Science
Facilities Maintenance and Repair

The Department's Facilities Maintenance and Repair activities are tied to its programmatic missions, goals, and objectives. The Facilities Maintenance and Repair activities funded by the budget and displayed below and are intended to ensure that the scientific community has the facilities required to conduct cutting edge scientific research now and in the future to meet Department of Energy (DOE) goals and objectives.

Costs for Direct-Funded Maintenance and Repair (including Deferred Maintenance Reduction)

(dollars in thousands)

	FY 2020 Planned Cost	FY 2020 Actual Cost	FY 2021 Planned Cost	FY 2022 Planned Cost
Brookhaven National Laboratory	4,821	5,495	4,917	5,578
Lawrence Berkeley National Laboratory	8,612	6,335	3,900	19,089
Notre Dame Radiation Laboratory	124	167	125	127
Oak Ridge National Laboratory	18,994	27,774	19,564	28,886
Oak Ridge Office	6,479	2,832	6,673	6,410
Office of Scientific and Technical Information	382	392	421	397
SLAC National Accelerator Laboratory	3,276	3,663	3,407	3,934
Thomas Jefferson National Accelerator Facility	195	98	198	133
Total, Direct-Funded Maintenance and Repair	**42,883**	**46,756**	**39,205**	**64,554**

General purpose infrastructure includes multiprogram research laboratories, administrative and support buildings, as well as cafeterias, power plants, fire stations, utilities, roads, and other structures. Together, the Office of Science (SC) laboratories have over 1,400 operational buildings and real property trailers, with nearly 20 million gross square feet of space.

Generally, facilities maintenance and repair expenses are funded through an indirect overhead charge. In some cases, however, a laboratory may charge maintenance directly to a specific program. One example would be when maintenance is performed in a building used only by a single program. Such direct-funded charges are not directly budgeted.

Indirect-Funded Maintenance and Repair (including Deferred Maintenance Reduction)

Facilities maintenance and repair activities funded indirectly through overhead charges at SC laboratories are displayed in the table above. Since this funding is allocated to all work done at each laboratory, the cost of these activities is charged to funding from SC and other DOE organizations, as well as other Federal agencies and other entities doing work at SC laboratories. Maintenance reported to SC for non-SC laboratories is also shown. The figures are total projected costs across all SC laboratories.

Science
Costs for Indirect-Funded Maintenance and Repair (including Deferred Maintenance Reduction)

(dollars in thousands)

	FY 2020 Planned Cost	FY 2020 Actual Cost	FY 2021 Planned Cost	FY 2022 Planned Cost
Ames Laboratory	2,700	2,200	2,400	2,400
Argonne National Laboratory	45,823	45,370	46,768	51,237
Brookhaven National Laboratory	29,619	31,183	30,211	33,352
Fermi National Accelerator Laboratory	20,994	15,682	21,704	23,183
Lawrence Berkeley National Laboratory	28,778	31,220	29,749	31,051
Oak Ridge Institute for Science and Education	468	622	480	656
Oak Ridge National Laboratory and Y-12	71,680	59,868	73,830	55,925
Oak Ridge Office	1,492	1,976	1,537	2,236
Pacific Northwest National Laboratory	10,591	6,199	10,322	11,270
Princeton Plasma Physics Laboratory	6,644	6,029	6,843	6,280
SLAC National Accelerator Laboratory	13,649	16,847	14,195	14,089
Thomas Jefferson National Accelerator Facility	9,988	6,652	10,188	7,634
Total, Indirect-Funded Maintenance and Repair	**242,426**	**223,848**	**248,227**	**239,313**

Report on FY 2020 Expenditures for Maintenance and Repair

This report responds to the requirements established in Conference Report (H.Rep. 108-10) accompanying Public Law 108-7 (pages 886–887), which requires the DOE to provide an annual year-end report on maintenance expenditures to the Committees on Appropriations. This report compares the actual maintenance expenditures in FY 2020 to the amount planned for FY 2020, including Congressionally directed changes.

Science
Total Costs for Maintenance and Repair

(dollars in thousands)

	FY 2020 Planned Costs	FY 2020 Actual Costs
Ames Laboratory	2,700	2,200
Argonne National Laboratory	45,823	45,370
Brookhaven National Laboratory	34,440	36,678
Fermi National Accelerator Laboratory	20,994	15,682
Lawrence Berkeley National Laboratory	37,390	37,555
Oak Ridge Institute for Science and Education	468	622
Notre Dame Radiation Laboratory	124	167
Oak Ridge National Laboratory and Y-12	90,674	87,642
Oak Ridge Office	7,971	4,808
Office of Scientific and Technical Information	382	392
Pacific Northwest National Laboratory	10,591	6,199
Princeton Plasma Physics Laboratory	6,644	6,029
SLAC National Accelerator Laboratory	16,925	20,510
Thomas Jefferson National Accelerator Facility	10,183	6,750
Total, Maintenance and Repair	**285,309**	**270,604**

Excess Facilities are facilities no longer required to support the Department's needs, present or future missions or functions, or the discharge of its responsibilities. The table below reports the funding to deactivate and dispose of excess infrastructure, including stabilization and risk reduction activities at high-risk excess facilities. These activities result in surveillance and maintenance cost avoidance and reduced risk to workers, the public, the environment, and programs. This includes reductions in costs related to maintenance of excess facilities (including high-risk excess facilities) necessary to minimize the risk posed by those facilities prior to disposition. SC has no direct funded excess facilities costs to report.

Costs for Indirect-Funded Excess Facilities

(dollars in thousands)

	FY 2020 Planned Cost	FY 2020 Actual Cost	FY 2021 Planned Cost	FY 2022 Planned Cost
Argonne National Laboratory	400	400	400	400
Brookhaven National Laboratory	958	595	978	619
Fermi National Accelerator Laboratory	20	20	20	20
Lawrence Berkeley National Laboratory	16	1	16	2
Oak Ridge National Laboratory	500	250	500	250
SLAC National Accelerator Laboratory	54	—	56	—
Total, Indirect-Funded Excess Facilities	**1,948**	**1,266**	**1,970**	**1,291**

Science
Research and Development

(dollars in thousands)

	FY 2020 Enacted	FY 2021 Enacted	FY 2022 Request	FY 2022 Request vs FY 2021 Enacted
Basic	5,325,327	5,335,339	5,765,254	+429,915
Applied	—	—	—	—
Development	—	—	—	—
Subtotal, R&D	5,325,327	5,335,339	5,765,254	+429,915
Equipment	217,526	239,552	208,391	-31,161
Construction	1,380,147	1,343,109	1,298,355	-44,754
Total, R&D	**6,923,000**	**6,918,000**	**7,272,000**	**+354,000**

Science
Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR)

(dollars in thousands)

	FY 2020 Enacted	FY 2021 Enacted	FY 2022 Request	FY 2022 Request vs FY 2021 Enacted
Office of Science				
Advanced Scientific Computing Research				
SBIR	25,160	25,736	28,354	+2,618
STTR	3,538	3,620	3,989	+369
Basic Energy Sciences				
SBIR	57,423	56,592	59,865	+3,273
STTR	8,075	7,963	8,432	+469
Biological and Environmental Research				
SBIR	23,687	23,851	25,504	+1,653
STTR	3,330	3,352	3,589	+237
Fusion Energy Sciences				
SBIR	12,348	12,352	13,360	+1,008
STTR	1,737	1,740	1,885	+145
High Energy Physics				
SBIR	22,265	22,325	22,618	+293
STTR	3,131	3,140	3,181	+41
Nuclear Physics				
SBIR	18,257	18,685	21,005	+2,320
STTR	2,468	2,625	2,955	+330
Accelerator R&D and Production				
SBIR	—	—	768	+768
STTR	—	—	108	+108
Total, Office of Science SBIR[a]	**159,140**	**159,541**	**171,474**	**+11,933**
Total, Office of Science STTR	**22,279**	**22,440**	**24,139**	**+1,699**

[a] The other DOE programs SBIR/STTR funding amounts are listed in the other DOE budget volumes.

Science
Safeguards and Security Crosscut

(dollars in thousands)

	FY 2020 Enacted	FY 2021 Enacted	FY 2022 Request	FY 2022 Request vs FY 2021 Enacted
Safeguards and Security				
Protective Forces	43,545	44,200	46,710	+2,510
Security Systems	16,960	20,180	22,490	+2,310
Information Security	4,356	4,420	4,490	+70
Cyber Security	33,346	37,520	81,260	+43,740
Personnel Security	5,444	5,500	5,750	+250
Material Control and Accountability	2,431	2,465	2,500	+35
Program Management	6,618	6,715	6,800	+85
Total, Safeguards and Security	**112,700**	**121,000**	**170,000**	**+49,000**

The FY 2022 Request supports sustained levels of operations in S&S program elements including Protective Forces, Security Systems, Information Security, Cyber Security, Personnel Security, Material Control and Accountability, and Program Management, while also addressing the program's highest priority of providing adequate security for the special nuclear material housed in Building 3019 at the Oak Ridge National Laboratory (ORNL).

The Request also includes an additional $43.74 million in Cyber Security to address long standing gaps in infrastructure, operations, and compliance to ensure adequate detection, mitigation, and recovery from cyber intrusions and attacks against DOE laboratories.