

**APPENDIX D**

**CONTRACTOR'S COMMITMENTS**

**REV. 1**

**Applicable to the Operations of  
Brookhaven National Laboratory**

The following proposed commitments were accepted.

Source/Commitment	Alignment with BSA's Critical Outcomes or Other Initiatives	Delivery Timeframe	Estimated Value
<b>New York State</b>			
High-energy x-ray beamline at NSLS-II	Transformation of synchrotron science; in operando/in situ energy science	2015-2020	\$25 million
Accelerator & Electron Ion Collider (EIC) Design Building	Origins of matter and mass	2015–2020	\$25 million
Establish Big Data Consortium–Center for Data-driven Discovery (CD <sub>3</sub> )	Data-driven discovery	2015–2020	\$15 million
		<b>NYS Total</b>	<b>\$65 million</b>
<b>Brookhaven Science Associates</b>			
Capitalize Agreements for Commercializing Technology (ACT) and nonfederal Work for Others (WFO) to accelerate Laboratory growth agenda	Growth in WFO, energy technology; workforce development; community relations	2015–2025	\$3.2 million
STEM education and community outreach	Workforce development; community relations	2015–2025	\$2.5 million
Laboratory employee college scholarships	Workforce attraction and retention	2015–2025	\$1.5 million
Laboratory Director discretionary funds	All Critical Outcomes	2015–2025	\$15 million
		<b>BSA Total</b>	<b>\$22.2 million</b>
<b>Stony Brook University</b>			
Stony Brook-BNL Joint Appointments	Synchrotron sciences; Energy sciences; High-Energy Physics (HEP); Environmental; Datadriven Discovery	2015–2025	\$26.2 million
Stony Brook-BNL Seed Grant Program	All science Critical Outcomes	2015–2025	\$2 million
		<b>Stony Brook Total</b>	<b>\$28.2 million</b>
<b>Partner Universities</b>			
Columbia U.-BNL Joint Appointments	Transformation of synchrotron science; in operando/in situ energy science	2015–2020	\$2.25 million
Cornell U.-BNL Joint Appointment	In operando/in situ energy science	2015–2020	\$750,000
		<b>Partner Universities Total</b>	<b>\$3M</b>
<b>GRAND TOTAL</b>			<b>\$118.4 million</b>

## The following commitments have been completed

Source/Commitment	Alignment with BSA's Critical Outcomes or Other Initiatives	Delivery Timeframe	Estimated Value	Completion date
<b>New York State</b>				
High-energy x-ray beamline at NSLS-II	Transformation of synchrotron science; in operando/in situ energy science	2015-2020	\$25 million	March 2021
Accelerator & Electron Ion Collider (EIC) Design Building	Origins of matter and mass	2015–2020	\$25 million	March 2021
Establish Big Data Consortium–Center for Data-driven Discovery (CD <sub>3</sub> )	Data-driven discovery	2015–2020	\$15 million	
		<b>NYS Total</b>	<b>\$65 million</b>	
<b>Brookhaven Science Associates</b>				
Capitalize Agreements for Commercializing Technology (ACT) and nonfederal Work for Others (WFO) to accelerate Laboratory growth agenda	Growth in WFO, energy technology; workforce development; community relations	2015–2025	\$3.2 million	
STEM education and community outreach	Workforce development; community relations	2015–2025	\$2.5 million	
Laboratory employee college scholarships	Workforce attraction and retention	2015–2025	\$1.5 million	
Laboratory Director discretionary funds	All Critical Outcomes	2015–2025	\$15 million	
		<b>BSA Total</b>	<b>\$22.2 million</b>	
<b>Stony Brook University</b>				
Stony Brook-BNL Joint Appointments	Synchrotron sciences; Energy sciences; High-Energy Physics (HEP); Environmental; Datadriven Discovery	2015–2025	\$26.2 million	March 2021
Stony Brook-BNL Seed Grant Program	All science Critical Outcomes	2015–2025	\$2 million	
		<b>Stony Brook Total</b>	<b>\$28.2 million</b>	
<b>Partner Universities</b>				
Columbia U.-BNL Joint Appointments	Transformation of synchrotron science; in operando/in situ energy science	2015–2020	\$2.25 million	March 2021
Cornell U.-BNL Joint Appointment	In operando/in situ energy science	2015–2020	\$750,000	March 2021
		<b>Partner Universities Total</b>	<b>\$3M</b>	
<b>GRAND TOTAL</b>			<b>\$118.4 million</b>	

The following proposed commitments were not accepted.

Source/Commitment	Alignment with BSA's Critical Outcomes or Other Initiatives	Delivery Timeframe	Estimated Value
<b>Brookhaven Science Associates</b>			
Capitalize Special Purpose Entity for campus modernization	Renewed research campus	2015–2020	\$1,000,000
		<b>BSA Total</b>	<b>\$1,000,000</b>
<b>Stony Brook University</b>			
Training for BNL staff development	Safe, efficient operations	2015–2020	\$125,000
		<b>Stony Brook Total</b>	<b>\$125,000</b>
<b>Battelle</b>			
Communities of Practice (COP) participation	All Critical Outcomes	2015–2025	\$800,000
		<b>Battelle Total</b>	<b>\$800,000</b>
<b>Partner Universities</b>			
Governance Role via Board and Committee Membership	All Critical Outcomes	2015–2025	\$360,000
Oversight of Science via S&T Steering Committee	All science Critical Outcomes	2015–2025	\$720,000
		<b>Partner Universities Total</b>	<b>\$1,080,000</b>
<b>GRAND TOTAL</b>			<b>\$3,005,000</b>

Construction of HEX Beamline at NSLS II	
Source of Commitment	
New York State (NYS)	
Description of Commitment	
<p>The President of New York’s Empire State Development (the economic development agency for NYS), the Speaker of the NYS Assembly, and the Temporary President/ Majority Leader of the NYS Senate have each stated their intent to provide \$25 million in NYS funds over the period 2015 through 2020 to construct a unique high-energy, x-ray beamline at the NSLS II to support implementation of BSA’s strategy for rapid build out of NSLS II beamlines and acceleration of BNL’s research mission in photon sciences and in operando research. The three attached letters provide the strongest possible statement of support for the funding, which is combined with Commitments 2 and 3. The construction will be managed as a project within NSLS II, with leadership by the NSLS II Director and close coordination with the Associate Laboratory Director (ALD) for Basic Energy Sciences at BNL.</p>	
Location of Commitment Estimated	Total Value
NSLS II at BNL \$25 million	
Expected Benefits to BNL	
<p>Accelerates plan for rapid build out of NSLS II beamlines; enables in situ/in operando research agenda in energy sciences; provides unique capabilities for NSLS II user community</p>	
Date Commitment will be Provided	
2015 through 2020	
Description of any liability to the Government as well as any Governmental action required or related to the commitment:	
<p>Once completed and operational, BNL/NSLS II assumes responsibility for management, operation, and support of beamline.</p>	

<b>Construction of Building for Accelerator Development and EIC Design</b>	
<b>Source of Commitment</b>	
New York State (NYS)	
<b>Description of Commitment</b>	
<p>The President of New York’s Empire State Development (the economic development agency for NYS), the Speaker of the NYS Assembly, and the Temporary President/ Majority Leader of the NYS Senate have each stated their intent to provide \$25 million in NYS funds over the period 2015 through 2020 to construct a building to house the Center for Accelerator Research, Development, and Design (CARDD), which will be the home of the electron Relativistic Heavy Ion Collider (eRHIC) Design team and for the eRHIC detector collaborations during the construction phase. The three attached letters provide the strongest possible statement of support for the funding, which is combined with Commitments 1 and 3.</p>	
<b>Location of Commitment</b>	<b>Estimated Total Value</b>
BNL	\$25 million
<b>Expected Benefits to BNL</b>	
<p>Accelerates design and development of accelerator and detector technologies that enable Electron-Ion Collider (EIC) design; supports BNL’s mission in nuclear physics; supports nuclear physics user community</p>	
<b>Date Commitment will be Provided</b>	
2015 through 2020	
<b>Description of any liability to the Government as well as any Governmental action required or related to the commitment:</b>	
<p>After its completion, BNL assumes responsibility for the Accelerator Development and EIC Design Building, including its operation and maintenance.</p>	

Investment in “Big-Data” Consortium Involving BNL, Stony Brook, Columbia University, and New York Industrial Partners	
Source of Commitment	
New York State (NYS)	
Description of Commitment	
<p>The President of New York’s Empire State Development (the economic development agency for NYS), the Speaker of the NYS Assembly, and the Temporary President/ Majority Leader of the NYS Senate have each stated their intent to provide \$15 million in NYS funds over the period 2015 through 2020 to establish and operate a “big-data” consortium, the Center for Data-driven Discovery (CD<sub>3</sub>) involving BNL, Stony Brook University, Columbia University, and New York industrial partners. The three attached letters provide the strongest possible statement of support for the funding, which is combined with Commitments 1 and 2.</p>	
Location of Commitment	Estimated Total Value
BNL	\$15 million
Expected Benefits to BNL	
<p>Accelerates implementation of the Computational Sciences Initiative and creation of CD<sub>3</sub>, which will centralize computational capabilities across the Laboratory, providing cost-effective support for BNL’s science missions and leveraging resources from academic and industrial partners</p>	
Date Commitment will be Provided	
2015 through 2020	
Description of any liability to the Government as well as any Governmental action required or related to the commitment:	
None	

<b>BSA Investment to Enable ACT and Non-Federal WFO for Laboratory Growth Strategy</b>	
<b>Source of Commitment</b>	
Brookhaven Science Associates (BSA)	
<b>Description of Commitment</b>	
BSA will provide a package of investments that enable ACT and non-federal WFO that accelerate our growth agenda for BNL. The overall commitment has three components: (1) BSA will make available a minimum of \$1 million in working capital to support ACT, and up to \$3 million when needed to accommodate growth in the program; (2) a minimum of \$1.2 million over 10 years for operating expenses for ACT; and (3) a minimum of \$1 million in working capital yearly to accelerate non-federal WFO initiatives. BSA's investments to capitalize and operate the ACT program are contingent on DOE's approval of an ACT clause for BNL. BSA's commitments over 10 years are contingent on retaining the contract beyond the initial 5-year time frame.	
<b>Location of Commitment</b>	<b>Estimated Total Value</b>
BNL	A minimum of \$3.2 million over 10 years (assumes BSA retains contract), with up to \$5.2 million when needed to accommodate growth
<b>Expected Benefits to BNL</b>	
Accelerates BSA's growth agenda for BNL by expanding technology transfer and non-federal WFO	
<b>Date Commitment will be Provided</b>	
2015 through 2025 (assumes BSA retains contract)	
<b>Description of any liability to the Government as well as any Governmental action required or related to the commitment:</b>	
BSA investment in ACT is contingent on DOE's approval of an ACT clause for BNL.	

<b>BSA Investment in STEM Education and Community Outreach</b>	
<b>Source of Commitment</b>	
Brookhaven Science Associates (BSA)	
<b>Description of Commitment</b>	
BSA will expand its support of Science, Technology, Engineering, and Mathematics (STEM) education programs and community outreach activities by increasing its commitment to these activities to \$2.5 million over 10 years.	
<b>Location of Commitment</b>	<b>Estimated Total Value</b>
BNL and its local community	\$2.5 million over 10 years (assumes BSA retains contract)
<b>Expected Benefits to BNL</b>	
STEM education programs support BSA’s vision for developing a diverse workforce for the Laboratory. These education programs, combined with other community outreach activities, enhance BNL’s and DOE’s branding in the local community and support the strong local partnerships that BSA has developed at BNL.	
<b>Date Commitment will be Provided</b>	
2015 through 2025 (assumes BSA retains contract)	
<b>Description of any liability to the Government as well as any Governmental action required or related to the commitment:</b>	
None	

<b>BSA College Scholarships for Children of Laboratory Employees</b>	
<b>Source of Commitment</b>	
Brookhaven Science Associates (BSA)	
<b>Description of Commitment</b>	
BSA commits a minimum of \$1.5 million over 10 years to provide need- and merit based college scholarships for children of BNL employees.	
<b>Location of Commitment</b>	<b>Estimated Total Value</b>
BNL	A minimum of \$1.5 million over 10 years (assumes BSA retains contract)
<b>Expected Benefits to BNL</b>	
BSA's program of college scholarships for children of Laboratory employees supports recruitment and retention efforts, allowing BNL to build and maintain a highly qualified workforce.	
<b>Date Commitment will be Provided</b>	
2015 through 2025 (assumes BSA retains contract)	
<b>Description of any liability to the Government as well as any Governmental action required or related to the commitment:</b>	
None	

<b>BSA Investment for Laboratory Director Discretionary Funds</b>	
<b>Source of Commitment</b>	
Brookhaven Science Associates (BSA)	
<b>Description of Commitment</b>	
BSA commits \$15 million in funds over 10 years to be expended at the Director's discretion to support Laboratory business objectives.	
<b>Location of Commitment</b>	<b>Estimated Total Value</b>
BNL	\$15 million over 10 years (assumes BSA retains contract)
<b>Expected Benefits to BNL</b>	
Expenditures enable Laboratory to perform necessary activities not allowable under the M&O contract, to fulfill responsibilities, and to rapidly respond to opportunities for private sector partnerships.	
<b>Date Commitment will be Provided</b>	
2015 through 2025 (assumes BSA retains contract)	
<b>Description of any liability to the Government as well as any Governmental action required or related to the commitment:</b>	
None	

<b>Stony Brook University-BNL Joint Appointment Program</b>	
<b>Source of Commitment</b>	
Stony Brook University	
<b>Description of Commitment</b>	
Stony Brook will continue its existing program of joint appointments with BNL (currently numbering 24), and will expand the program with 22 new positions over 10 years, bringing the total to 46. In the first 5 years of the new contract, 10 to 12 positions will be added, with the full complement of 22 in the next 5 years, assuming BSA retains the contract. The new joint appointments are aligned with BSA's Critical Outcomes and related initiatives. Joint appointees will enter the tenure track for faculty at Stony Brook.	
<b>Location of Commitment</b>	<b>Estimated Total Value</b>
BNL and Stony Brook	\$26.2 million over 10 years (assumes BSA retains contract)
<b>Expected Benefits to BNL</b>	
Accelerate recruitment of research staff to maximize achievement of BNL science missions; strengthen connection to parent organization	
<b>Date Commitment will be Provided</b>	
2015 through 2025 (assumes BSA retains contract)	
<b>Description of any liability to the Government as well as any Governmental action required or related to the commitment:</b>	
None	

<b>Stony Brook University-BNL Seed Grant Program</b>	
<b>Source of Commitment</b>	
Stony Brook University	
<b>Description of Commitment</b>	
Stony Brook will continue its successful Seed Grant Program, providing approximately \$200,000 yearly for competitive grants that involve collaboration between BNL and Stony Brook researchers. The Grant Program allows collaborators to undertake demonstration and proof-of-concept research to provide a foundation for external funding proposals.	
<b>Location of Commitment</b>	<b>Estimated Total Value</b>
BNL and Stony Brook	\$2 million over 10 years (assumes BSA retains contract)
<b>Expected Benefits to BNL</b>	
Provide seed funds for preliminary research activities that support BNL’s mission; accelerate growth agenda for BNL; strengthen connection to parent organization	
<b>Date Commitment will be Provided</b>	
2015 through 2025 (assumes BSA retains contract)	
<b>Description of any liability to the Government as well as any Governmental action required or related to the commitment:</b>	
None	

Columbia University-BNL Joint Appointments	
Source of Commitment	
Columbia University	
Description of Commitment	
Columbia University commits to continued support for three joint positions through the initial 5-year contract period at a minimum, subject to continued availability of appropriately qualified and interested individuals. The current joint appointments include Professors Simon Billinge, Wayne Hendrickson, and Jingguang Chen.	
Location of Commitment	Estimated Total Value
BNL and Columbia University	\$2.25 million over 5 years
Expected Benefits to BNL	
Accelerate BNL's science mission in areas that align with BSA's vision and DOE's goals; strengthen connections to a BSA partner university; open pipeline for recruiting Ph.D.s and postdocs from Columbia	
Date Commitment will be Provided	
2015 through 2020	
Description of any liability to the Government as well as any Governmental action required or related to the commitment:	
None	

<b>Cornell University-BNL Joint Appointment</b>	
<b>Source of Commitment</b> Cornell University	
<b>Description of Commitment</b>  Cornell University commits to continued support for one joint position through the initial 5-year contract period at a minimum, subject to continued availability of appropriately qualified and interested individuals. The current joint appointment is Professor Seamus Davis.	
<b>Location of Commitment</b>	<b>Estimated Total Value</b>
BNL and Cornell University	\$750,000 over 5 years
<b>Expected Benefits to BNL</b>  Accelerate BNL mission in basic energy sciences; strengthen connection to a BSA partner university; open pipeline for recruiting Ph.D.s and postdocs from Cornell	
<b>Date Commitment will be Provided</b>  2015 through 2020	
<b>Description of any liability to the Government as well as any Governmental action required or related to the commitment:</b>  None	