392	
Molecular Biophysics & Integrated Bioimaging	772	\$17,810	
ALD Totals	4,365	\$94,317	
COMPUTING SCIENCES			
Computing Sciences ALD	273	\$982	
Computational Research	887	\$3,306	
National Energy Research Scientific Computing	1,202	\$108,009	
Scientific Networking	774	\$16,735	
ALD Totals	3,136	\$129,031	

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PROPERTY MANAGEMENT ACTIVITY CONTINUED

Table 5.3

Area and Division	Total Assets for Area and Division	Acquisition Value for Area and Division (\$K)	
DIRECTORATE & OPERATIONS			
Office of the CFO	237	\$427	
Environment, Health, Safety & Security	325	\$2,653	
Excess	17	\$344	
Facilities	827	\$4,954	
Human Resources	249	\$245	
Information Technology	2,641	\$22,448	
Laboratory Directorate	246	\$376	
Operations	27	\$35	
Projects and Infrastructure Modernization	88	\$215	
Security and Emergency Services	183	\$2,357	
ALD Totals	4,840	\$34,055	
EARTH & ENVIRONMENTAL SCIENCES			
Earth & Environmental Science ALD	363	\$2,187	
Climate & Ecosystems	652	\$8,521	
Energy Geosciences	763	\$12,604	
ALD Totals	1,778	\$23,312	
ENERGY SCIENCES			
Energy Sciences ALD	15	\$23	
Advanced Light Source	1,934	\$255,125	
Chemical Sciences	1,341	\$42,566	
Molecular Foundry	1,288	\$85,121	
Material Sciences	1,597	\$59,071	
ALS-U Upgrade	108	\$1,092	
ALD Totals	6,283	\$442,999	
ENERGY TECHNOLOGIES			
Energy Technologies Area Office	115	\$179	
Building Technology & Urban Systems	565	\$4,797	
Cyclotron Road	27	\$370	
Energy Analysis Environmental Impact	690	\$8,180	
Energy Storage & Distribution	897	\$16,657	
ALD Totals	2,294	\$30,183	
PHYSICAL SCIENCES			
Accelerator Technology & Applied Physics	1,094	\$94,906	
Engineering	1,158	\$17,419	
Nuclear Science	867	\$84,289	
Physics	956	\$174,824	
ALD Totals	4,075	\$371,437	
Totals Lab-Wide	26,771	\$1,125,334	

ACRONYMS

ALD	Associate Lab Director	IARPA	Intelligence Advanced Research Projects Activity
ALS	Advanced Light Source	ICR	Institutional Cost Report
ALS-U	Advanced Light Source Upgrade	IEWO	Inter-Entity Work Orders
AMO	Advanced Manufacturing Office	IGPP	Institutional General Plant Project
ARPA-E	Advanced Research Projects Agency-Energy	IJE	Inter-Jurisdictional Employee Exchange
ASCR	Advanced Scientific Computing Research	ILA	Inter-Location Appointment
		IPA	Inter-Governmental Personnel Assignment
		IT	Information Technology
B&R	Budget and Reporting		
BA	Budget Authority	JBEI	Joint BioEnergy Institute
BASO	Bay Area Site Office	JGI	Joint Genome Institute
BCSB	Berkeley Center for Structural Biology		
BER	Biological & Environmental Research		
BES	Basic Energy Sciences	LBNL	Lawrence Berkeley National Laboratory
BioEPIC	Biological and Environmental Program Integration Center	LDRD	Laboratory Directed Research and Development
		LZ	LUX-ZEPLIN
CAD	Computer Aided Design	M&O	Management & Operating
CAS	Cost Accounting Standards	MF	Molecular Foundry
CD	Critical Decision	MLA	Multiple Location Appointment
CFO	Chief Financial Officer	MSD	Materials Sciences Division
COVID-19	Coronavirus Disease 2019		
CRADA	Cooperative Research and Development Agreement	NAWI	National Alliance for Water Innovation
CRT	Computational Research and Theory Facility	NERSC	National Energy Research Scientific Computing Center
CSR	Contractor Supported Research	NIH	National Institutes of Health
CXRO	Center for X-ray Optics	NNSA	National Nuclear Security Agency
		NPO	Nonprofit Organization
DESI	Dark Energy Spectroscopic Instrument	OCFO	Office of the Chief Financial Officer
DNN	Defense Nuclear Nonproliferation	OHRCH	Overhead Recharge
DOD	Department of Defense		
DOE	Department of Energy		
eBuy	Berkeley Lab's Online Marketplace	PCard	Purchase Card
EERE	Energy Efficiency and Renewable Energy	PLF	Paid Leave Factor
EGD	Energy Geosciences Division		
EH&S	Environment/Health/Safety	R&D	Research and Development
ePro	Berkeley Lab Purchase Orders	RD&T	Research, Development, and Technology
EPSA	Energy Policy System Analysis		
ESD	Earth Sciences Division	S&S	Safeguard & Security
ESnet	Energy Sciences Network	SDL	Semiconductor Detector Laboratory
ETA	Energy Technologies Area	SPP	Sponsored Partnership Projects
FAM	Facility Advanced Microscopy	TCR	Transcription-Coupled Repair
FES	Fusion Energy Science	TOUGH	Transport of Unsaturated Groundwater and Heat
FS	Field Security		
FTE	Full-Time Equivalent	UC	University of California
FY	Fiscal Year (October 1 through September 30)	UCCSR	University of California Contract Supported Research
		UCOP	University of California Office of the President
G&A	General and Administrative	UCPath	University of California system-wide HR application for payroll, employee benefits and other transactions
GAAP	Generally Accepted Accounting Principles	UCRP	University of California Retirement Plan
GSRA	Graduate Student Research Assistant	UNFD	Used Nuclear Fuel Disposition
HEP	High Energy Physics	WFB	Wells Fargo Bank
HPC	High Performance Computing		
HUBZone	Historically Under-utilized Business Zone		

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