## Science Funding by Congressional Control

(dollars in thousands)

|  | (donars in thousands) |                 |                 |                                       |
|--|-----------------------|-----------------|-----------------|---------------------------------------|
|  | FY 2019 Enacted       | FY 2020 Enacted | FY 2021 Request | FY 2021 Request vs<br>FY 2020 Enacted |
| Advanced Scientific Computing Research   |                       |                 |                 |                                       |
| Research   | 702,794               | 791,265         | 819,106         | +27,841                               |
| 17-SC-20, Office of Science Exascale Computing Project (SC-ECP)                    | 232,706               | 188,735         | 168,945         | -19,790                               |
| Total, Advanced Scientific Computing Research                                      | 935,500               | 980,000         | 988,051         | +8,051                                |
| Basic Energy Sciences  |                       |                 |                 |                                       |
| Research   | 1,757,700             | 1,853,000       | 1,751,673       | -101,327                              |
| Construction   |                       |                 |                 |                                       |
| 21-SC-10, Cryomodule Repair & Maintenance Facility, SLAC                           | _                     | _               | 1,000           | +1,000                                |
| 19-SC-14, Second Target Station (STS), ORNL  | 1,000                 | 20,000          | 1,000           | -19,000                               |
| 18-SC-10, Advanced Photon Source Upgrade (APS-U), ANL                              | 130,000               | 170,000         | 150,000         | -20,000                               |
| 18-SC-11, Spallation Neutron Source Proton Power Upgrade (PPU), ORNL               | 60,000                | 60,000          | 5,000           | -55,000                               |
| 18-SC-12, Advanced Light Source Upgrade (ALS-U), LBNL (19-SC-10)                   | 60,000                | 60,000          | 13,000          | -47,000                               |
| 18-SC-13, Linac Coherent Light Source-II-High Energy (LCLS-II-HE), SLAC (19-SC-11) | 28,000                | 50,000          | 14,000          | -36,000                               |
| 13-SC-10, Linac Coherent Light Source-II (LCLS-II), SLAC                           | 129,300               | _               | _               | _                                     |
| Total, Construction  | 408,300               | 360,000         | 184,000         | -176,000                              |
| Total, Basic Energy Sciences   | 2,166,000             | 2,213,000       | 1,935,673       | -277,327                              |
| Biological and Environmental Research  | 705,000               | 750,000         | 516,934         | -233,066                              |
| Fusion Energy Sciences   |                       |                 |                 |                                       |
| Research   | 432,000               | 414,000         | 313,151         | -100,849                              |
| Construction   |                       |                 |                 |                                       |
| 20-SC-61, Matter in Extreme Conditions (MEC) Petawatt Upgrade                      | _                     | 15,000          | 5,000           | -10,000                               |
| 14-SC-60, U.S. Contributions to ITER   | 132,000               | 242,000         | 107,000         | -135,000                              |
| Total, Construction  | 132,000               | 257,000         | 112,000         | -145,000                              |
| Total, Fusion Energy Sciences  | 564,000               | 671,000         | 425,151         | -245,849                              |

(dollars in thousands)

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|--|-----------------|-----------------|-----------------|---------------------------------------|
| High Energy Physics  |                 |                 |                 |                                       |
| Research   | 800,000         | 814,000         | 697,631         | -116,369                              |
| Construction   |                 |                 |                 |                                       |
| 18-SC-42, Proton Improvement Plan II (PIP-II), FNAL  | 20,000          | 60,000          | 20,000          | -40,000                               |
| 11-SC-40, Long Baseline Neutrino Facility/Deep Underground Neutrino Experiment (LBNF/DUNE), FNAL | 130,000         | 171,000         | 100,500         | -70,500                               |
| 11-SC-41, Muon to Electron Conversion Experiment, FNAL   | 30,000          | _               | _               | _                                     |
| Total, Construction  | 180,000         | 231,000         | 120,500         | -110,500                              |
| Total, High Energy Physics   | 980,000         | 1,045,000       | 818,131         | -226,869                              |
| Nuclear Physics  |                 |                 |                 |                                       |
| Operation and Maintenance  | 615,000         | 660,000         | 635,027         | -24,973                               |
| Construction   |                 |                 |                 |                                       |
| 20-SC-51, U.S. Stable Isotope Production and Research Center, ORNL                               | _               | 12,000          | 12,000          | _                                     |
| 20-SC-52, Electron Ion Collider, BNL   | _               | 1,000           | 1,000           | _                                     |
| 14-SC-50, Facility for Rare Isotope Beams, MSU   | 75,000          | 40,000          | 5,300           | -34,700                               |
| Total, Construction  | 75,000          | 53,000          | 18,300          | -34,700                               |
| Total, Nuclear Physics   | 690,000         | 713,000         | 653,327         | -59,673                               |
| Workforce Development for Teachers and Scientists  | 22,500          | 28,000          | 20,500          | -7,500                                |
| Science Laboratories Infrastructure  |                 |                 |                 |                                       |
| Infrastructure Support   |                 |                 |                 |                                       |
| Payment in Lieu of Taxes   | 1,713           | 4,540           | 4,650           | +110                                  |
| Oak Ridge Landlord   | 6,434           | 5,610           | 5,860           | +250                                  |
| Facilities and Infrastructure  | 45,543          | 56,850          | 6,200           | -50,650                               |
| Oak Ridge Nuclear Operations   | 26,000          | 26,000          | 6,000           | -20,000                               |
| Total, Infrastructure Support  | 79,690          | 93,000          | 22,710          | -70,290                               |

(dollars in thousands)

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|--|------------------|-----------------------|------------------|---------------------------------------|
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| Construction   |                  |                       |                  |                                       |
| 21-SC-71, Princeton Plasma Innovation Center, PPPL               | _                | _                     | 2,000            | +2,000                                |
| 21-SC-72, Critical Infrastructure Recovery & Renewal, PPPL       | _                | _                     | 2,000            | +2,000                                |
| 21-SC-73, Ames Infrastructure Modernization                      | _                | _                     | 2,000            | +2,000                                |
| 20-SC-71, Critical Utilities Rehabilitation Project, BNL         | _                | 20,000                | 15,000           | -5,000                                |
| 20-SC-72, Seismic and Safety Modernization, LBNL                 | _                | 10,000                | 10,000           | _                                     |
| 20-SC-73, CEBAF Renovation and Expansion, TJNAF (19-SC-75)       | _                | 2,000                 | 2,000            | _                                     |
| 20-SC-74, Craft Resources Support Facility, ORNL (19-SC-76)      | _                | 15,000                | 25,000           | +10,000                               |
| 20-SC-75, Large Scale Collaboration Center, SLAC (19-SC-77)      | _                | 11,000                | 8,000            | -3,000                                |
| 20-SC-76, Tritium System Demolition and Disposal, PPPL           | _                | 13,000                | 19,400           | +6,400                                |
| 20-SC-77, Argonne Utilities Upgrade, ANL                         | _                | 500                   | 2,000            | +1,500                                |
| 20-SC-78, Linear Assets Modernization Project, LBNL              | _                | 500                   | 2,000            | +1,500                                |
| 20-SC-79, Critical Utilities Infrastructure Revitalization, SLAC | _                | 500                   | 2,000            | +1,500                                |
| 20-SC-80, Utilities Infrastructure Project, FNAL                 | _                | 500                   | 2,000            | +1,500                                |
| 19-SC-71, Science User Support Center, BNL                       | 7,000            | 20,000                | 7,000            | -13,000                               |
| 19-SC-72, Electrical Capacity and Distribution Capability, ANL   | 30,000           | 30,000                | _                | -30,000                               |
| 19-SC-73, Translational Research Capability, ORNL                | 25,000           | 25,000                | 10,000           | -15,000                               |
| 19-SC-74, BioEPIC, LBNL  | 5,000            | 15,000                | 6,000            | -9,000                                |
| 18-SC-71, Energy Sciences Capability, PNNL                       | 24,000           | 23,000                | 23,000           | _                                     |
| 17-SC-71, Integrated Engineering Research Center, FNAL           | 20,000           | 22,000                | 12,000           | -10,000                               |
| 17-SC-73, Core Facility Revitalization, BNL                      | 42,200           | _                     | _                | _                                     |
| Total, Construction  | 153,200          | 208,000               | 151,400          | -56,600                               |
| Total, Science Laboratories Infrastructure                       | 232,890          | 301,000               | 174,110          | -126,890                              |
| Safeguards and Security  | 106,110          | 112,700               | 115,623          | +2,923                                |
| Program Direction  | 183,000          | 186,300               | 190,306          | +4,006                                |
| Total, Science<br>Federal FTEs                                   | 6,585,000<br>810 | 7,000,000<br>785      | 5,837,806<br>785 | -1,162,194                            |
| . 646.4  | 010              | , 03                  | , 03             |                                       |

## SBIR/STTR funding:

- FY 2019 Enacted: SBIR \$148,264,000 and STTR \$20,851,000 (SC only)
- FY 2020 Enacted: SBIR \$159,140,000 and STTR \$22,279,000 (SC only)
- FY 2021 Request: SBIR \$139,901,000 and STTR \$19,390,000 (SC only)