NEW ISSUE-Book Entry Only **Ratings: See "RATINGS" herein**

In the opinion of Co-Bond Counsel interest on the Series AY Bonds is not excludable from gross income for federal income tax purposes. Co-Bond Counsel is also of the opinion that under current Pennsylvania law, interest on the Series AY Bonds is exempt from Pennsylvania personal income tax and Pennsylvania corporate net income tax. See "TAX MATTERS" herein.

$78,925,000
PENNSYLVANIA HIGHER EDUCATIONAL FACILITIES AUTHORITY
(Commonwealth of Pennsylvania)
STATE SYSTEM OF HIGHER EDUCATION, REFUNDING REVENUE BONDS
SERIES AY
(Federally Taxable)

Dated: Date of Delivery **Due: June 15, as shown on the inside front cover**

The Series AY Bonds are issuable only as fully registered bonds without coupons, and when issued, will be registered in the name of Cede & Co., as registered owner and nominee for The Depository Trust Company ("DTC"), New York, New York. DTC will act as securities depository for the Series AY Bonds. Purchase of the Series AY Bonds will be made in book-entry only form, in the denomination of $5,000 or any integral multiple thereof. Purchasers will not receive certificates representing their interest in the Series AY Bonds. So long as the Series AY Bonds are registered in the name of Cede & Co. as nominee of DTC, references herein to the registered owners shall mean Cede & Co., and shall not mean the Beneficial Owners of the Series AY Bonds. See "The Series AY Bonds - Book-Entry Only System" herein.

Principal of and interest on the Series AY Bonds will be paid by The Bank of New York Mellon Trust Company, N.A., Philadelphia, Pennsylvania, as trustee (the "Trustee"). So long as DTC or its nominee, Cede & Co., is the registered owner of the Series AY Bonds, such payments will be made directly to it as registered owner. Disbursement of such payments to the DTC Participants is the responsibility of DTC and disbursement of such payments to the Beneficial Owners is the responsibility of the DTC Participants and the Indirect Participants, as more fully described herein. Interest will be payable on December 15 and June 15, commencing December 15, 2020, to the registered owners of record as of the pertinent record dates herein described.

The Series AY Bonds are subject to redemption prior to maturity as described herein.

The Series AY Bonds are limited obligations of the Authority and are secured under the provisions of the Indenture and the Loan Agreement, as each is defined herein, and are payable solely from payments to be received under the Loan Agreement by the Authority from the State System of Higher Education (the "System") and from certain funds held under the Indenture.

Neither the general credit of the Authority nor the credit or taxing power of the Commonwealth of Pennsylvania or of any political subdivision thereof is pledged for the payment of the principal of or the interest on the Series AY Bonds described above, nor shall such Series AY Bonds be deemed to be general obligations of the Authority or obligations of the Commonwealth of Pennsylvania or any political subdivision thereof, nor shall the Commonwealth of Pennsylvania or any political subdivision thereof be liable for the payment of the principal of or interest on the Series AY Bonds described above. The Authority has no taxing power.

The scheduled payment of principal and interest on the Series AY Bonds when due will be guaranteed under a municipal bond insurance policy to be issued concurrently with delivery of the Series AY Bonds by Build America Mutual Assurance Company.

BAM
BUILD AMERICA MUTUAL

The Series AY Bonds are offered when, as and if issued by the Authority and received by the Underwriters subject to receipt of the approving legal opinion of Ballard Spahr LLP and Turner Law, P.C., both of Philadelphia, Pennsylvania, Co-Bond Counsel. Certain legal matters will be passed upon for the Authority by its counsel, Barley Snyder LLP, Lancaster, Pennsylvania, and for the System by its Chief Legal Counsel. It is expected that the Series AY Bonds in definitive form will be available for delivery in New York, New York on or about October 1, 2020.

This cover page contains certain information for quick reference only. It is not a summary of the issue. Prospective purchasers of the Series AY Bonds must read the entire Official Statement to obtain information essential to the making of an informed investment decision.

The date of this Official Statement is September 24, 2020.

$78,925,000
PENNSYLVANIA HIGHER EDUCATIONAL
FACILITIES AUTHORITY
(Commonwealth of Pennsylvania)
STATE SYSTEM OF HIGHER EDUCATION,
REFUNDING REVENUE BONDS
SERIES AY
(Federally Taxable)

Maturity (June 15)	Amount	Interest	Yield	Price	CUSIP† (70917T)
2022	$7,250,000	0.625%	0.625%	100.000	BH3
2023	7,310,000	0.750%	0.750%	100.000	BJ9
2024	7,385,000	0.875%	0.875%	100.000	BK6
2025	7,470,000	1.125%	1.125%	100.000	BL4
2026	7,570,000	1.375%	1.375%	100.000	BM2
2027	6,200,000	1.500%	1.500%	100.000	BN0
2028	6,295,000	1.625%	1.625%	100.000	BP5
2029	6,400,000	1.750%	1.750%	100.000	BQ3
2030	6,505,000	2.000%	2.000%	100.000	BR1
2031	6,635,000	2.125%	2.125%	100.000	BS9
2032	1,885,000	2.250%	2.250%	100.000	BT7

$3,915,000 2.375% Term Bond Due: June 15, 2034 Yield 2.375% Price 100.00
CUSIP†: 70917TBU4

$4,105,000 2.500% Term Bond Due: June 15, 2036 Yield 2.500% Price 100.00
CUSIP†: 70917TBV2

PENNSYLVANIA HIGHER EDUCATIONAL FACILITIES AUTHORITY
(Commonwealth of Pennsylvania)
1035 Mumma Road
Wormleysburg, Pennsylvania 17043

BOARD MEMBERS OF THE AUTHORITY

Honorable Thomas W. Wolf
Governor of the Commonwealth of Pennsylvania .... President

Honorable Wayne Langerholc Jr.
Designated by the President Pro Tempore of the Senate .... Vice President

Honorable Andrew E. Dinniman
Designated by the Minority Leader of the Senate .... Vice President

Honorable Curtis G. Sonney
Designated by the Speaker of the House of Representatives .... Vice President

Honorable Joseph M. Torsella
State Treasurer .... Treasurer

Honorable Curtis M. Topper
Secretary of General Services .... Secretary

Honorable Anthony M. DeLuca
Designated by the Minority Leader of the House of Representatives .... Board Member

Honorable Eugene A. DePasquale
Auditor General .... Board Member

Honorable Pedro A. Rivera
Secretary of Education .... Board Member

EXECUTIVE DIRECTOR
Eric Gutshall

AUTHORITY COUNSEL
(Appointed by the Office of General Counsel)
Barley Snyder LLP
Lancaster, Pennsylvania

TRUSTEE
The Bank of New York Mellon Trust Company, N.A.
Philadelphia, Pennsylvania

CO-BOND COUNSEL
(Appointed by the Office of General Counsel)

Ballard Spahr LLP	Turner Law, P.C.
Philadelphia, Pennsylvania	Philadelphia, Pennsylvania

FINANCIAL ADVISOR
to the State System of Higher Education
RBC Capital Markets, LLC
Lancaster, Pennsylvania

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS THAT STABILIZE OR MAINTAIN THE MARKET PRICE OF THE SERIES AY BONDS AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

No dealer, broker, salesman, or other person has been authorized by the Pennsylvania Higher Educational Facilities Authority, the State System of Higher Education or the Underwriters to give any information or to make any representations, other than those contained in this Official Statement, and if given or made, such other information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Series AY Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information set forth herein has been obtained from the State System of Higher Education, and other sources which are believed to be reliable but it is not guaranteed as to accuracy or completeness, and is not to be construed as a representation by the Underwriters or, as to information from other sources, by the Pennsylvania Higher Educational Facilities Authority or the State System of Higher Education. The information and expressions of opinion herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in any of the information set forth herein since the date hereof or the date as of which particular information is given, if earlier.

The Series AY Bonds are not and will not be registered under the Securities Act of 1933, as amended, or under any state securities laws, and the Indenture has not been and will not be qualified under the Trust Indenture Act of 1939, as amended, in reliance on exemptions contained in such laws. Neither the Securities and Exchange Commission nor any federal, state, municipal or other governmental agency will pass upon the accuracy, adequacy or completeness of this Official Statement.

Build America Mutual Assurance Company ("BAM") makes no representation regarding the Series AY Bonds or the advisability of investing in the Series AY Bonds. In addition, BAM has not independently verified, makes no representation regarding, and does not accept any responsibility for the accuracy or completeness of this Official Statement or any information or disclosure contained herein, or omitted herefrom, other than with respect to the accuracy of the information regarding BAM, supplied by BAM and presented under the heading "BOND INSURANCE" and "Appendix V - Specimen Municipal Bond Insurance Policy".

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OFFICIAL STATEMENT

$78,925,000
PENNSYLVANIA HIGHER EDUCATIONAL
FACILITIES AUTHORITY
(COMMONWEALTH OF PENNSYLVANIA),
STATE SYSTEM OF HIGHER EDUCATION
REFUNDING REVENUE BONDS
SERIES AY
(Federally Taxable)

INTRODUCTION

This Introduction is qualified in all respects by the more detailed information appearing elsewhere in this Official Statement and in the Appendices hereto.

General

This Official Statement, including the cover page and the Appendices hereto, sets forth certain information concerning the issuance by the Pennsylvania Higher Educational Facilities Authority (the "Authority," the offices of which are located at 1035 Mumma Road, Wormleysburg, Pennsylvania 17043), of the Authority's State System of Higher Education, Refunding Revenue Bonds, Series AY (Federally Taxable) in the aggregate principal amount of $78,925,000 (the "Series AY Bonds"). The Authority is a body corporate and politic constituting a public corporation and a public instrumentality of the Commonwealth of Pennsylvania (the Commonwealth"), created by The Pennsylvania Higher Educational Facilities Authority Act of December 6, 1967, P.L. 678, No. 318, as amended (the "Act"). See **"The Authority"** herein for additional information about the Authority.

The Series AY Bonds are being issued on behalf of the State System of Higher Education (the "System" or "SSHE"), a body corporate and politic constituting a public corporation and a governmental instrumentality of the Commonwealth of Pennsylvania, created by the State System of Higher Education Act of November 12, 1982, P.L. 660, No. 188, as amended ("Act 188"). See **Appendix I: "Certain Information Concerning Pennsylvania's State System of Higher Education"** for certain information concerning the System.

Certain capitalized terms used and not otherwise defined herein shall have the meaning assigned to them in **Appendix III: "Summary of Legal Documents -- Definitions of Certain Terms".**

The Series AY Bonds

The Series AY Bonds are being issued by the Authority in the aggregate principal amount of $78,925,000. They will be dated their date of delivery, and will bear interest from such date, payable June 15 and December 15, commencing December 15, 2020, at the rates set forth on the inside of the front cover page hereof and shall be subject to redemption prior to maturity as described herein. See **"The Series AY Bonds -- Redemption Provisions"** herein.

The Series AY Bonds will be issued pursuant to the Act and an Indenture of Trust dated as of June 1, 1985 (the "Original Indenture"), as previously supplemented and as further supplemented by a Forty-Seventh Supplemental Indenture of Trust dated as of October 1, 2020 (collectively, the "Indenture"), between the Authority and The Bank of New York Mellon Trust Company, N.A., Philadelphia, Pennsylvania, as trustee (the "Trustee"). The Series AY Bonds will be equally and ratably secured (as and to the extent described below) with the Outstanding bonds of forty-nine prior series under the Indenture (such prior bonds are sometimes referred to, collectively hereinafter, as the "Prior Bonds"). The Prior Bonds, the Series AY Bonds and any Additional Bonds which may be Outstanding from time to time under the Indenture are referred to collectively herein as "Bonds." As of September 1, 2020, there was a total of $1,114,760,000 aggregate principal amount of Prior Bonds outstanding. See **"Sources of and Security for Payment of the Series AY Bonds"** herein.

The Series AY Bonds are issuable only as fully registered bonds without coupons and, when issued, will be registered in the name of Cede & Co., as registered owner and nominee for The Depository Trust Company ("DTC"), New York, New York. See "**The Series AY Bonds -- Book-Entry Only System**" herein.

Use of Proceeds

Pursuant to a Loan and Security Agreement dated as of June 1, 1985, between the Authority and the System, as supplemented including by in particular, a Forty-Seventh Supplemental Loan and Security Agreement dated as of October 1, 2020 (collectively, the "Loan Agreement"), the Authority will lend the proceeds of the Series AY Bonds to the System, which will use such proceeds as described herein under **"Sources and Uses of Funds"** and **"Plan of Finance."**

Security for the Series AY Bonds

The Series AY Bonds are being issued on a parity (except as to certain specified funds held under the Indenture) with the Prior Bonds and any Additional Bonds with respect to the amounts payable by the System and secured under the Loan Agreement and by, inter alia, an assignment to the Trustee of all the right, title, and interest of the Authority in and to the Loan Agreement (except for the Authority's right to payment of certain fees and expenses and to indemnification), including such amounts payable thereunder. **The Loan Agreement is an unsecured general obligation of the System and the full faith and credit of the System is pledged to the payment of all sums due thereunder.** See **"Sources of and Security for Payment of the Series AY Bonds" and Appendix III: "Summary of Legal Documents"** herein.

NEITHER THE GENERAL CREDIT OF THE AUTHORITY NOR THE CREDIT OR TAXING POWER OF THE COMMONWEALTH OF PENNSYLVANIA OR OF ANY POLITICAL SUBDIVISION THEREOF IS PLEDGED FOR THE PAYMENT OF THE PRINCIPAL OF OR THE INTEREST ON THE SERIES AY BONDS, NOR SHALL THE SERIES AY BONDS BE DEEMED TO BE GENERAL OBLIGATIONS OF THE AUTHORITY OR OBLIGATIONS OF THE COMMONWEALTH OF PENNSYLVANIA OR ANY POLITICAL SUBDIVISION THEREOF, NOR SHALL THE COMMONWEALTH OF PENNSYLVANIA OR ANY POLITICAL SUBDIVISION THEREOF BE LIABLE FOR THE PAYMENT OF THE PRINCIPAL OF OR INTEREST ON THE SERIES AY BONDS. THE AUTHORITY HAS NO TAXING POWER.

Availability of Documents

The general descriptions of various legal documents set forth in this Official Statement do not purport to be comprehensive or definitive and reference should be made to each document for the complete terms and provisions thereof. Copies of all documents referred to herein about any document are available for inspection during normal business hours at the designated corporate trust office of the Trustee in Philadelphia, Pennsylvania. All statements herein are qualified in all respects by reference to such document in its entirety.

THE SERIES AY PROJECT

As further discussed below, the Series AY Bonds are being issued to finance the costs of the Series AY Project, as further discussed and defined below.

Plan of Refunding

The Series AY Bonds are being issued to provide funds to the System to finance: (i) the advanced refunding on a taxable basis of all or a portion of Pennsylvania Higher Educational Facilities Authority's State System of Higher Education Revenue Bonds, Series AM of 2011 (the "Refunded Bonds"); and (ii) contingencies and payment of costs and expenses incident to the issuance of the Series AY Bonds.

A portion of the proceeds of the Series AY Bonds will be irrevocably deposited with The Bank of New York Mellon Trust Company, N.A., (the "Escrow Agent"), applied to the purchase of state and local government securities, the principal and interest on which will be sufficient to pay when due the principal and interest on the Refunded Bonds (hereinafter defined) and to redeem such Refunded Bonds on their redemption date at their redemption price in accordance with an Escrow Agreement between the Authority and the Escrow Agent.

The Refunding Project

The Refunded Bonds are as shown in the following table:

(June 15) Maturity	Principal	CUSIP (70917)
2022	$5,775,000	RZ57
2023	6,080,000	RZ65
2024	6,420,000	RZ73
2025	6,770,000	RZ81
2026	7,065,000	RZ99
2027	5,820,000	R2A2
2028	6,055,000	R2B0
2029	6,300,000	R2C8
2030	6,615,000	R2D6
2031	6,945,000	R2E4
2033	3,925,000	R2F1
2036	6,560,000	R2G9

Verification Of Mathematical Computations

Financial S&Lutions LLC (the "Verification Agent") will deliver to the Authority, on or before the date of issuance of the Series AY Bonds, a report (the "Verification Report") to the effect that the Verification Agent has verified the mathematical accuracy of the schedules provided by the Financial Advisor, RBC Capital Markets, LLC and the Underwriters with respect to the Refunded Bonds. Included in the scope of its engagement will be a verification of the mathematical accuracy of (a) mathematical computations of the adequacy of the cash and the maturing principal of and interest on the "SLGs" which will be" placed in escrow to pay, when due and upon redemption, the principal of and interest on the Refunded Bonds.

ESTIMATED SOURCES AND USES OF FUNDS

The following table sets forth estimated sources and uses of funds for the Series AY Project:

Sources:	
Series AY Bond Proceeds	$78,925,000.00
Total Sources	$78,925,000.00
Uses:	
Deposit for the Refunding Project(1)	$77,677,038.99
Issuance Costs(2)	261,398.51
Underwriters' Discount	986,562.50
Total Uses:	$78,925,000.00

(1) Amount to be irrevocably deposited with the Escrow Agent and applied to the redemption of the Refunded Bonds on their date of redemption.

(2) Includes fees and expenses of Co-Bond Counsel, the Financial Advisor, the Authority, the Trustee, the verification agent, rating agency fees, printing fees and miscellaneous fees and expenses.

THE AUTHORITY

The Authority is a body corporate and politic, constituting a public corporation and a public instrumentality of the Commonwealth of Pennsylvania (the "Commonwealth" or "State"), created by the Pennsylvania Higher Educational Facilities Authority Act of 1967 (Act No. 318 of the General Assembly of the Commonwealth of Pennsylvania, approved December 6, 1967, as amended) (the "Act").

The Authority is authorized under the Act, among other things, to acquire, construct, finance, improve, maintain, operate, hold and use any educational facility (as therein defined) and, with respect to a college, to finance projects by making loans, to lease as lessor or lessee, to transfer or sell any educational facility or property, to charge and collect amounts for the payment of expenses of the Authority and for payment of the principal of and interest on its obligations, to issue bonds and other obligations for the purpose of paying the cost of projects, to issue refunding bonds and to pledge all or any of the revenues of the Authority for all or any of such obligations, and to enter into trust indentures providing for the issuance of such obligations and for their payment and security.

Under the Act, the Board of the Authority (the "Board") consists of the Governor of the Commonwealth, the State Treasurer, the Auditor General, the Secretary of the Department of Education, the Secretary of the Department of General Services, the President Pro Tempore of the Senate, the Speaker of the House of Representatives, the Minority Leader of the House of Representatives and the Minority Leader of the Senate. Pursuant to the Act, the President Pro Tempore of the Senate, the Speaker of the House of Representatives, the Minority Leader of the Senate and the Minority Leader of the House of Representatives may designate a member of their respective legislative bodies to act as a member of the Authority in their stead. The members of the Board serve without compensation but are entitled to reimbursement for all necessary expenses incurred in connection with the performance of their duties as members. The powers of the Authority are exercised by the Board.

The Authority has issued from time to time other series of revenue bonds and notes for the purpose of financing projects for higher educational institutions in the Commonwealth. None of the revenues of the Authority with respect to any of such revenue bonds and notes are pledged as security for the Series AY Bonds and, conversely, such revenue bonds and notes above are not payable from or secured by the revenues of the Authority or other moneys securing the Series AY Bonds.

The Authority may in the future issue other series of bonds for the purpose of financing projects for educational institutions in the Commonwealth. Each such series of bonds will be secured by instruments separate and apart from the Indenture securing the Series AY Bonds, except for any Additional Bonds issued thereunder.

On May 1, 1991, the Authority was unable to make payments to bondholders with respect to a series of revenue bonds issued by the Authority on behalf of a college because of defaults on payment obligations related to such series of revenue bonds by such college. The Florida Department of Banking and Finance, Division of Securities and Investor Protection, generally requires disclosure by any issuer of securities sold in Florida of defaults on any other obligations of such issuer. These defaulted bonds were special obligations payable only from revenues received from the particular college or from other limited sources, but not from revenues pledged to pay any series of bonds, and the full faith and credit of the Authority was not pledged to secure the payment of such bonds. Such default is not material with respect to the offering and sale of the Series AY Bonds, and additional details with respect thereto in this are not being provided in this Official Statement.

The Series AY Bonds are being issued under the Act pursuant to a resolution of the Authority adopted on August 27, 2020, and pursuant to the Indenture.

Except for the Prior Bonds and any Additional Bonds, none of the revenues of the Authority with respect to any of the revenue bonds and notes referred to above are pledged as security for any of the Series AY Bonds and, conversely, the revenue bonds and notes referred to above are not payable from or secured by the revenues of the Authority or other moneys securing the Series AY Bonds. See **"Sources of and Security for Payment of the Series AY Bonds".**

The following are key staff members of the Authority who are involved in the administration of the financing and projects:

Eric Gutshall, Executive Director. Mr. Gutshall was appointed by Governor Wolf as Executive Director of the Authority and SPSBA on December 9, 2019. He previously served as Governor Wolf's Secretary of Intergovernmental Affairs and as Director of Constituent Services. He obtained his Bachelor of Science degree in Business Administration from Central Pennsylvania College and his Master of Public Administration from the University of Pennsylvania.

Beverly M. Nawa, Director of Operations. Ms. Nawa serves as the Director of Operations of both the Authority and the State Public School Building Authority ("SPSBA"). She has been with the Authority and SPSBA since 2004. Prior to her present position, she served as an Administrative Officer for both Authorities. Ms. Nawa is a graduate of Alvernia University with a bachelor's degree in business administration.

David Player, Comptroller. Mr. Player serves as the Comptroller & Director of Financial Management of both the Authority and SPSBA. He has been with the Authority and the SPSBA since 1999. Mr. Player is a graduate of The Pennsylvania State University and a Certified Public Accountant.

THE SERIES AY BONDS

Description of the Series AY Bonds

The Series AY Bonds shall be dated their date of delivery, will mature on the dates and in the amounts and shall be payable as to interest, on June 15 and December 15 of each year commencing December 15, 2020, at the rates set forth on the inside of the cover page hereof. The Series AY Bonds shall be subject to redemption prior to maturity as described below.

The Series AY Bonds will be issued in fully registered form and, when issued, will be registered in the name of Cede & Co., as registered owner and nominee of DTC. Purchases of the Series AY Bonds will be made in book-entry only form, in denominations of $5,000 and any integral multiple thereof. Beneficial Owners will not receive certificates representing their interests in the Series AY Bonds purchased. So long as Cede & Co. is the registered owner, as nominee of DTC, references herein to the registered owners shall mean Cede & Co., as aforesaid, and shall not mean the Beneficial Owners of the Series AY Bonds. See "Book-Entry Only System" below.

Principal of and interest on the Series AY Bonds will be paid by The Bank of New York Mellon Trust Company, N.A., Philadelphia, Pennsylvania, as Trustee. So long as DTC or its nominee, Cede & Co., is the registered owner of the Series AY Bonds, such payments will be made directly to it as registered owner. Disbursement of such payments to the DTC Participants is the responsibility of DTC and disbursement of such payments to the Beneficial Owners is the responsibility of the DTC Participants and the Indirect Participants, as more fully described herein.

Book-Entry-Only System

THE INFORMATION IN THIS SECTION CONCERNING DTC AND DTC'S BOOK-ENTRY SYSTEM HAS BEEN OBTAINED FROM DTC, AND THE SYSTEM, THE AUTHORITY AND THE TRUSTEE TAKE NO RESPONSIBILITY FOR THE ACCURACY THEREOF.

Purchasers of Series AY Bonds (the "Beneficial Owners") will not receive certificates representing their interest in the Series AY Bonds. Purchases of beneficial interests in the Series AY Bonds will be made in book-entry only form in Authorized Denominations by credit to participating broker-dealers and other institutions on the books of DTC as described herein. Payments of principal of and interest on the Series AY Bonds will be made by the Trustee directly to DTC as the registered Owner thereof. Disbursement of such payments to the Direct Participants (as hereinafter defined) is the responsibility of DTC and disbursements of such payments to the Beneficial Owners is the responsibility of the Direct Participants and the Indirect Participants (as hereinafter defined), as more fully described herein. Any purchaser of beneficial interests in the Series AY Bonds must maintain an account with a broker or dealer who is, or acts through, a Direct Participant to receive payment of the principal of and interest on such Series AY Bonds.

The Depository Trust Company, New York, New York ("DTC") will act as securities depository for the Series AY Bonds (the "Bond Depository"). The Series AY Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered bond certificate will be issued for each maturity of the Series AY Bonds, each in the aggregate principal amount of the Series AY Bonds of such maturity, and will be deposited with DTC.

DTC, the world's largest depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York

Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has Standard & Poor's highest rating: AAA. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com and www.dtc.org.

Purchases of Series AY Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series AY Bonds on DTC's records. The ownership interest of each Beneficial Owner is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series AY Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Series AY Bonds, except in the event that use of the book-entry system for the Series AY Bonds is discontinued.

To facilitate subsequent transfers, all Series AY Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of the Series AY Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series AY Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series AY Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of the Series AY Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series AY Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Bond Documents. For example, Beneficial Owners of the Series AY Bonds may wish to ascertain that the nominee holding the Series AY Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Series AY Bonds within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series AY Bonds unless authorized by a Direct Participant in accordance with DTC's Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Authority as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Series AY Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal and interest payments on the Series AY Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Authority or the Trustee, on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC nor its nominee, the Trustee, or the Authority, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, distributions, and dividend payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Authority or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Series AY Bonds at any time by giving reasonable notice to the Authority or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, bond certificates are required to be printed and delivered.

The Authority may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event, bond certificates will be printed and delivered.

SO LONG AS CEDE & CO., AS THE NOMINEE FOR DTC, IS THE REGISTERED OWNER OF THE SERIES AY BONDS, THE AUTHORITY AND THE TRUSTEE WILL TREAT CEDE & CO. AS THE ONLY REGISTERED OWNER OF THE SERIES AY BONDS FOR ALL PURPOSES UNDER THE INDENTURE, INCLUDING RECEIPT OF ALL PRINCIPAL OF AND INTEREST ON THE SERIES AY BONDS, RECEIPT OF NOTICES, AND VOTING.

The Trustee will pay principal of and interest on the Series AY Bonds to or upon the order of the respective Owners, as shown on the Bond Register, or upon their respective attorneys duly authorized in writing, as provided in the Indenture, and all such payments will be valid and effective to fully satisfy the Authority's obligations with respect to the payment of principal and interest on the Series AY Bonds to the extent of the sum or sums so paid. Upon delivery by the nominee of DTC to the Trustee of written notice to the effect that DTC has determined to substitute a new nominee in place of the existing nominee, and subject to the provisions of the Indenture with respect to record dates, the word "Cede & Co." in the Indenture will refer to such new nominee of DTC.

In the event the Authority or the Trustee receives written notice from DTC to the effect that DTC is unable or unwilling to discharge its responsibilities, and the Authority is unable to find a substitute depository, in the opinion of the Authority, willing and able to undertake the functions of the Bond

Depository upon reasonable and customary terms, then the Series AY Bonds will no longer be restricted to being registered in the Bond Register in the name of the nominee of DTC or DTC, but may be registered in whatever name or names the Beneficial Owners (as certified by DTC) transferring or exchanging the Series AY Bonds will designate, in accordance with the provisions of the Indenture.

In the event the Authority determines that it is in the best interests of the Beneficial Owners of the Series AY Bonds that they be able to obtain bond certificates, the Authority may notify DTC and the Trustee, whereupon DTC will notify the Direct Participants and Indirect Participants of the availability through the nominee or DTC of bond certificates. In such event, the Trustee will issue, transfer, and exchange Series AY Bond certificates as requested by DTC and any other Bondowners in appropriate amounts, and whenever the Bond Depository requests the Authority and the Trustee to do so, the Authority and the Trustee will cooperate with DTC by taking appropriate action after reasonable notice (i) to make available one or more separate certificates evidencing the Series AY Bonds to any nominee or Direct Participant having Series AY Bonds credited to its account or (ii) to arrange for another securities depository to maintain custody of certificates evidencing the Series AY Bonds.

Notwithstanding any other provision described herein or contained in the Indenture to the contrary, so long as any Series AY Bond is registered in the name of the nominee of DTC, all payments with respect to the principal of and interest on such Series AY Bond will be made and given, respectively, to the nominee or DTC in the manner provided in the Blanket Letter of Representation entered into between DTC and the Authority.

In connection with any notice or communication to be provided to Series AY Bondowners pursuant to the Indenture by the Authority or the Trustee with respect to any consent or other action to be taken by Bondowners, the Authority, or the Trustee, as the case may be, will establish a record date for such consent or other action and give the nominee or DTC notice of such record date not less than fifteen (15) calendar days in advance of such record date to the extent possible.

THE SYSTEM, THE AUTHORITY AND THE TRUSTEE HAVE NO RESPONSIBILITY OR OBLIGATIONS TO THE DIRECT OR INDIRECT PARTICIPANTS OR THE BENEFICIAL OWNERS WITH RESPECT TO (A) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC OR ANY DIRECT OR INDIRECT PARTICIPANT; (B) THE PAYMENT BY DTC OR ANY DIRECT OR INDIRECT PARTICIPANT OF ANY AMOUNT DUE TO ANY BENEFICIAL OWNER IN RESPECT OF THE PRINCIPAL OF AND INTEREST ON THE SERIES AY BONDS; (C) THE DELIVERY OR TIMELINESS OF DELIVERY BY DTC OR ANY DIRECT OR INDIRECT PARTICIPANT OF ANY NOTICE TO ANY BENEFICIAL OWNER THAT IS REQUIRED OR PERMITTED UNDER THE TERMS OF THE INDENTURE TO BE GIVEN TO BONDOWNERS; (D) THE SELECTION OF THE BENEFICIAL OWNERS TO RECEIVE PAYMENTS IN THE EVENT OF ANY PARTIAL REDEMPTION OF THE SERIES AY BONDS; OR (E) ANY CONSENT GIVEN OR OTHER ACTION TAKEN BY DTC, OR ITS NOMINEE, CEDE & CO., AS REGISTERED BONDOWNER.

Redemption Provisions

The Series AY Bonds are subject to redemption as follows:

Optional Redemption: The Series AY Bonds maturing on and after June 15, 2031 are subject to optional redemption prior to maturity by the Authority at the written direction of the System in whole at any time or in part from time to time, on and after June 15, 2030 at a redemption price equal to one hundred percent (100%) of the principal amount thereof, plus accrued interest thereon to the date of redemption. Any partial redemption may be in any order of maturity and in any principal amount within a maturity as designated by the System by lot within a maturity. The Series AY Bonds to be redeemed within any maturity will be selected by the Trustee by lot.

Extraordinary Optional Redemption: The Series AY Bonds will be subject to redemption prior to maturity at the option of the Authority, at the direction of the System, in whole at any time, or in part from time to time, with respect to the Series AY Bonds in any order of maturity selected by the System, and within any maturity by lot, upon payment of a redemption price equal to one hundred percent (100%) of the principal amount thereof, plus accrued interest to the date of redemption, but only in the event that all or a portion of the Series AY Projects financed or refinanced with the proceeds of the Series AY Bonds are damaged, destroyed or condemned, or sold under threat of condemnation, and it is determined that repair or reconstruction is not desirable, practical or financially feasible, from and to the extent of insurance proceeds, condemnation awards or proceeds of sale in lieu of condemnation received by the Trustee as a result of such damage, destruction, condemnation or sale under threat of condemnation.

Mandatory Sinking Fund Redemption: The Series AY Bonds maturing on June 15, 2034 and June 15, 2036 shall be subject to mandatory sinking fund redemption in part at a redemption price of one hundred percent (100%) of the principal amount thereof, plus accrued interest to the date of redemption, from moneys deposited in the Sinking Fund Account of the Revenue Fund in accordance with the sinking fund redemption schedule set forth below:

Series AY Bonds Maturing on June 15, 2034

June 15 of the Year	Principal Amount
2033	$1,935,000
2034*	1,980,000

* Final Maturity

Series AY Bonds Maturing on June 15, 2036

June 15 of the Year	Principal Amount
2035	$2,025,000
2036*	2,080,000

* Final Maturity

The principal amount of the Series AY Bonds otherwise required to be redeemed pursuant to mandatory sinking fund redemption may be reduced by the principal amount of such Series AY Bonds previously called for optional or extraordinary optional redemption or theretofore delivered to the Trustee by the System in lieu of cash payments under the Loan Agreement or purchased by the Trustee out of moneys in the Revenue Fund established under the Indenture and which have not theretofore been applied as a credit against any Sinking Fund Payment.

Notice of Redemption: Notice of any redemption, identifying the Series AY Bonds or portions thereof to be redeemed, will be given not more than 45 nor less than 30 days prior to the redemption date, by first-class mail, postage prepaid, to the registered owners of the Series AY Bonds to be redeemed. Any defect in the notice or the mailing thereof with respect to any Series AY Bond will not affect the validity of the redemption as to any other Series AY Bonds. No further interest will accrue on the principal of any Series AY Bonds called for redemption after the date fixed for redemption if payment of the redemption price thereof has been duly provided for, and the registered owners of such Series AY Bonds will have no rights under the Indenture except to receive payment of the redemption price thereof and unpaid interest accrued to the date fixed for redemption. If the notice so specifies, a call for redemption may be conditioned on the deposit of funds for redemption by the redemption date, in the absence of which deposit the call for redemption would be of no effect. The Trustee will not be responsible for mailing notices of redemption to anyone other than DTC or its nominee as long as DTC acts as securities depository for the Series AY Bonds.

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DEBT SERVICE REQUIREMENTS ON THE SERIES AY BONDS AND THE PRIOR BONDS

The following tables set forth, for each of the periods indicated, the amounts required in such periods to be made available for the captioned purposes:

Fiscal Year Ended June 30	Series AY Bonds Principal	Interest	Total	Prior Bonds Total Debt Service[1]	Refunded Bonds Debt Service	Total Debt Service
2021		824,997.31	824,997.31	112,630,738.69	3,406,162.50	110,049,573.50
2022	7,250,000	1,169,287.52	8,419,287.52	116,335,340.08	9,181,162.50	115,573,465.10
2023	7,310,000	1,123,975.04	8,433,975.04	114,146,445.08	9,197,412.50	113,383,007.62
2024	7,385,000	1,069,150.04	8,454,150.04	116,427,702.58	9,218,212.50	115,663,640.12
2025	7,470,000	1,004,531.26	8,474,531.26	89,683,641.32	9,231,162.50	88,927,010.08
2026	7,570,000	920,493.78	8,490,493.78	86,760,146.32	9,255,362.50	85,995,277.60
2027	6,200,000	816,406.26	7,016,406.26	80,527,331.32	7,727,762.50	79,815,975.08
2028	6,295,000	723,406.26	7,018,406.26	78,244,382.56	7,729,962.50	77,532,826.32
2029	6,400,000	621,112.52	7,021,112.52	73,981,580.08	7,725,193.76	73,277,498.84
2030	6,505,000	509,112.52	7,014,112.52	69,276,197.58	7,725,193.76	68,565,116.34
2031	6,635,000	379,012.52	7,014,012.52	66,078,713.82	7,724,443.76	65,368,282.58
2032	1,885,000	238,018.76	2,123,018.76	60,760,688.82	2,386,918.76	60,496,788.82
2033	1,935,000	195,606.26	2,130,606.26	60,128,372.56	2,387,918.76	59,871,060.06
2034	1,980,000	149,650.00	2,129,650.00	54,639,528.78	2,385,200.00	54,383,978.78
2035	2,025,000	102,625.00	2,127,625.00	52,963,431.28	2,386,150.00	52,704,906.28
2036	2,080,000	52,000.00	2,132,000.00	52,893,341.26	2,387,825.00	52,637,516.26
2037				46,171,600.00		46,171,600.00
2038				41,729,008.76		41,729,008.76
2039				39,478,756.26		39,478,756.26
2040				39,181,185.00		39,181,185.00
2041				32,676,677.50		32,676,677.50
2042				27,778,087.50		27,778,087.50
2043				20,588,350.00		20,588,350.00
2044				14,683,550.00		14,683,550.00
2045				6,806,570.00		6,806,570.00
2046				871,000.00		871,000.00
2047				873,750.00		873,750.00
2048				875,000.00		875,000.00
2049				874,750.00		874,750.00
2050				873,000.00		873,000.00
2051				874,750.00		874,750.00
2052				874,750.00		874,750.00
2053				873,000.00		873,000.00
2054				874,500.00		874,500.00
2055				504,000.00		504,000.00
TOTAL	$78,925,000.00	$9,899,385.05	$88,824,385.05	$1,562,939,867.15	$100,056,043.80	$1,551,708,208.40

1. Includes the Refunded Bonds to be refunded from a portion of the proceeds of the Series AY Bonds.

SOURCES OF AND SECURITY FOR PAYMENT OF THE SERIES AY BONDS

The Series AY Bonds are limited obligations of the Authority, payable solely from (i) payments received from the System under the Loan Agreement, and (ii) moneys held by the Trustee in funds established under the Indenture excepting, however, sinking or Indenture funds pledged to a specific series of Bonds other than the Series AY Bonds.

Under the Loan Agreement, the System pledges its full faith and credit to the timely payment of the amounts payable and to the performance of the acts required of it thereunder. The Loan Agreement constitutes an unsecured general obligation of the System and does not limit the ability of the System to incur additional indebtedness. In accordance with the Loan Agreement, the System may pledge up to twenty percent (20%) of its tuition receipts and Commonwealth appropriations to secure any indebtedness it may incur or any guaranties it may undertake without providing similar pledges to the owners of the Series AY Bonds. As of the date hereof, no such pledge has been made by the System.

Additional Bonds

The Authority may issue Additional Bonds on parity with the Series AY Bonds (other than with respect to certain funds under and as prescribed in the Indenture). In connection with the issuance of Additional Bonds, additional funds may be established under the Indenture for the benefit of such additional series. In such event, the holders of the Series AY Bonds will have no claims or right to any such funds. For a further description of the conditions under which such Additional Bonds may be issued, see **Appendix III: "Summary of Legal Documents: The Indenture -- Additional Bonds".**

No Recourse

All covenants, stipulations, promises, agreements and obligations of the Authority contained in the Indenture are deemed to be covenants, stipulations, promises, agreements and obligations of the Authority and not of any member, officer or employee of the Authority in his or her individual capacity, and no recourse shall be had for the payment of the principal or redemption price of or interest on the Series AY Bonds or for any claim based thereon or on the Indenture against any member, officer or employee of the Authority or any person executing the Series AY Bonds.

BOND INSURANCE

Bond Insurance Policy

Concurrently with the issuance of the Series AY Bonds, Build America Mutual Assurance Company ("BAM") will issue its Municipal Bond Insurance Policy for the Series AY Bonds (the "Policy"). The Policy guarantees the scheduled payment of principal of and interest on the Series AY Bonds when due as set forth in the form of the Policy included as an exhibit to this Official Statement.

The Policy is not covered by any insurance security or guaranty fund established under New York, California, Connecticut or Florida insurance law.

Build America Mutual Assurance Company

BAM is a New York domiciled mutual insurance corporation and is licensed to conduct financial guaranty insurance business in all fifty states of the United States and the District of Columbia. BAM provides credit enhancement products solely to issuers in the U.S. public finance markets. BAM will only insure obligations of states, political subdivisions, integral parts of states or political subdivisions or entities otherwise eligible for the exclusion of income under section 115 of the U.S. Internal Revenue Code of 1986, as amended. No member of BAM is liable for the obligations of BAM.

The address of the principal executive offices of BAM is: 200 Liberty Street, 27th Floor, New York, New York 10281, its telephone number is: 212-235-2500, and its website is located at: www.buildamerica.com.

BAM is licensed and subject to regulation as a financial guaranty insurance corporation under the laws of the State of New York and in particular Articles 41 and 69 of the New York Insurance Law.

BAM's financial strength is rated "AA/Stable" by S&P Global Ratings, a business unit of Standard & Poor's Financial Services LLC ("S&P"). An explanation of the significance of the rating and current reports may be obtained from S&P at www.standardandpoors.com. The rating of BAM should be evaluated independently. The rating reflects the S&P's current assessment of the creditworthiness of BAM and its ability to pay claims on its policies of insurance. The above rating is not a recommendation to buy, sell or hold the Series AY Bonds, and such rating is subject to revision or withdrawal at any time by S&P, including withdrawal initiated at the request of BAM in its sole discretion. Any downward revision or withdrawal of the above rating may have an adverse effect on the market price of the Series AY Bonds. BAM only guarantees scheduled principal and scheduled interest payments payable by the issuer of the Series AY Bonds on the date(s) when such amounts were initially scheduled to become due and payable (subject to and in accordance with the terms of the Policy), and BAM does not guarantee the market price or liquidity of the Series AY Bonds, nor does it guarantee that the rating on the Series AY Bonds will not be revised or withdrawn.

Capitalization of BAM

BAM's total admitted assets, total liabilities, and total capital and surplus, as of June 30, 2020 and as prepared in accordance with statutory accounting practices prescribed or permitted by the New York State Department of Financial Services were $488.7 million, $143.6 million and $345.1 million, respectively.

BAM is party to a first loss reinsurance treaty that provides first loss protection up to a maximum of 15% of the par amount outstanding for each policy issued by BAM, subject to certain limitations and restrictions.

BAM's most recent Statutory Annual Statement, which has been filed with the New York State Insurance Department and posted on BAM's website at www.buildamerica.com, is incorporated herein by reference and may be obtained, without charge, upon request to BAM at its address provided above (Attention: Finance Department). Future financial statements will similarly be made available when published.

BAM makes no representation regarding the Series AY Bonds or the advisability of investing in the Series AY Bonds. In addition, BAM has not independently verified, makes no representation regarding, and does not accept any responsibility for the accuracy or completeness of this Official Statement or any information or disclosure contained herein, or omitted herefrom, other than with respect to the accuracy of the information regarding BAM, supplied by BAM and presented under the heading "BOND INSURANCE".

Additional Information Available from BAM

Credit Insights Videos. For certain BAM-insured issues, BAM produces and posts a brief Credit Insights video that provides a discussion of the obligor and some of the key factors BAM's analysts and credit committee considered when approving the credit for insurance. The Credit Insights videos are easily accessible on BAM's website at www.buildamerica.com/videos. (The preceding website address is provided for convenience of reference only. Information available at such address is not incorporated herein by reference.)

Credit Profiles. Prior to the pricing of bonds that BAM has been selected to insure, BAM may prepare a pre-sale Credit Profile for those bonds. These pre-sale Credit Profiles provide information about the sector designation (e.g. general obligation, sales tax); a preliminary summary of financial information and key ratios; and demographic and economic data relevant to the obligor, if available. Subsequent to closing, for any offering that includes bonds insured by BAM, any pre-sale Credit Profile will be updated and superseded by a final Credit Profile to include information about the gross par insured by CUSIP, maturity and coupon. BAM pre-sale and final Credit Profiles are easily accessible on BAM's website at www.buildamerica.com/credit-profiles. BAM will produce a Credit Profile for all bonds insured by BAM, whether or not a pre-sale Credit Profile has been prepared for such bonds. (The preceding website address is provided for convenience of reference only. Information available at such address is not incorporated herein by reference.)

Disclaimers. The Credit Profiles and the Credit Insights videos and the information contained therein are not recommendations to purchase, hold or sell securities or to make any investment decisions. Credit-related and other analyses and statements in the Credit Profiles and the Credit Insights videos are statements of opinion as of the date expressed, and BAM assumes no responsibility to update the content of such material. The Credit Profiles and Credit Insight videos are prepared by BAM; they have not been reviewed or approved by the issuer of or the underwriter for the Series AY Bonds, and the issuer and underwriter assume no responsibility for their content.

BAM receives compensation (an insurance premium) for the insurance that it is providing with respect to the Series AY Bonds. Neither BAM nor any affiliate of BAM has purchased, or committed to purchase, any of the Series AY Bonds, whether at the initial offering or otherwise.

CERTAIN BONDHOLDERS' RISKS

Introduction

The Series AY Bonds constitute limited obligations of the Authority, payable solely from the payments to be made by the System pursuant to the Loan Agreement. Future revenues and expenses of the System are subject to change, and no assurance can be given that the System will be able to generate sufficient revenues to meet its obligations, including its obligations under the Loan Agreement.

The purchase of the Series AY Bonds involves numerous investment risks, some of which are referred to in this Official Statement. No representation is made that the risks described or referred to in this Official Statement constitute all of the risks associated with investing in the Series AY Bonds. Accordingly, prior to making a decision to invest in the Series AY Bonds, each prospective purchaser thereof should make an independent evaluation of all of the information presented in this Official Statement, including the Appendices, and should review other pertinent information. **The Authority has made no independent investigation of the extent to which any such factors may have an adverse effect on the revenues of the System.**

COVID-19

On January 31, 2020, the United States Department of Health and Human Services declared a public health emergency for the United States to aid the nation's health care community in responding to the novel coronavirus ("COVID-19"). On March 11, 2020, the World Health Organization ("WHO") declared the COVID-19 outbreak a global pandemic and on March 13, 2020, the President of the United States declared a national state of emergency.

Due to the increase in the number of COVID-19 cases around the country and internationally, federal, state, and local governmental bodies have and continue to enact and implement legislative actions, regulations, and other administrative directives and guidance to mitigate the impacts of COVID-19 on the general population and the economy. On March 6, 2020, the Governor declared a disaster emergency in the Commonwealth. On April 1, 2020, the Governor issued a stay at home order for all counties in the Commonwealth for all activities, except as needed to access, support, or provide life sustaining business, emergency, or government services. As of the date of this Official Statement, the stay at home order has been lifted in all counties in the Commonwealth although many restrictions continue to remain in effect for throughout the Commonwealth.

The System continues to monitor and assess the effects of the COVID-19 pandemic and its impact on the System's financial position and operations. A full assessment of the impact on the System depends, in part, on the impact of COVID-19 on the Commonwealth and the federal response to the national impact of COVID-19. It is not possible, at present, to project the total impact on the System's revenues, expenditures, reserves, budgets, or financial position. Such impact will depend heavily on future events and actions by other governmental entities. No assurance can be given by the System at this time.

For more information on the System's response to COVID-19 and the related impact on the System's finances and operations, see APPENDIX I – "COVID-19."

General

There are a number of factors affecting institutions of higher education, including the System, that could have an adverse effect on the System's financial position and its ability to make the payments required under the Loan Agreement, including the debt service payments on the Series AY Bonds. These factors include, but are not limited to, competition with other educational institutions; an economic downturn in the regions served by the System; changing demographics in the regions served by the System; declining enrollment; increasing costs of technology; the failure to increase (or a decrease in) the funds obtained by the System from other sources, including appropriations from governmental bodies; the impact at various times of modifications to federal student financial aid programs; and increasing costs of compliance with changes in federal or state regulatory laws or regulations. See **Appendix I: "Certain Information Concerning Pennsylvania's State System of Higher Education".** Appendix I should be read in its entirety.

Certain State Appropriations

A substantial portion of the System's operating revenues consists of appropriations made to the System by the Commonwealth of Pennsylvania. There is a risk that such Commonwealth appropriations may not continue at current levels as a percentage of the System's current unrestricted revenues which, in turn, may require greater than historic rates of tuition increases. See **Appendix I "Certain Information Concerning Pennsylvania's State System of Higher Education - Commonwealth Appropriations"** for a discussion of such appropriations.

LEGALITY FOR INVESTMENT

Under the Act, the Series AY Bonds are designated securities in which all officers of the Commonwealth and its political subdivisions and municipal officers and administrative departments, boards and commissions of the Commonwealth, all banks, bankers, savings banks, trust companies, savings and loan associations, investment companies and other persons carrying on a banking business, all insurance companies, insurance associations and other persons carrying on an insurance business, and all administrators, executors, guardians, trustees and other fiduciaries, and all other persons whatsoever who are authorized to invest in bonds or other obligations of the Commonwealth, may properly and legally invest any funds, including capital belonging to them or within their control, and the Series AY Bonds are securities which properly and legally may be deposited with, and received by, any Commonwealth or municipal officers or agency of the Commonwealth for any purpose for which the deposit of bonds or other obligations of the Commonwealth is authorized by law.

NEGOTIABILITY

Under the Act, the Series AY Bonds have all the qualities of negotiable instruments under the law merchant and the laws of the Commonwealth relating to negotiable instruments.

TAX MATTERS

Federal Tax Exemption

In the opinion of Co-Bond Counsel, interest on the Series AY Bonds is not excludable from gross income for purposes of federal income tax purposes. Interest on the Series AY Bonds is taxable as ordinary income for federal income tax purposes at the time the interest accrues or is received in accordance with a bondholder's method of accounting for federal income tax purposes. Prospective purchasers of the Series AY Bonds who are not United States persons, as defined for federal income tax purposes, may be subject to special rules and should consult their tax advisors.

State Tax Exemption

Co-Bond Counsel is also of the opinion that under current Pennsylvania law, interest on the Series AY Bonds is exempt from Pennsylvania personal income tax and Pennsylvania corporate net income tax. Co-Bond Counsel will express no opinion regarding other state or local tax consequences arising with respect to the Series AY Bonds, including whether interest on the Series AY Bonds is exempt from taxation under the laws of any jurisdiction other than the Commonwealth of Pennsylvania.

PROSPECTIVE PURCHASERS OF THE SERIES AY BONDS SHOULD CONSULT THEIR TAX ADVISERS WITH RESPECT TO THE FEDERAL, STATE AND LOCAL INCOME TAX CONSEQUENCES OF OWNERSHIP OF THE SERIES AY BONDS AND ANY CHANGES IN THE STATUS OF PENDING OR PROPOSED TAX LEGISLATION.

LEGAL MATTERS

Legal matters incident to the authorization, issuance and sale of the Bonds will be passed upon by Ballard Spahr LLP and Turner Law, P.C., both of Philadelphia, Pennsylvania, Co-Bond Counsel. In connection with the issuance of the Series AY Bonds, each of such firms will render an opinion in substantially the form included as Appendix IV hereto. Certain legal matters will be passed upon for the Authority by its counsel, Barley Snyder LLP, Lancaster, Pennsylvania and for the System by its Chief Legal Counsel.

RATINGS

Moody's Investors Service, Inc. ("Moody's") and Fitch Ratings ("Fitch") have assigned their municipal bond ratings of "Aa3" (stable outlook) and "A+" (stable outlook), respectively, to the Series AY Bonds. Moody's and S&P Global Ratings, Inc., a business unit of Standard & Poor's Financial Services LLC (S&P) will assign their respective ratings of "A2" and "AA" to the Series AY Bonds on the understanding that the municipal bond insurance policy of Build America Mutual Assurance Company ("BAM") insuring the scheduled payment of the principal of and interest due with respect to the Series AY Bonds will be issued by BAM upon the issuance of the Series AY Bonds.

Any explanation of these ratings may be obtained only from the rating agencies issuing such ratings. Generally, rating agencies base their ratings on information and materials supplied to them and on their own investigations, studies and assumptions. There is no assurance that such ratings, once assigned, will remain for any given period of time or that they will not be lowered or withdrawn entirely by either rating agency concerned if in its judgment circumstances so warrant. Any such downward change or withdrawal of such ratings may have an adverse effect on the market price and/or marketability of the Series AY Bonds.

LITIGATION AND LEGAL PROCEEDINGS

No Litigation Affecting the Series AY Bonds

There is no litigation of any nature pending or, to the Authority's knowledge, threatened against the Authority at the date of this Official Statement to restrain or enjoin the issuance, sale, execution or delivery of the Series AY Bonds, or in any way contesting or affecting the validity of the Series AY Bonds or any proceedings of the Board of the Authority taken with respect to the issuance or sale thereof, or the pledge or application of any moneys or the security provided for the payment of the Series AY Bonds or the existence or powers of the Authority or the performance of the Series AY Project.

Commonwealth Litigation Against RBC Capital Markets, LLC

On May 20, 2018, the Commonwealth of Pennsylvania and City of Harrisburg filed a lawsuit in the Commonwealth Court of Pennsylvania ("Commonwealth Complaint") against a number of professional advisors and financial firms alleging, inter alia, professional malpractice, unjust enrichment and breach of fiduciary duty in connection with a series of bonds issued by the Pennsylvania Economic Development Financing Authority in 2003, which has since defaulted, to finance an incinerator project ("Defaulted 2003 Bonds"). RBC Capital Markets, LLC ("RBC"), Municipal Advisor to the System in connection with the issuance of the Series AY Bonds, was one of the underwriters of the Defaulted 2003 Bonds and, accordingly, is one of the defendants named in the Commonwealth Complaint. RBC intends to vigorously defend itself against the allegations in the Commonwealth Complaint and does not believe that such litigation has a material impact on its ability to act as Financial Advisor in connection with the issuance of the Series AY Bonds.

CONTINUING DISCLOSURE

To assist the Underwriters in satisfying the requirements of Rule 15c2-12 (the "Rule") promulgated by the Securities and Exchange Commission, the System will enter into a Continuing Disclosure Agreement with The Bank of New York Mellon Trust Company, N.A., as dissemination agent (in such capacity, the "Dissemination Agent") for the benefit of owners of the Series AY Bonds. Pursuant to such agreement, the System will covenant to provide, through the Dissemination Agent, to the Electronic Municipal Market Access ("EMMA") system of the Municipal Securities Rulemaking Board (the "MSRB"), certain annual financial information and operating data of the nature included in the following sections of Appendix I to this Official Statement: Accreditation; Degrees Awarded; Enrollment; Application and Admissions; Tuition, Student Fees and Competition; Freshman Enrollment Composition; Student Financial Aid; Commonwealth Appropriations; Unrestricted Net Position; Faculty and Staff; and Outstanding Indebtedness. Audited financial statements of the System also will be provided to EMMA when available. The System will covenant to provide such information for a fiscal year within 150 days following the end of such fiscal year, commencing with the fiscal year ending June 30, 2020. The System will covenant to provide notice in a timely manner to EMMA of a failure of the System to provide the required annual financial information on or before the date specified in the Continuing Disclosure Agreement.

In the Continuing Disclosure Agreement, the System also will covenant to provide, within 10 business days, to EMMA notice of the occurrence of any of the following events with respect to the Series AY Bonds: (1) principal and interest payment delinquencies, (2) non-payment related defaults, if material, (3) unscheduled draws on debt service reserves reflecting financial difficulties, (4) unscheduled draws on credit enhancements reflecting financial difficulties, (5) substitution of credit or liquidity providers, or their failure to perform, (6) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Series AY Bonds, or other material events affecting the tax status of the Series AY Bonds, (7) modifications to rights of holders of the Series AY Bonds, if material, (8) Series AY Bond calls, if material, and tender offers, (9) defeasances, (10) release, substitution or sale of property securing repayment of the Series AY Bonds, if material, (11) rating changes, (12) bankruptcy, insolvency, receivership or similar event of the System, (13) the consummation of a merger, consolidation, or acquisition involving the System or the sale of all or substantially all of the assets of the System other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material, (14) appointment of a successor or additional trustee or the change of name of a trustee, if material, (15) the incurrence of a Financial Obligation of the obligated person, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation (as defined in the Rule) of the obligated person, any of which affect securities holders, if material; (16) A default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the obligated person, any of which reflect financial difficulties, and (17) failure to provide annual information as required. Financial Obligation means a (i) debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term Financial Obligation shall not include municipal securities as to which a final official statement has been provided to the MSRB consistent with the Rule.

The System and the Dissemination Agent may amend the Continuing Disclosure Agreement, including amendments deemed necessary or appropriate in the judgment of the System (whether to reflect changes in the availability of information or in accounting standards or otherwise), and any provision of the Continuing Disclosure Agreement may be waived, provided that the following conditions are satisfied: (a) if the amendment or waiver relates to the undertakings of the System to provide annual financial information and notices, such amendment is made in connection with a change in circumstances that arises from a change in legal requirements, change in law or change in the identity, nature or status of the System or the type of business or operations conducted by the System; (b) the undertakings contained in the Continuing Disclosure Agreement, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of the Series AY Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and (c) the amendment either (i) is approved by the Holders of the Series AY Bonds in the same manner as provided in the Indenture for amendments to the Indenture with the consent of Holders, or (ii) does not, in the opinion of nationally recognized bond counsel, materially impair the interests of the Holders or Beneficial Owners of the Series AY Bonds, the Authority or the Dissemination Agent. The System's obligation to provide the foregoing annual financial information and notices of the specified events when material will terminate when the Series AY Bonds have been fully paid or legally defeased or at such other times as such information and notices (or any portion thereof) are no longer required to be provided by the Rule as it applies to the Series AY Bonds. Notice of such amendment will be provided to EMMA.

Under the Continuing Disclosure Agreement, the sole remedy for a breach or default by the System of its covenants to provide annual financial information and notices will be an action to compel specific performance. No action may be brought for monetary damages or otherwise under any circumstances. A breach or default under the Continuing Disclosure Agreement will not constitute an Event of Default under the Indenture or the Loan Agreement.

The Authority has no responsibility for the Continuing Disclosure Agreement or for the System's compliance with the Continuing Disclosure Agreement or for the contents of the financial information, operating data or notices provided thereunder or any omissions therefrom.

During the last five years, the System failed to file with EMMA, in a timely manner, certain Annual Financial Information in accordance with the Rule and as required under its previous continuing disclosure undertakings as follows. For the fiscal year ended June 30, 2016 and 2015, Annual Financial Information otherwise timely filed was not properly associated with certain CUSIPs associated with four series' of the System's prior bonds. The required filings were corrected on EMMA on or before September 1, 2017.

UNDERWRITING

The Series AY Bonds are being purchased for reoffering by a group of banks and investment banking firms represented by Citigroup Global Markets Inc. as representative (the "Underwriters"). The Underwriters have agreed to purchase the Series AY Bonds at an aggregate purchase price of $77,938,437.50.

FINANCIAL ADVISOR

The System has retained RBC Capital Markets, LLC as its financial advisor in connection with the issuance of the Series AY Bonds. The receipt of a fee by RBC Capital Markets, LLC is contingent upon the issuance of the Series AY Bonds. The Financial Advisor is not obligated to undertake, and has not undertaken to make, an independent verification or to assume responsibility for the accuracy, completeness, or fairness of the information in this Official Statement.

The Financial Advisor may also receive a fee for conducting a competitive bidding process regarding the investment of certain proceeds of the Series AY Bonds.

MISCELLANEOUS

All of the summaries of the provisions of the Act, Act 188, the Indenture, the Loan Agreement and of the Series AY Bonds set forth herein are only brief descriptions of certain provisions thereof, and do not purport to be complete statements of the provisions of any such document and are qualified in all respects by reference to such documents in their entireties to which attention is hereby directed for further information.

Information concerning the System has been provided by the Office of the Chancellor. All estimates, projections and assumptions herein have been made on the best information available and are believed to be reliable, but no representations whatsoever are made that such estimates, projections or assumptions are correct or will be realized. So far as any statements herein involve matters of opinion, whether or not expressly so stated, they are intended merely as such and not as representations of fact.

This Official Statement is not to be construed as a contract or agreement between the Authority or the System and the purchasers or owners of any of the Series AY Bonds. The information hereinabove set forth and that which follows should not be construed as constituting all of the conditions affecting the Authority, the System or the Series AY Bonds.

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The distribution of this Official Statement has been duly authorized by the Authority and the System. The Authority has not assisted in the preparation of this Official Statement, except for the statements concerning the Authority under the sections captioned **"The Authority"** and **"Litigation"** herein and, except for those sections, the Authority is not responsible for any statements made in this Official Statement. Except for the execution and delivery of documents required to effect the issuance of the Series AY Bonds, the Authority has not otherwise assisted in the public offer, sale or distribution of the Series AY Bonds. Accordingly, except as aforesaid, the Authority assumes no responsibility for the disclosures set forth in this Official Statement.

PENNSYLVANIA HIGHER EDUCATIONAL FACILITIES AUTHORITY

By: /s/ Eric Gutshall
Eric Gutshall
Executive Director

Approved:

STATE SYSTEM OF HIGHER EDUCATION

By: /s/ Sharon P. Minnich
Sharon P. Minnich
Executive Vice Chancellor

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APPENDIX I

CERTAIN INFORMATION CONCERNING PENNSYLVANIA'S STATE SYSTEM OF HIGHER EDUCATION

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PENNSYLVANIA'S STATE SYSTEM OF HIGHER EDUCATION

History and Philosophy of the System

Pennsylvania's State System of Higher Education (the "System") is a body corporate and politic constituting a public corporation and a governmental instrumentality of the Commonwealth of Pennsylvania, created by the State System of Higher Education Act of November 12, 1982, P.L. 660, No. 188, as amended ("Act 188").

Act 188 established a Board of Governors and the Office of the Chancellor and awarded university status to the 13 state-owned colleges on July 1, 1983. (Indiana University of Pennsylvania was awarded university status prior to the enactment of Act 188.) On that date, the System, composed of the 14 state-owned universities in the Commonwealth and the Office of the Chancellor, embarked upon its primary mission to provide "instruction for undergraduate and graduate students to and beyond the master's degree in the liberal arts and sciences, and in the applied fields, including the teaching profession." The System universities are herein referred to individually as a "University" or a "System University" and collectively as the "Universities" or "System Universities." The Universities also have specific missions in business, human services, public administration, and technology. The 14 System Universities include:

Bloomsburg University of Pennsylvania
California University of Pennsylvania
Cheyney University of Pennsylvania
Clarion University of Pennsylvania
East Stroudsburg University of Pennsylvania
Edinboro University of Pennsylvania
Indiana University of Pennsylvania
Kutztown University of Pennsylvania
Lock Haven University of Pennsylvania
Mansfield University of Pennsylvania
Millersville University of Pennsylvania
Shippensburg University of Pennsylvania
Slippery Rock University of Pennsylvania
West Chester University of Pennsylvania

Bound together by the mission and by the mandate set forth in Act 188, the Universities strive to provide the highest quality education feasible for their students at the lowest possible cost.

The history of each University evolved from a need to train teachers for the Commonwealth's secondary educational institutions and to elevate the accepted standards of education. The Commonwealth adopted the Normal School Act on May 20, 1857, which provided the standards by which teachers for the Commonwealth's Normal Schools were to be trained. During the 25 years following passage of the Normal School Act, all of the schools that now comprise the System were privately established and were recognized as State Normal Schools.

On September 22, 1921, the Commonwealth enacted legislation for the acquisition of 13 State Normal Schools, adding the 14th State Normal School in 1922. These schools subsequently were redesignated as State Teachers' Colleges in 1929 (the "State Colleges"). The responsibility for certifying teachers then was transferred from the county superintendents to the Commonwealth. Within ten years following this transfer of responsibility, teacher certification requirements changed from a two-year certificate program to a four-year college degree program.

In 1959, the State Teachers' Colleges were redesignated State Colleges and, in 1961, legislation was enacted to allow the State Colleges to offer a wider range of educational opportunities. (See "Degrees Awarded" herein.) Graduate programs soon were approved and instituted at many of the State Colleges. Indiana State College achieved university status in 1965, and the remaining 13 State Colleges were recognized as Universities in 1983 with the enactment of Act 188. Each University, with its unique geography and array of academic offerings, serves as a cultural center for its surrounding community.

Additionally, eight of the Universities are involved with the operation of the Chincoteague Bay Field Station of the Marine Science Consortium, a nonprofit educational 501(c)(3) corporation located in Wallops Island, Virginia (the "Consortium"), committed to excellence in education and research in the marine and environmental sciences. The Consortium was founded by eight of the Universities in 1970 and maintains marine stations where both field and laboratory investigations of coastal ecosystems are conducted under the supervision of University faculty and qualified marine education instructors. The Consortium supports precollege, college, and Road Scholar programs. In 2017, the Consortium began seeking to divest itself from the property, due to the cost of operating the enterprise, including debt service obligations. To date, there have been no acceptable offers. Therefore, the Consortium is no longer pursuing divestiture and has committed to fully utilizing the facility and expanding the academic programming offered at the site.

The Board of Governors

The System is governed and guided by a Board of Governors (the "Board") composed of 20 members: the Governor of Pennsylvania (or designee), the Secretary of Education (or designee), one senator appointed by the President Pro Tempore of the Senate, one senator appointed by the minority leader of the Senate, one representative appointed by the Speaker of the House of Representatives, one representative appointed by the minority leader of the House of Representatives, and 14 members who are appointed by the Governor of Pennsylvania and confirmed by the Senate. The Board has the authority to exercise all sanctioned corporate powers in the administration of its overall responsibility to plan and to coordinate the development of the System. Members of the Board appointed from the General Assembly serve a term of office concurrent with their respective elective terms as members of the General Assembly with the Governor and Secretary of Education (or their respective designees), serving so long as they continue in office. Eleven members of the Board, appointed by the Governor, customarily will serve four-year appointments, at which time a reappointment for an additional four-year term may be commissioned. Three of the members of the Board, appointed by the Governor, must be undergraduate students presently attending a System University. The student members are selected from the presidents of the local campus student government associations or their local equivalents, and their terms automatically expire upon graduation or separation from the System. Five members of the Board also must hold membership in one of the local councils of trustees serving the Universities with no more than one trustee representing a University. The Board annually elects a chair, and at present there are two vice chairs. Members of the Board receive no compensation for their services; however, all expenses incurred in the performance of their duties may be reimbursed by the System.

The Governor of Pennsylvania and the Secretary of Education, or their designees, as members of the Board are entitled to attend all of the scheduled meetings, to address matters of concern before the Board, and to vote. However, they cannot be elected as officers of the Board.

The chancellor of the System serves the Board as the chief executive officer of the System. The chancellor has the authority to address any matters of discussion before the Board but does not have voting privileges.

Act 188 requires that the Board conduct a public meeting quarterly; however, additional meetings may be convened by the chair or upon the request of six members of the Board. The Office of the Chancellor has the responsibility of presenting an agenda to the Board for action at each scheduled meeting. Eleven members of the Board attending any meeting of the Board constitute a quorum.

In accordance with Act 188, the Board has "overall responsibility for planning and coordinating the development and operation of the System." To this end, the Board employs the chancellor as the chief executive officer of the System. The Board must approve the chancellor's salary and delineate any duties and responsibilities beyond those prescribed in Act 188.

The president of each University is appointed by the Board originally for a fixed term from a list of qualified candidates submitted by the chancellor to the Board. Performance evaluations are used to evaluate the services of each president before the term of such president's appointment can be extended.

Through the chancellor and the 14 presidents of the Universities, the Board administers broad fiscal, personnel, and educational policies and establishes general policies that will be beneficial to the System in attaining its goal to offer an education of high quality to all its students.

The Board approves the annual operating and capital budgets for the System. The Board's request for operating and capital appropriations is submitted to the State Board of Education for comment. As required by statute, the Board then submits its request for operating and capital appropriations to the Governor not later than November 1 of the fiscal year preceding the fiscal year for which the appropriations are requested. The Board independently submits its request for operating and capital appropriations to the General Assembly. When required, the Board or its chancellor must represent the System before the General Assembly, the Governor of Pennsylvania, and the State Board of Education.

Under Act 188, the Board fixes the levels of tuition fees across the System, including the allowance for a differential between students who are residents of the Commonwealth and those who are nonresidents. All other fees are set locally by each University.

There are five standing committees which make policy recommendations to the full Board: Audit and Compliance, Executive, Governance and Leadership, Student Success, and University Success. The present bylaws provide that members of the Board may attend and participate in the meetings of any of the committees; however, only committee members may vote on an issue under consideration.

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Board of Governors

Cynthia D. Shapira, *Chair*
President
David S. and Karen A. Shapira Foundation
Pittsburgh, PA

Timothy P. Briggs
Member
Pennsylvania House of Representatives
Harrisburg, PA

Audrey F. Bronson
Trustee, Cheyney University of Pennsylvania
Philadelphia, PA

Nicole Dunlop
Student
Slippery Rock, PA

Alex Fefolt
Student
Indiana, PA

Donald E. Houser, Jr.
State Policy Advisor
Dominion Resources Inc.
Coraopolis, PA

Scott Martin
Member
Senate of Pennsylvania
Harrisburg, PA

David M. Maser, *Vice Chair*
Of Counsel
Cohen Milstein Sellers & Toll
Philadelphia, PA

Marian D. Moskowitz
Real Estate Developer
Malvern, PA

Thomas S. Muller
Former County Executive
Lehigh County
Lower Macungie, PA

Pedro A. Rivera
Secretary of Education
Pennsylvania Department of Education
Harrisburg, PA

Bradley T. Roae
Member
Pennsylvania House of Representatives
Harrisburg, PA

Judith L. Schwank
Member
Senate of Pennsylvania
Harrisburg, PA

Samuel H. Smith, *Vice Chair*
Chair, Council of Trustees at Indiana
University of Pennsylvania
Punxsutawney, PA

Stephen L. Washington, Jr.
Student
Shippensburg, PA

Neil R. Weaver
Executive Deputy Secretary
Department of Community and Economic
Development
York, PA

Tom Wolf
Governor
Commonwealth of Pennsylvania
Harrisburg, PA

Janet L. Yeomans
Former Executive, 3M Corporation
Philadelphia, PA

(2 Vacancies)

Office of the Chancellor

Act 188 stipulates that the chancellor "shall be responsible for the administration of the System under policies prescribed by the Board." As the chief executive officer of the System, the chancellor advises the Board on budgetary matters, academic program matters, and the formulation of personnel administration policies and procedures. In order to explore and control all of the important daily endeavors of the System, the chancellor is empowered to employ a central office staff to fulfill the mandates of both Act 188 and the Board. Under the chancellor's direction, the presidents, line officers, and support staff provide Systemwide management in such areas as academic and student policy, planning, business affairs, faculty and staff affairs, legislative policy, institutional research, legal affairs, capital planning, System relations, advancement, and equal educational opportunities. The chancellor assists the Board in its appointment of the presidents by submitting to the Board, with his recommendation, the names of individuals recommended for consideration by the councils of trustees. Upon the appointment of each president, an annual evaluation process must be conducted, the results of which are reviewed thoroughly by the Board.

Daniel I. Greenstein
Chancellor

Dr. Daniel I. Greenstein became the fifth chancellor of Pennsylvania's State System of Higher Education on September 4, 2018. In that role, he serves as chief executive officer of the State System, which operates Pennsylvania's 14 public universities, serving approximately 100,000 students. The chancellor works with the Board of Governors to recommend and develop overall policies for the System. Dr. Greenstein previously led the Postsecondary Success strategy at the Bill and Melinda Gates Foundation, where he worked with other higher education leaders across the country on initiatives designed to raise educational attainment levels and to promote economic mobility, especially among low-income and minority students. He developed and implemented a national strategy for increasing the number of degrees awarded and for reducing the attainment gaps among majority and nonmajority students at U.S. colleges and universities. Before joining the foundation, Dr. Greenstein was vice provost for academic planning and programs for the University of California (UC) system. In that role, he oversaw systemwide academic planning and programs, including the University of California Press; the California Digital Library; the UC system's Education Abroad Program; internship programs in Washington, D.C., and Sacramento, CA; and UC Online Education. Dr. Greenstein has created and led several internet-based academic information services in the United States and the United Kingdom, and served on boards and acted in strategic consulting roles for educational, cultural heritage, and information organizations. He began his academic career as a senior lecturer in Modern History at Glasgow University in Scotland. He holds both bachelor's and master's degrees from the University of Pennsylvania and a D.Phil. from the University of Oxford.

The Office of the Chancellor operates with a core leadership team comprising an executive vice chancellor; deputy chancellor; a vice chancellor and chief academic officer; a vice chancellor and chief diversity, equity, and inclusion officer; and a chief information officer. Leadership team members serve the System in an important capacity, individually and collectively, and work together to ensure that the academic programs offered on all of the campuses best suit the needs of the Commonwealth.

Sharon P. Minnich
Executive Vice Chancellor

The executive vice chancellor provides executive-level oversight and leadership for the effective execution of budget, finance, facilities management, human resources, labor relations, general administration, and shared services functions Systemwide while advising the chancellor regarding high-impact practices to advance the System Redesign efforts. She renders guidance in the development of policy and business procedures to be implemented by the chancellor and the Board. Such policy issues include accounting and financial policy and reporting; treasury operations including cash management, commercial banking, and investment programs; capital financing and planning; emergency management; physical plant planning; security management; insurance management; annual System budget development and management; and procurement management.

Ms. Minnich was appointed vice chancellor for administration and finance in January 2019, and recently named executive vice chancellor. Prior to joining the System, she served as secretary of the Governor's Office of Administration, a position she held since 2015. As a member of Governor Tom Wolf's senior staff and cabinet, she led the agency responsible for oversight and administration of the enterprise functions of human resources, information technology, and continuity of government and records management for nearly 80,000 employees under the Governor's jurisdiction, implementing shared services for both human resources and information technology. Ms. Minnich previously served as the assistant chief information officer for the Commonwealth, chief information officer for the Department of Revenue, deputy secretary for financial administration in the Office of the Budget, and deputy secretary for procurement at the Department of General Services. In these roles, she improved operations and managed significant process and system changes, including the implementation of a new financial shared services model for Pennsylvania, the implementation of Pennsylvania's tax amnesty project, and the state's enterprise resource planning system implementation. In addition to her work in state government, Ms. Minnich has worked as a consultant in the private sector, specializing in strategy and transformation. Her experience includes positions at Highmark Blue Cross/Blue Shield; Meridian Bank; SAP Business Consulting; and Deloitte Consulting, LLP. She served for 12 years on the Board of Trustees for her alma mater, Albright College, where she earned a bachelor of arts in economics and political science, and holds a master's degree in government administration from the University of Pennsylvania.

Randy A. Goin, Jr.
Deputy Chancellor

The deputy chancellor provides executive-level oversight for effective and efficient operation of the Board of Governors and the Office of the Chancellor and works closely with leaders from the System, Universities, government, and business to ensure timely advancement of System strategic priorities.

Dr. Goin joined the System as chief of staff in December 2013 and was named Deputy Chancellor in April 2019. Prior to joining the System's leadership team, Dr. Goin was chief of staff for the Florida Board of Governors, which oversees the second largest university system in America. He also led the public affairs, governmental relations, and communications group, which worked to articulate a clear message and vision with all constituents. He launched his career in the private sector more than two decades ago and later moved into communications management roles in higher education. He ultimately served as associate vice president for marketing at Florida Atlantic University, where he helped build the communications organization and reposition the institution's brand. Dr. Goin was then named university chief of staff and worked closely with the president to reshape the institution's organizational structure by increasing focus on top priorities. He served as a conduit between the administration and the university trustees—enhancing board relations and operations. He earned a bachelor of architecture degree and a master of arts degree with a focus in corporate and political communication from Florida Atlantic University and a Ph.D. in communication from Indiana University of Pennsylvania.

Donna F. Wilson
Vice Chancellor and Chief Academic Officer

The vice chancellor and chief academic officer (CAO) provides executive leadership and support for academic program planning and for the academic success of the universities and the System as a whole. The CAO works closely with the 14 University Chief Academic Officers to develop and execute a strategy that strengthens and incentivizes the use of collaborative, shared, or System-level enterprise infrastructure and provides leadership to support the collaborative development of policies, procedures, and practices that strengthen an inclusive model of shared governance at the system level and to foster dialogue among all State System internal stakeholders to improve systemwide shared governance and collaboration.

Dr. Donna F. Wilson was appointed as the State System's chief academic officer in October 2019. She was the Provost and Executive Vice President at Lock Haven University, a position she had held since July 2012. Wilson served the university as interim president for several months in 2018. She was responsible for sustaining and improving excellence in all academic matters, community partnerships, assessment and accreditation, institutional research, NCAA athletics, generating revenue, and strategic planning and implementation. Prior to appointment at Lock Haven University, Dr. Wilson served at Brooklyn College of the City University of New York as Associate Provost, Dean of Undergraduate Studies, Director of the CUNY Honors College, and faculty in the Department of Classics and the CUNY Graduate Center. Dr. Wilson was awarded a Leonard and Claire Tow Professorship, a Mrs. Giles Whiting Award for Excellence in Teaching in the Humanities, and multiple university grants to sponsor research in the Classics. The Harvard Center for Hellenic Studies awarded her a prestigious one-year fellowship to advance research on divine twins in Indo-European epic. Dr. Wilson holds a PhD in Classics from the University of Texas at Austin. She is the author of *Ransom, Revenge, and Heroic Identity in the Iliad* (2002, Cambridge University Press), articles, book chapters, and book reviews, and has delivered numerous invited lectures and refereed papers for learned societies.

Denise Pearson
Vice Chancellor and Chief Diversity, Equity, and Inclusion Officer

The vice chancellor and chief diversity, equity, and inclusion officer (VC-DEI) is a new position in 2020. This position is responsible for developing and operationalizing an outcomes-oriented strategy that addresses persisting inequalities in areas including but not limited to student access and outcomes, employee recruitment, retrenchment, and progression. The strategy will seek to optimize the cultural competencies, policy/procedural landscape, and overall level of engagement required for the effective and respectful operation of more diverse, equitable, and inclusive campuses. The VC-DEI works closely with the chancellor and Board of Governors, the State System's universities' presidents and trustees, and other system-level and university-level leaders to achieve this vision.

Dr. Denise Pearson was appointed as the State System's chief diversity officer in August 2020. Prior to joining the State System, she served as Vice President for Academic Affairs and Equity Initiatives for the association of State Higher Education Executive Officers (SHEEO) where she was responsible for collaborating with chief executives of state higher education agencies and their staffs to promote policies and practices that improved access and student success across member states and territories. During her tenure at SHEEO, Dr. Pearson worked closely with chief academic and chief diversity officers to support effectiveness and build capacity to improve student outcomes in a variety of areas including equity-minded leadership, teacher preparation, adult learners, state degree attainment, and postsecondary education for incarcerated populations. She is the author and co-author of several publications spanning these areas. Dr. Pearson is a 2019 graduate of the American Association of State Colleges and Universities (AASC&U) Millennium Leadership Initiative and a current member of the National Association of Diversity Officers in Higher Education. She earned a Ph.D. in Education Administration and Supervision (Marquette University), M.A. in Conflict Resolution (University of Denver), M.S. in Education Administration (Concordia University), and B.A. in Human Services (Pace University). Dr. Pearson also completed mediation training through the Colorado Bar Association.

Rosa Lara
Chief Information Officer

The chief information officer is a new position in 2020. This position is responsible for overseeing IT strategy, governance, policy and compliance, and works closely with various stakeholders in the System. Ms. Lara joined the State System in April 2019 as the project manager for System Redesign and was named chief information technology officer in January 2020.

Prior to joining the System, Ms. Lara was the Director of the Office of Strategy and Management in the Office of Information Technology (OIT) Governor's Office of Administration, a position she held since July 2017. Ms. Lara has more than 19 years' experience in the information technology field, including oversight of very visible and highly complex initiatives. She has experience in the areas of business process reengineering, large scale implementation efforts, financial management, procurement, and managing for results. Ms. Lara held numerous positions within OIT, serving as the Deputy Chief Information Officer for the Commonwealth, overseeing OIT's planning and budgeting process and human resource functions, including special projects such as the Enterprise Grants Management initiative and the implementation of an enterprise system to oversee the American Recovery and Reinvestment Act (ARRA) funds. She also led the Commonwealth's IT shared services transformation initiative, which implemented a new shared services operating model for IT services focused on improving service delivery while reducing cost. Ms. Lara earned a bachelor's in public administration from The College of New Jersey, a master's of public administration from the Maxwell School of Citizenship Affairs, and a master's of information resource management from Syracuse University.

The Presidents of the Universities

The presidents of the 14 Universities are appointed by the Board for a specified term. In an effort to ensure that the presidents are guiding the individual Universities toward the achievement of the System's unified goals, the chancellor reviews the goals and objectives of each president annually. As the chief executive officers of the Universities, the presidents are responsible for development and implementation of policies and procedures regarding personnel administration, fiscal management, admissions, discipline and expulsion guidelines, instructional programs, research programs, and public service programs within the framework prescribed by the Board.

The presidents must ensure that prudent fiscal policies are followed in the expenditure of all Commonwealth appropriations, tuition, fees, and all other available funds. They have the authority to obligate the System for ongoing contractual liabilities within the limitations of the operating budget of the university. Overall, their primary responsibility is to implement the policies of the Board and to perform all of those operations necessary for the orderly and judicious management of the university. Each president may attend any scheduled meeting of the university's council of trustees and address matters before such council, but may not vote.

The 14 University presidents are listed below.

Dr. Bashar W. Hanna
Bloomsburg University of Pennsylvania

Ms. Geraldine M. Jones
California University of Pennsylvania

Mr. Aaron A. Walton
Cheyney University of Pennsylvania

Dr. Dale-Elizabeth Pehrsson
Clarion University of Pennsylvania

Mr. Kenneth Long (interim effective 07/31/20)
East Stroudsburg University of Pennsylvania

Dr. Guiyou Huang
Edinboro University of Pennsylvania

Dr. Michael A. Driscoll
Indiana University of Pennsylvania

Dr. Kenneth S. Hawkinson
Kutztown University of Pennsylvania

Dr. Robert M. Pignatello
Lock Haven University of Pennsylvania

Dr. Charles E. Patterson
Mansfield University of Pennsylvania

Dr. Daniel A. Wubah
Millersville University of Pennsylvania

Ms. Laurie A. Carter, J.D.
Shippensburg University of Pennsylvania

Dr. William J. Behre
Slippery Rock University of Pennsylvania

Dr. Christopher M. Fiorentino
West Chester University of Pennsylvania

The Councils of Trustees

Each University within the System maintains a council of trustees consisting of 11 members who are appointed by the Governor with the advice and consent of the Senate. At least two of these members must be alumni of the institution. Ten of the members serve terms of six years while one member must be a full-time undergraduate student, other than a freshman, enrolled for at least 12 semester hours at the institution of which he/she is a trustee. The student member serves a term of three years or for so long as he/she is a full-time undergraduate student in good academic standing, whichever period is shorter. Six members of a council constitute a quorum, and each council meets at least quarterly and additionally at the call of the president, or its chair, or upon the request of three of its members.

Each council's specific responsibilities include making recommendations to the Chancellor for the appointment, retention, or dismissal of the president of its University following consultation with students, faculty, and alumni; reviewing and approving the recommendations of the president as to the standards for admission, discipline, and expulsion of students; and reviewing and approving the recommendations of the president as to the policies and procedures governing the use of institutional facilities and property, and the policies and procedures for the annual operating and capital budget requirements for submission to the Board. The council has the authority to approve schools and academic programs; to review and approve charges for room, board, and miscellaneous fees; to review and approve all contracts and purchases negotiated or awarded by the president, with or without competitive bidding, and all contracts for consulting services entered into by the president; and to take such action as may be necessary to effectuate the powers and duties delegated by Act 188.

Capital Facilities

The campuses of the 14 Universities encompass more than 4,700 acres. To date, there are almost 900 physical plant structures, with over 32 million gross square feet. Capital facilities in place prior to the System's inception in 1983, state-appropriated capital renovations of those facilities, and new state-appropriated capital facilities are made available to the System at no cost. In 2002, the Commonwealth transferred custody and control of these facilities to the System. Under this arrangement, the Commonwealth retains fee title for the facilities and continues to provide state appropriations for capital facilities construction and renovations. Capital facilities acquired and constructed after 1983 by the System from other than state appropriations, as well as capitalized renovations and capital assets, such as equipment, furnishings, and library books, are assets on the System's balance sheet and have a book value, as of June 30, 2019, of $2 billion net of accumulated depreciation. The current replacement cost of the total System capital facilities and infrastructure is estimated to be in excess of $11 billion. The housing project to be acquired by East Stroudsburg University as part of this bond issuance will be an asset reflected on the System's balance sheet.

Educational and General Facilities—The Commonwealth appropriates funds for capital repairs and renovations while the System contributes regular maintenance funded from its operating budget. In July 1996, the Board of Governors approved a facilities renovation partnership with the Commonwealth of Pennsylvania. Currently, the Commonwealth is providing approximately $70 million annually toward capital improvement for the System's academic facilities. The System contributes any additional funding for capital repairs and renovations needed through bond financing, operating funds, or fundraising. The System has expended approximately $2 billion for renovation of existing academic facilities since 1996, while the Commonwealth has appropriated approximately $1.7 billion over the same period.

Each University's capital budget request for the forthcoming fiscal year is submitted to the Office of the Chancellor. In order for a capital project to be included in the appropriations request to the Governor and to the General Assembly, the Office of the Chancellor assesses the project's priority using criteria that include: University priorities; academic benefit; space requirements; ADA, safety, and code compliance deficiencies; new revenue or matching funds potential; cost savings potential; and impact on deferred maintenance. The equitable distribution of capital funds to each of the Universities is also considered in developing the plan. The Office of the Chancellor conducts an in-depth review of each capital project request to determine the overall contribution of the project to the well-being of the System as a whole.

Auxiliary Facilities—The Board of Governors has determined that additional facilities may be needed at the Universities and has adopted a Construction Finance Policy, which permits the System to seek bond funding to finance construction of new auxiliary facilities such as residence halls, recreation centers, student unions, and such other facilities, equipment, real property, or other needs as the Board decides. Auxiliary facilities are sustained with student fees, not Commonwealth appropriations or tuition. Act 188 requires the maintenance of an Auxiliary Facilities Reserve Fund established from mandatory resident student fees to accumulate funds with which to repair or construct new residence halls. To ensure longevity of existing residence halls, a capital renewal fee is charged per resident student for use in implementing capital maintenance projects. The monies collected are restricted for the specific purpose of roof replacement, floor replacement, or any major repair/replacement project that will significantly prolong the usable life of the building for use as a residence hall. The System has expended approximately $1.6 billion for auxiliary facilities since 1996.

Accreditation

All of the System universities are fully accredited by the Middle States Association of Colleges and Secondary Schools (Middle States). Certain academic programs are accredited individually by various other national professional organizations.

Degrees Awarded

A range of undergraduate and graduate degree programs is offered across the System; 793 undergraduate and 302 graduate programs are offered in 253 major academic areas[1]. In addition, certification programs are offered in 188 areas. The System awarded 18,623 bachelor's degrees and 5,225 master's degrees in 2018/19. The System also awarded 290 doctoral degrees through Bloomsburg, Indiana, and Slippery Rock Universities of Pennsylvania and 1,551 associate's degrees through all the Universities.

[1]Prior reporting to 2017/18 undergraduate and graduate program counts were based on the CIP (Classification of Instructional Program) codes. The revised reporting is based on the actual number of programs that reside in the State System's Academic Program Inventory. This change results in a higher number of programs overall, but it is more accurate. "Academic areas" is a count of unique six-digit CIPs across all undergraduate and graduate programs.

Enrollment

The following data shows the System's fall semester enrollment by headcount and full-time equivalent enrollment for the last five academic years.

	2015/16	2016/17	2017/18	2018/19	2019/20*
Fall Headcount					
Undergraduate	92,818	89,802	86,971	82,805	80,426
Graduate	14,308	14,977	15,330	15,289	15,376
Total	107,126	104,779	102,301	98,094	95,802
Full-Time	89,845	86,905	84,098	79,694	77,012
Part-Time	17,281	17,874	18,203	18,400	18,790
Total	107,126	104,779	102,301	98,094	95,802
Fall Full-Time Equivalent					
Undergraduate	86,622	83,611	80,788	76,786	74,136
Graduate	8,207	8,606	8,825	8,758	8,793
Total	94,829	92,217	89,613	85,544	82,929

**Effective in Fall 2019, clock hour students (308 students) are included in total headcount.*

Based on student registration as of August 31, 2020, the System anticipates an approximate 3 percent decrease in enrollment for Fall 2020, of which 2 percent is attributed to the impact of COVID-19. Pre-COVID, the System was anticipating an overall 1 percent enrollment reduction primarily due to the decline in Pennsylvania's high school graduates. System universities have developed various scenarios for the fall semester and have been able to adjust plans seamlessly in response to COVID-19. All System universities began the fall 2020 semester, with a range of face-to-face and remote instruction options, ranging from 30 percent to 100 percent remote.

Applications and Admissions

The following data shows the fall semester application/enrollment figures for the System for the previous five academic years.

	2015/16	2016/17	2017/18	2018/19	2019/20
Applied	79,468	79,426	81,619	77,528	79,732
Accepted	63,965	63,606	66,409	64,123	67,317
Enrolled	18,913	18,137	18,008	17,133	16,861
% Accepted	80.5%	80.1%	81.4%	82.7%	84.4%
% Enrolled/Accepted	29.6%	28.6%	27.1%	26.7%	25.0%

Tuition, Student Fees, and Competition

The following includes the current and previous four years of Systemwide average in-state full-time undergraduate tuition and fees.

Full-Time Undergraduate Tuition and Student Fees

	2016/17	2017/18	2018/19	2019/20	Preliminary 2020/21
System Average	$10,436	$10,876	$11,309	$11,271	$11,105

System Universities compete with many other colleges and universities for qualified applicants. The undergraduate tuition and required fees collected by various higher education sectors in Pennsylvania during the current year are illustrated in the following table. The private colleges and universities listed were chosen because of geographic location, similar academic offerings, and similar selectivity ratios.

	2020/21 Required Fees and Tuition
Selected Private Colleges and Universities	
Washington and Jefferson College	$49,308
Juniata College	$49,175
Delaware Valley University	$40,620
Gannon University	$34,526
Elizabethtown College	$32,960
State-Related Universities (in-state)	
Temple University	$19,749
The University of Pittsburgh	$19,718
The Pennsylvania State University	$18,450
Community Colleges (in-state)	
Community Colleges Average (full-time equivalent course load)	$5,573
Pennsylvania's State System of Higher Education (in-state)	
System Average	$11,105

Source: *The College Board*

Freshmen Enrollment Composition

The following tables highlight the high school rank and average SAT scores of the System's incoming freshmen for the years indicated.

Percentage of Freshmen by High School Rank

Quintile	2015	2016	2017	2018	2019
1	20.9%	19.6%	21.0%	21.1%	21.7%
2	28.7%	27.5%	28.0%	28.2%	28.4%
3	26.5%	26.8%	26.5%	26.3%	25.9%
4	17.9%	19.0%	18.6%	18.4%	18.0%
5	6.0%	7.1%	5.9%	6.1%	6.2%

Average SAT Scores

	2015	2016	2017*	2018	2019
Verbal	491	488	534	538	535
Math	493	489	524	526	523
Total	984	977	1058	1064	1058

**SAT score for 2017 represents the new SAT score for tests taken on or after March 1, 2016. The Verbal score for 2017, and future years, is now the Evidence-Based Reading & Writing (ERW) score (combination of old SAT Writing and Critical Reading section scores). The changes in scoring resulted in higher test scores overall.*

Student Financial Aid

Ninety percent of all first-time, full-time, degree-seeking undergraduate students attending State System universities during academic year 2018/19 received financial aid. Thirty-eight percent of these students received awards from federal grant aid, while 40 percent received awards from the Commonwealth or local agencies. Forty-one percent of these students received awards from the institution. Seventy-seven percent of all first-time, full-time undergraduates received a student loan.

The major sources of financial aid available to System students are the Federal Pell Grant Program, Pennsylvania State Grant Program, Federal Supplemental Educational Opportunity Grant Program, Federal Work Study Program, and Federal Direct Loan Program. Of the financial aid programs available, the three main sources of financial aid received by System students are the Federal Pell Grant, Pennsylvania State Grant, and Federal Direct Loans. Each University maintains a fully functioning student financial aid office.

Commonwealth Appropriations

In Act 188, the General Assembly defined the System as an instrumentality of state government and declared its operating costs ordinary expenses of state government, entitling it to preferred appropriations status under Article III, Section 11, of the Pennsylvania Constitution. Preferred appropriations are authorized only for state government, public schools, and payment of the public debt. Preferred appropriations bills require only a simple majority vote of the General Assembly, while "nonpreferred appropriations" bills, authorized by Article III, Section 30, of the Pennsylvania Constitution to fund state-related universities and private state-aided institutions, require a two-thirds majority vote.

One advantage of preferred appropriations status is that a smaller constitutional majority is required for passage of bills, thereby reducing the possibility of defeat. It also is settled law that, in exigent times, the Governor may reduce or entirely abate nonpreferred appropriations. See *Schnader v. Liveright*, 308 Pa. 35 (1932).

The State System's FY 2020/21 annual appropriation, based on the Commonwealth's spending plan as enacted on May 29, 2020, represents approximately 21 percent of total revenues. The Commonwealth General Fund spending plan provided for 12 months of sustained public education funding at FY 2019/20 levels, while supporting most other state agencies through five months of the fiscal year—due to the impact of COVID-19 on state revenues. Receipt of an appropriation in a given year does not ensure an appropriation or the amount of such appropriation in the following year. The chart below shows the current fiscal year and a five-year history of total annual appropriations received by the System.

Fiscal Year	Appropriations
2020/21	$477,470,000
2019/20	$477,470,000
2018/19	$468,108,000
2017/18	$453,100,000
2016/17	$444,224,000
2015/16	$433,389,000

The FY 2020/21 budget includes level funding in state appropriations. Although the State System is receiving level funding for FY 2020/21, increases have been provided in each of the past five years as follows: $20.6 million (5 percent) in FY 2015/16, $10.8 million (2.5 percent) in FY 2016/17, $8.9 million (2 percent) in FY 2017/18, $15 million (3.3 percent) in FY 2018/19, and $9.4 million (2 percent) in FY 2019/20. The combined result is restoration of approximately 71 percent of the $90.6 million cut made in FY 2011/12. At its April 2020 meeting, the Board of Governors voted to freeze tuition for FY 2020/21. This is the second year in a row the Board of Governors has frozen tuition rates. In addition, the State System continues to receive state funding for deferred maintenance through a portion of the realty transfer tax.

Coronavirus Aid, Relief, and Economic Security (CARES) Act - Enacted March 27, 2020, this is the largest economic relief bill in U.S. history, allocating $2.2 trillion in support to individuals and businesses affected by the Coronavirus pandemic and economic downturn. Seven main groups will receive support from this Act: individuals, small businesses, big corporations, hospitals and public health, federal safety net, state and local governments, and education. The State System universities have been awarded grants from the education section, administered through the US Department of Education (ED). Additionally, the Commonwealth was appropriated funds from the state and local governments section, administered through the US Treasury, of which a portion was appropriated by the state to the State System. In August 2020, the Pennsylvania Department of Education also awarded a portion of the Governor's Education Emergency Relief Fund (GEERF) to State System universities to assist with fall 2020 reopening efforts. Below is a summary of funds received by the State System. All but GEERF were awarded in fiscal year 2019/20.

	$ in millions
Emergency Aid for Students[1]	$40.0
Institutional Share[1]	40.0
Strengthening Institutions Program[1]	2.6
State Appropriated Coronavirus Relief Funds[2]	30.0
Governor's Education Emergency Relief Funds[3]	4.2
Total CARES Act Funds	$116.8
CARES Act Funds for University Use (less Emergency Aid)	$76.8

[1]Higher Education Emergency Relief Funds, US Department of Education

[2]Title V, Assistance for State, Local and Tribal Governments, US Department of the Treasury

[3]GEERF, US Department of Education, as distributed by Pennsylvania Department of Education

Refer to COVID-19 section for additional information.

Realty Transfer Tax

In 1993, the General Assembly and the Governor of Pennsylvania passed into law a dedicated allocation of 2.7 percent of the Pennsylvania Realty Transfer Tax to the System. These revenues are restricted to use for deferred maintenance on academic facilities. The chart below shows the current fiscal year and a four-year history of revenues the System received from this tax.

Fiscal Year	Revenue
2020/21	$13,771,000*
2019/20	$17,608,000
2018/19	$18,371,000
2017/18	$18,023,000
2016/17	$16,081,000

**Notified in July 2020 that the State System allocation was reduced by $1.8 million for FY 2020/21, based on anticipated transfer tax income.*

Statement of Revenues, Expenses, and Changes in Net Position

This statement reports the revenues earned and the expenses incurred in the fiscal year. The resulting net income or loss is reported as an increase or decrease in net position on the *Balance Sheet.*

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Pennsylvania's State System of Higher Education

Statement of Revenues, Expenses, and Changes in Net Position
For the Years Ended June 30, 2019 and 2018
(dollars in thousands)

	2019	2018
Operating Revenues		
Tuition and fees, net	$ 841,415	$ 850,495
Grants and contracts	164,883	156,285
Sales and services	42,077	41,717
Auxiliary enterprises, net	320,884	317,398
Other revenues, net	16,615	19,322
Total Operating Revenues	1,385,874	1,385,217
Operating Expenses		
Instruction	750,456	755,638
Research and Public Service	59,301	50,983
Academic support	183,312	191,062
Student services	190,256	190,322
Institutional support	255,983	265,714
Operations and maintenance of plant	145,333	162,005
Depreciation	143,699	136,422
Student aid	71,911	75,369
Auxiliary enterprises	254,518	255,111
Total Operating Expenses	2,054,969	2,082,626
Operating Loss	(669,095)	(697,409)
Nonoperating Revenues (Expenses)		
State appropriations, general and restricted	468,106	453,108
Pell grants	136,010	139,304
Investment income, net	50,198	39,367
Unrealized gain (loss) on investments	402	(19,595)
Gifts for other than capital purposes	22,852	21,300
Interest expense on capital asset-related debt	(42,025)	(37,105)
Loss on disposal/acquisition of assets	(28,322)	(2,267)
Other nonoperating revenue	11,410	11,279
Net Nonoperating Revenues	618,633	605,391
Loss before other revenues and special item	(50,462)	(92,018)
State appropriations, capital	18,244	18,023
Capital gifts and grants	10,930	15,121
Loss before special item	(21,288)	(58,874)
Special item - regulatory matter	(14,308)	-
Decrease in Net Position	(35,596)	(58,874)
Net position—beginning of year, as restated	(1,574,603)	(1,515,729)
Net position—end of year	$ (1,610,199)	$ (1,574,603)

Investment of Working Capital

The System invests its working capital in accordance with the Board of Governors' Investment Policy. The investment priorities of the System as stated in this policy are, in order of priority: (1) safety of principal, (2) liquidity, and (3) yield. This policy expressly prohibits leverage and speculative investment strategies.

Unrestricted Net Position

Unrestricted net position, which totals -$2,602.2 million, includes the effects of three unfunded liabilities: the liability of net pension totaled $1,108.3 million for the year ended June 30, 2019 (see financial statements note 8 for more information); the liability for postretirement benefits for employees who participate in the System plan totaled $1,976.6 million for the year ended June 30, 2019 (see financial statements note 9 for more information); and the liability for compensated absences totaled $127.6 million for the year ended June 30, 2019 (see financial statements note 7 for more information). Without the effect of these liabilities, total unrestricted net position would equal $610.3 million.

Faculty and Staff

As of October 31, 2019, System faculty numbered 4,535 full-time members and 1,351 part-time members. Of the full-time faculty members, 3,049 have been awarded tenure, and 943 are tenure-track.

As of October 31, 2019, the System employed 6,125 full-time staff members and 215 part-time staff members. The System believes that it provides a competitive compensation program for its staff, and that it is able to attract persons with outstanding qualifications.

The System participates in three different retirement systems funded in part each year from each University's operating budget: the State Employees' Retirement System (SERS), the Public School Employees' Retirement System (PSERS), and the Alternative Retirement Plan (ARP, which includes Fidelity and TIAA). Liabilities of the respective retirement systems are not the responsibility of the System. The basic benefits for each program are outlined below (see also financial statements note 7).

(1) State Employees' Retirement System (SERS). The employee's contribution rate is 5.00 percent of gross salary for Class A and 6.25 percent of gross salary for Class AA. An employee is vested upon completion of five years of service with the state government for these classes. The employee's contribution rate is 6.25 percent of gross salary for Class A-3 and 9.3 percent of gross salary for Class A-4. Class A-3 and Class A-4 are applicable to new members enrolling after January 1, 2011. An employee in Class A-3 or A-4 is vested upon completion of ten years of service with the state government. The employee's contribution rate is 8.25 percent of gross salary (5 percent defined benefit pension and 3.25 percent defined contribution investment) for Class A-5 and 7.5 percent of gross salary (4 percent defined benefit pension and 3.5 percent defined contribution investment) for Class A-6. Employee vesting for Class A-5 and A-6 is ten years for the defined benefit pension and three years for the employer share of the defined contribution investment. For Class 40 (straight defined contribution plan), the employee's contribution rate is 7.5 percent of gross salary, and the employer contribution rate is 3.5 percent. Employee vesting for Class 40 is three years for employer contributions.

(2) Public School Employees' Retirement System (PSERS). The employee's contribution rate ranges from 5.25 percent to 7.50 percent of gross salary, depending upon class and hire date. Most employees elected the 7.5 percent Class T-D when offered the higher benefit effective

January 1, 2002. An employee is vested upon completion of five years of service with the state government for these classes. The employee's contribution rate is 7.5 percent of gross salary for Class T-E and 10.3 percent of gross salary for Class T-F. Class T-E and Class T-F are applicable to new members enrolling after July 1, 2011. An employee in Class T-E or T-F is vested upon completion of ten years of service with the state government. The employee's contribution rate is 8.25 percent of gross salary (5.5 percent defined benefit pension and 2.75 percent defined contribution investment) for Class T-G and 7.5 percent of gross salary (4.5 percent defined benefit pension and 3 percent defined contribution investment) for Class T-H. Employee vesting for Classes T-G and T-H is ten years for the defined benefit pension and three years for the employer share of the defined contribution investment. For the DC only (straight defined contribution plan), the employee's contribution rate is 7.5 percent of gross salary, and the employer contribution rate is 2 percent. Employee vesting for the DC only is three years for employer contributions.

(3) Alternative Retirement Plan (ARP). The employee's contribution rate is 5.00 percent of gross salary. An employee is immediately vested in this retirement program upon employment. Early retirement can be requested at any age; however, the amount of annuity is based on the employee/employer contributions and investment income.

The following table summarizes the System's contribution rates for employee retirement benefits for five years (including the current year) for each of the above-mentioned retirement plans. All of the figures are a percent of the employee's gross salary. (See financial statements note 8 for the dollar amount of such contributions.)

	SERS*						
	Class A	**Class AA**	**Class A-3 and A-4**	**Class A-5 and A-6**	**401a Only**	**PSERS**	**ARP**
2020/21	29.48%	36.84%	25.47%	19.59%	19.56%	17.255%	9.29%
2019/20	28.84%	36.04%	24.92%	19.18%	19.12%	17.145%	9.29%
2018/19	27.71%	34.63%	23.94%	18.42%	18.39%	16.715%	9.29%
2017/18	27.55%	34.44%	23.80%	-	-	16.29%	9.29%
2016/17	23.96%	29.95%	20.70%	-	-	15.02%	9.29%

**There are five different rates for SERS employees, depending on their class. The majority of System employees are in Class AA. Newly enrolled employees hired after January 1, 2011, are in Class A-3 or A-4. Newly enrolled employees hired after January 1, 2019, are in Class A-5, A-6, or 401a Only.*

The System's employer contribution rates are certified each year as a result of the actuarial valuation of the SERS pension system, assessing the current funds, and determining the future expected liabilities. The employer contribution rate is set so that it can fund all retirement benefits earned by employees working during the year and pay toward any unfunded liabilities that may exist.

On June 12, 2017, Governor Tom Wolf signed into law a new retirement plan designed for future employees in the Public School Employees' Retirement System (PSERS) and State Employees' Retirement System (SERS). The new plan provides three retirement benefit options: two "side-by-side" hybrid retirement plans, which include a defined benefit and defined contribution component (Class A-5 and A-6), and a third stand-alone defined contribution retirement plan (Class 401a Only). The new SERS retirement plans were effective January 1, 2019, while PSERS took effect on July 1, 2019. Additional information can be found on the Governor's website and Pennsylvania Independent Fiscal Office website.

Most System employees are represented by various labor unions. The two that represent the largest number of employees are the American Federation of State, County and Municipal Employees (AFSCME) (ratified by membership, awaiting approval from the Commonwealth and the

Board of Governors, contract termination date June 30, 2023), and the Association of Pennsylvania State College and University Faculties (APSCUF) (contract termination date June 30, 2023, for faculty and June 30, 2023, for nonfaculty coaches, which are two separate bargaining units). Other labor unions include the State College and University Professional Association (SCUPA) (contract termination date June 30, 2023); Office and Professional Employees International Union Healthcare Pennsylvania (OPEIU) (contract termination date June 30, 2023); Security, Police and Fire Professionals of America (SPFPA) (contract termination date August 31, 2020); the Pennsylvania Doctor's Alliance (PDA) (contract termination date June 30, 2019); the Service Employees International Union (SEIU, Local 668) (contract termination date June 30, 2023); and the Police Officers Association (POA) a new union (contract termination date August 31, 2022). The System has complete autonomy in the negotiation processes for the APSCUF, SCUPA, SPFPA, OPEIU, and POA contracts. However, the System engages in coalition bargaining with the Commonwealth of Pennsylvania on all other labor union contracts. Negotiations are currently underway with PDA for a successor collective bargaining agreement. The System experienced a three-day work stoppage with APSCUF in October 2016, but it did not result in any adverse financial situation.

Accounting Matters

The System's financial statements have been prepared using the economic resources measurement focus and the accrual basis of accounting in accordance with the accounting principles generally accepted in the United States of America, as prescribed by the Governmental Accounting Standards Board (GASB).

As of July 1, 1983, with the enactment of Act 188, the System became responsible for the use of all appropriations for all the Universities. Any funds unexpended at the end of any given fiscal year by any University or the Office of the Chancellor do not lapse to the Commonwealth, but remain in the respective accounts for future use. The presidents have the authority to expend their respective university's allocated funds as they deem proper and necessary, with review by the Office of the Chancellor. The amount of appropriations granted by the General Assembly and the Governor of Pennsylvania for the next fiscal year is not affected adversely by any cumulative amounts remaining unexpended by the Universities and the Office of the Chancellor from the prior fiscal year appropriations.

The System contracted with an external firm that, along with System personnel and in cooperation with the U.S. Department of Education (ED), analyzed and reconciled fiscal years 2011/12, 2012/13, and 2013/14 student financial aid awards of Cheyney University of Pennsylvania, a historically black university (HBCU). In August 2015, Cheyney University self-reported to the ED of federal student financial aid improperly administered and delivered in the fiscal years under review. In September 2015, the ED placed the university on Heightened Cash Monitoring 2 (HCM2) status, meaning that the university does not receive federal student financial aid funds in advance, but must use its own cash to grant federal financial aid to its students and then request reimbursement from the ED. Currently, the university is still on HCM2 status.

U.S. Department of Education Program Review of Cheyney—On August 8, 2019, Cheyney University received a letter (the "ED Letter") from ED relating to its proposed resolution of its Program Review of Cheyney (the "Program Review"), asserting that Cheyney's overall response to the Program Review did not fully address ED's findings or accurately document the federal student aid funds disbursed during the periods under review (the 2011/2012, 2012/2013 and 2013/2014 award years). The ED Letter stated further that under normal circumstances ED would assess Cheyney full Federal Pell Grant and Federal Direct Loan liabilities in the amount of $57,531,566 for the award years reviewed. However, ED did acknowledge that Cheyney has, since the beginning of the review, undertaken significant steps to accurately document its administration of federal student aid funds despite being limited in its ability to do so by the past deficiencies and, accordingly, expressed a willingness to presume that significant amounts of the financial aid funds were provided to, and earned by, the students and to conclude the Program Review in consideration of Cheyney's (1) payment of $14,308,377, (2) waiver of its rights to any administrative appeal, and (3) entry into an acceptable repayment agreement with ED.

In February 2020, a settlement agreement was executed between ED and Cheyney and a payment schedule was established for the $14.3 million settlement amount.

In the opinion of the System's management, there has been no material adverse change in the financial condition of the System since June 30, 2019.

Budgetary Matters

The president of each University is required to submit a projected operating budget for each fiscal year to the Office of the Chancellor. Periodically throughout the fiscal year, each president must submit an interim budget showing actual revenues received and expenditures incurred to date with estimated projections for the remainder of the fiscal year. These financial submissions are one tool that the Office of the Chancellor uses to monitor the financial condition of the respective universities throughout the year to ensure that deficits are not incurred.

Financial Statements Audit

The financial statements of the System as of and for the year ended June 30, 2019, included in Appendix II of this Official Statement, have been audited by CliftonLarsonAllen LLP, the System's independent auditors, as stated in their report appearing herein. The financial statements of the System as of and for the year ended June 30, 2020 are anticipated to be publically available on or around October 8, 2020, and will be accessible at: https://www.passhe.edu/inside/anf/accounting/Pages/Financial-Statements.aspx.

CliftonLarsonAllen LLP has not been engaged to perform and has not performed, since the date of its report included herein, any procedures on the financial statements addressed in that report. CliftonLarsonAllen LLP also has not performed any procedures relating to this offering document.

Legal Matters

It is the opinion of the Chief Counsel to the System that, to the best of his knowledge after reasonable investigation, there is no action, suit, proceeding, or investigation at law or in equity before or by any court, public board, or body, pending or threatened, against or affecting the System, wherein an unfavorable decision, ruling, or finding would materially adversely affect the transactions contemplated by this Official Statement or the validity of the Loan Agreement and the Disclosure Agreement.

Legislative Matters

From time to time, legislation is introduced in the Pennsylvania General Assembly which may affect the System and, therefore, may affect certain portions of the description of the System contained in this Official Statement. The System cannot predict if such legislation or other legislation will be enacted into law now or in the future and, if enacted, how any such legislation may affect the System's ability to perform its obligations with respect to the Bonds.

On April 10, 2019, Senate Bill 536 was introduced by prime sponsor Senator Patrick M. Browne, establishing the Public Higher Education Funding Commission to review and make recommendations related to higher education funding, affordability, and effectiveness of administration and operations. SB 536 was then introduced as part of Senate Bill 700 and signed into law as Act 70 on July 2, 2019. The legislation charges the commission with issuing a report of its findings and recommendations to the General Assembly and other related committees by July 2, 2020; this deadline has since been postponed due to COVID-19.

On July 1, 2020, the Governor of Pennsylvania signed into legislation, House Bill 2171 (Act 50 of 2020). It requires the State System's Board of Governors to develop policies and procedures by which the board may create, expand, consolidate, transfer or affiliate an institution or college; provides that before the creation, expansion, consolidation, transfer, or affiliation of an institution or college, directs the board to call upon the chancellor to conduct a review and analysis of the relevant institutions using certain metrics, including consultation with stakeholders and public hearings; makes changes to the appointment process of students to the board of governors and councils of trustees; and makes various changes to the sections relating to the powers and duties of councils of trustees and to the powers and duties of institution presidents, among other things. By updating and modernizing Act 188 of 1982, Act 50 enables the State System to better manage and optimize the System, as well as be flexible and responsive to the changing landscape of higher education. Refer to Strategic System Redesign section for additional information.

Contingencies and Commitments

See financial statements note 15 for more information on such matters.

Future Financing

There are no additional capital projects expected to be bond financed in FY 2020/21. The System reviews its financing portfolio on an ongoing basis to determine opportunities for refundings.

Outstanding Indebtedness

As of September 1, 2020, the outstanding indebtedness of the System is as follows:

	Issuance Date	Original Issuance Amount	Current Outstanding Principal	Maturity Date
Series AI	08/07/08	32,115,000	160,000	06/15/25
Series AM*	07/12/11	119,085,000	79,825,000	06/15/36
Series AN	03/20/12	76,810,000	8,065,000	06/15/23
Series AO	07/18/13	30,915,000	23,265,000	06/15/38
Series AP	05/07/14	46,110,000	29,995,000	06/15/24
Series AQ	05/07/15	94,975,000	62,825,000	06/15/36
Series AR	09/10/15	102,365,000	89,890,000	06/15/40
Series AS	06/07/16	47,280,000	38,120,000	06/15/37
Series AT	09/07/16	298,110,000	270,920,000	06/15/55
Series AU	09/14/17	128,260,000	114,540,000	06/15/42
Series AV	09/06/18	236,945,000	217,560,000	06/15/45
Series AW	09/10/19	84,980,000	84,610,000	06/15/44
Series AX	07/23/20	94,985,000	94,985,000	06/15/42
Total		$1,392,935,000	$1,114,760,000	

**Anticipated to be partially redeemed with proceeds from Series AY-Bonds.*

The System has no other existing long-term indebtedness, except for the installment purchase and lease of office equipment, computer equipment, energy conservation equipment, and similar types of acquisitions. See note 10 of the 2019 Audited Financial Statements for further information pertaining to the leases.

Maturities of long-term debt for the current fiscal year, as well as the next five fiscal years, are as follows:

	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Series AI	30,000	30,000	30,000	35,000	35,000	-
Series AM	5,495,000	5,775,000	6,080,000	6,420,000	6,770,000	7,065,000
Series AN	2,825,000	2,965,000	2,275,000	-	-	-
Series AO	1,255,000	1,320,000	1,370,000	1,310,000	1,365,000	1,420,000
Series AP	7,030,000	7,300,000	7,650,000	8,015,000	-	-
Series AQ	7,965,000	6,960,000	7,880,000	8,275,000	8,690,000	5,910,000
Series AR	3,000,000	3,150,000	3,315,000	3,475,000	3,650,000	3,835,000
Series AS	3,175,000	3,245,000	2,850,000	2,990,000	3,135,000	3,295,000
Series AT	8,140,000	8,105,000	8,480,000	8,880,000	9,305,000	9,740,000
Series AU	7,525,000	8,715,000	9,135,000	7,245,000	7,660,000	8,760,000
Series AV	10,520,000	12,150,000	11,190,000	11,200,000	6,010,000	5,810,000
Series AW	3,330,000	8,500,000	9,060,000	17,095,000	5,200,000	5,465,000
Series AX	5,975,000	4,375,000	4,585,000	4,820,000	5,065,000	5,310,000
Total	$66,265,000	$72,590,000	$73,900,000	$79,760,000	$56,885,000	$56,610,000

Strategic System Redesign

In March 2017, the National Center for Higher Education Management Systems (NCHEMS) was selected as the consulting firm to assist the Board of Governors with a Strategic System Review of the 14 universities and the Office of the Chancellor. On July 21, 2017, NCHEMS released the results of the report, which made various recommendations to increase efficiency throughout the State System. The recommendations included, modernizing the governance structure, leveraging Systemwide and regional resources to deliver programming, and sharing administrative functions more efficiently. These recommendations have been taken under advisement by the Board of Governors.

In 2018, the System moved from "review" to "redesign" mode. The Board of Governors affirmed its commitment to the long-term stability of all 14 universities in the State System so that each may continue to serve students, its region, and the Commonwealth. A successful redesign will have a positive impact on students, promoting both affordability and long-term sustainability of the System. In September 2018, the System launched phase 2 of the redesign to develop a vision for the transformed System, including detailed implementation plans. The System Redesign is guided by three strategic priorities approved by the Board of Governors in January 2019: (1) ensuring student success, (2) leveraging university strengths, and (3) transforming the governance/leadership structure. Small, tactical groups are being utilized to support each of the three strategic priorities.

In support of the System Redesign priorities, on July 1, 2020, the Governor of Pennsylvania signed into law Act 50 of 2020. It requires the State System's Board of Governors to develop policies and procedures by which the Board may create, expand, consolidate, transfer or affiliate an institution or college and prescribes the process by which that may occur, among other things. By updating and modernizing Act 188 of 1982, Act 50 is intended to enable the State System to better manage and optimize the System, address affordability for students and financial sustainability for its universities, as well as be flexible and responsive to the changing landscape of higher education.

On July 16, 2020, the Board entered into the next phase of System Redesign and authorized the chancellor to review the financial impacts of integrating operations at selected System universities. A financial review is the first step towards integrating universities as outlined in Act 50, which requires a detailed, transparent, and broadly consultative review, planning and implementation process—one that will be undertaken over the next two years. For the purposes of this review process the System is using an approach that could identify combinations of certain universities that, when integrated, would operate under a unified leadership team reporting through the chancellor to the Board of Governors, have a single faculty and staff, a single academic program array, a unified enrollment strategy, and a single budget—all while honoring the local identity of the original institutions.

The process for integrating State System universities is defined in Act 50. The process is to be conducted in partnership with the General Assembly through quarterly check-ins with House and Senate Education and Appropriations Committees. It consists of four phases, progress between which requires affirmation by the Board of Governors. The phases, and the most expeditious path for their completion are outlined below.

- Phase 1 involves a review of the financial impacts of a potential integration, which is underway.
- Phase 2 involves the development of a detailed plan or plans to integrate selected institutions.
- Phase 3 involves a public comment period.
- Phase 4 involves implementing the plan.

As part of System Redesign and associated efforts to ensure university financial sustainability, the State System has been working with universities, their housing affiliates, and financial partners to address the impact of enrollment reductions on housing occupancy and bond financing. This work has resulted in master lease agreements that now include the State System in some housing partnerships, alleviating some covenant restrictions. COVID-19 is having a significant impact on housing occupancy and associated revenue, that is exacerbating these issues.

Interested investors can track the progress of the redesign on the System's website.

COVID-19

On January 31, 2020, the United States Department of Health and Human Services declared a public health emergency for the United States to aid the nation's health care community in responding to the novel coronavirus ("COVID-19"). On March 11, 2020, the World Health Organization declared the COVID-19 outbreak a global pandemic and on March 13, 2020, the President of the United States declared a national state of emergency.

On March 6, 2020, Governor Wolf declared a disaster emergency in the Commonwealth. On April 1, 2020, Governor Wolf issued a stay-at-home order for all counties in the Commonwealth for all activities, except as needed to access, support, or provide life sustaining business, emergency, or government services.

Throughout this period, the System has continued to follow state recommendations and restrictions that require remote working and remote education. The System continued remote education through the summer of 2020. Most universities began fall 2020 with mostly or completely remote offerings and continue to monitor and modify fall activities as necessary. The System universities are in the midst of developing various planning scenarios for the spring 2021 semester [and beyond], including academic activities returning to normal at the beginning of the spring semester or continuing into the spring. Plans also include various potential impacts on enrollment, changing expectations for learning and living environments, and the requirements for health monitoring and social distancing.

Prior to COVID-19, the System was anticipating negative operating results and its universities were implementing multi-year plans focused on cost control, increasing efficiencies, and aggressive management of their workforce. These efforts have intensified in response to the pandemic. The System is supporting its universities in these efforts through expanding shared services and offering retirement incentive programs. The System's financial and operational planning is fluid at this time. As a result of the net CARES Act funding awarded to the System, the associated costs incurred during fiscal year 2019/20 as a result of COVID-19 are anticipated to have minimal impact on the System's overall financial performance. However, the future financial impact will be dependent upon enrollment impacts, the continuing need for social distancing, ongoing response efforts to mitigate COVID-19, and any potential resurgence.

In regard to the current impact of COVID-19, the largest component of the fiscal impact to date is the almost $70 million in refunds of spring semester housing, dining and other fees that System universities provided to students, excluding approximately $25 million in student housing refunds provided by university affiliates. Given the remote nature of most fall 2020 instruction, these auxiliary functions will continue to be negatively impacted by COVID-19 in the current fiscal year. Housing ownership and management varies by university and System universities are working closely with their recognized affiliated entities that either own or manage on-campus housing with respect to managing the financial impact of housing refunds. Universities continue to incur costs for remote learning, remote working and pandemic mitigation, as well as revenue losses due to the impact on enrollment and auxiliary functions.

In response to the impact of COVID-19, the Board of Governors approved a tuition freeze for the current academic year, to provide assurances and financial relief to current and potential students. On May 29, 2020, the Commonwealth appropriated level state funding for the State System at $477.5 million for the full upcoming fiscal year 2020/21, even though the majority of the Commonwealth's spending plan was enacted for only five months.

As of the date of this Official Statement, all counties in the Commonwealth have lifted the stay-at-home order although many restrictions continue to remain in effect throughout the Commonwealth.

The System continues to monitor and assess the effects of the COVID-19 pandemic and its impact on the System's financial position and operations. A full assessment of the impact on the System depends, in part, on the Commonwealth, federal and student responses to the impact of COVID-19. To date, System universities have been awarded or appropriated $116.8 million in funds from the CARES Act, of which $76.8 million is available to address the institutional impact of COVID-19. It is not possible, at present, to project the total impact on the System's revenues, expenditures, reserves, budgets, or financial position. Such impact will depend heavily on future events and actions by other governmental entities. No assurance can be given by the System at this time.

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Appendix II

2019 Audited Financial Statements

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PENNSYLVANIA'S STATE SYSTEM OF HIGHER EDUCATION

Pennsylvania's
STATE SYSTEM
of Higher Education

FINANCIAL STATEMENTS
JUNE 30, 2019

Pennsylvania's State System of Higher Education
Financial Statements
June 30, 2019

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INDEPENDENT AUDITORS' REPORT

Board of Governors
Pennsylvania State System of Higher Education
Harrisburg, Pennsylvania

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities and the aggregate discretely presented component units of Pennsylvania's State System of Higher Education ("the State System"), a component unit of the Commonwealth of Pennsylvania as of and for the years ended June 30, 2019 and 2018, and the related notes to the financial statements, which collectively comprise the State System's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We did not audit the financial statements of certain of the discretely presented component units, which represent 80.94 percent, 85.34 percent, and 86.79 percent, respectively, of the 2019 assets, net assets, and revenues and 81.5 percent, 82.7 percent, and 79.8 percent, respectively, of the 2018 assets, net assets, and revenues of the discretely presented component units. Those statements were audited by other auditors whose reports have been furnished to us, and our opinion, insofar as it relates to the amounts included for the discretely presented component units, is based solely on the reports of the other auditors. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Board of Governors
Pennsylvania's State System of Higher Education

Opinions

In our opinion, based on our audit and the reports of other auditors, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and the aggregate discretely presented component units of the State System as of June 30, 2019 and 2018, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 3-19, and the various schedules of Proportionate Share of Net Pension Liability, OPEB Liability, Proportionate Share of Net OPEB Liability, and Contributions on pages 61-64 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

CliftonLarsonAllen LLP

CliftonLarsonAllen LLP

Harrisburg, Pennsylvania
September 27, 2019

MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)

As members of the Commonwealth of Pennsylvania's (Commonwealth) public four-year higher education system, the 14 universities of Pennsylvania's State System of Higher Education (State System) are charged with providing high-quality education at the lowest possible cost to the students. With over 98,000 degree-seeking students enrolled, and thousands more enrolled in certificate and other career-development programs, the State System is the largest producer of bachelor's degrees in the Commonwealth. The campuses of the 14 universities encompass more than 4,800 acres and 900 physical plant structures. The universities function independently, but being part of the State System enables them to share administrative resources and academic courses and benefit from economies of scale.

The State System's financial statements comprise:
- Bloomsburg University of Pennsylvania.
- California University of Pennsylvania.
- Cheyney University of Pennsylvania.
- Clarion University of Pennsylvania, including its branch campus in Oil City.
- East Stroudsburg University of Pennsylvania.
- Edinboro University of Pennsylvania.
- Indiana University of Pennsylvania, including its branch campuses in Punxsutawney and Freeport.
- Kutztown University of Pennsylvania.
- Lock Haven University of Pennsylvania, including its branch campus in Clearfield.
- Mansfield University of Pennsylvania.
- Millersville University of Pennsylvania.
- Shippensburg University of Pennsylvania.
- Slippery Rock University of Pennsylvania.
- West Chester University of Pennsylvania.
- Office of the Chancellor, including the Dixon University Center in Harrisburg and the State System @ Center City Philadelphia.

SYSTEM REDESIGN

In 2016, the State System undertook a strategic review of all operations, with the goal of identifying the changes that are necessary to help ensure its long-term success. As a result of that review, the Board established three priorities:
- Ensuring student success.
- Leveraging university strengths.
- Transforming the governance/leadership structure.

In January 2019, the Board adopted the framework for System Redesign and endorsed the scope of measures for student and university success. System Redesign seeks long-range financial sustainability by leveraging the State System's operating scale and strengthening governance and accountability in a manner that drives to measurable outcomes with respect to universities' financial performance and students' success.

The work is being performed by a number of inclusive teams that leverage expertise across the State System and engage outside experts on an as-needed basis. The teams have been formed around three areas to move System Redesign forward: University Success, Academic Success, and Student Affairs & Enrollment Management (SA/EM).

As part of **University Success**, an Investment Team is establishing a strategy to improve overall financial sustainability for the State System, incorporating goals for a sharing system. A Budget Team is working to ensure that the State System's budget process results in consistent application of terms, guidelines, and expectations by all universities to result in reliable, consistent, and realistic projections based on audited financial data. The Budget Team will realign the State System's allocation of Commonwealth appropriations to the new budget planning and investment process.

As part of **Academic Success**, the Collaborative PASSHE Team is developing a cross-institutional delivery of academic programs that are identified as having significant capacity at individual institutions to ensure students' timely completion. A PASSHE Online Pathways Team is assessing need, readiness, and potential return on investment for an online Systemwide consortium for recruitment and student support services that will advance online degree completion and workforce development, especially for post-traditional students who have attained some college credits but not a desired degree. A Developmental Education Team is reviewing current approaches to meeting developmental education needs.

As part of **SA/EM**, a Holistic Advising Team is reviewing and researching university-specific advising approaches and national best practices. A Workforce Readiness Team is identifying discipline-specific competencies that map to career-specific competencies for students preparing to enter the workforce. A Financial Aid and Affordability Team is reviewing and researching proven successes and barriers to affordability and developing innovative strategies for awarding financial aid. A Mental Health and Wellness Team is reviewing and researching efforts on the growing mental health crisis to proactively address students' mental health needs.

Detailed information on the progress of System Redesign can be found at http://systemredesign.passhe.edu.

Financial Highlights

Following is an overview of the State System's financial activities for the year ended June 30, 2019, as compared to the year ended June 30, 2018, as well as future economic factors. The tables throughout do not include the effects of Governmental Accounting Standards Board (GASB) Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, or Statement No. 81, *Irrevocable Split-Interest Agreements*, for information presented for fiscal year 2016/17.

Tuition and Fees

In July 2019, the Board determined that it is critical to both student and university success that the State System universities control costs and use tuition and institutional aid strategically to keep tuition as low as possible for those with the greatest financial challenges, and further concluding that growth in the net average price of attendance threatens to undermine the value of higher education, the Board voted to **freeze tuition** for the 2019/20 academic year. This action represents only the second time that tuition was frozen in the State System's 36-year history. The last time the Board held the line on tuition was in fiscal year 1998/99. This action follows the Board's decision to limit the 2018/19 tuition increase to 2.99%, which had been the second smallest increase in more than a decade. The Board's actions ensure that the State System universities will remain as the **lowest-cost option** among all four-year colleges and universities in the state, with a cost that is less than half the amount charged by most others.

The base tuition rate for most full-time Pennsylvania residents—who comprise about 90% of all State System university students—will remain at $3,858 per term, or $7,716 for the full 2019/20 academic year. **Nonresident, undergraduate tuition** also was frozen, with rates ranging from $10,032 to $19,290 for the 2019/20 academic year. The basic resident **graduate tuition** rate remained at $516 per credit, while the typical nonresident, graduate tuition rate remained at $774 per credit.

In April 2019, the Board of Governors approved unprecedented revisions to the State System's **tuition policy**, based on the concept that State System universities will serve more Pennsylvanians if their pricing strategies are flexible and student-centered, recognizing differences in each university's region, program offerings, and characteristics of the individual student—especially the student's ability to pay. Beginning in fall 2020, these changes, coupled with eliminating restrictions on institutional aid, afford the State System universities the opportunity to adopt, with Board approval, a wide variety of pricing practices used across the nation in public higher education. The new policy calls for tuition to be tentatively set two years at a time to provide students and families more time to plan and greater predictability about their cost of attendance. The policy revisions will provide greater local responsibility and require greater accountability in strategic pricing decisions.

The **technology tuition fee** remains at $478 for full-time in-state students and $728 for full-time out-of-state students. All funds raised by the technology tuition fee are used directly to benefit student learning. Universities have used the funds to install multimedia classrooms, design online instructional materials, increase university capacity for connectivity for students, and provide hardware, software, and support for students and faculty.

The State System's typical **price of attendance** (tuition, mandatory fees, room, and board) for academic year 2019/20 is $21,912, compared to $21,682 in academic year 2018/19, with the difference caused by room, board, and other fees that are set by the universities. The average price of attendance among all four-year public universities in the United States in academic year 2018/19 was $21,370, while the average price of attendance for the Middle States region was $23,347.

Appropriations

As part of the System Redesign strategy affirmed by the Board of Governors in January 2019, the System has begun developing a new methodology for distributing resources. To this end, a **new allocation formula** will be established to distribute state appropriations, beginning with fiscal year 2020/21. In anticipation of changes to the allocation formula and to provide universities with greater stability and predictability of funding in the upcoming fiscal year, in April 2019 the Board suspended the use of the current allocation formula and performance funding program.

In fiscal year 2019/20, the State System will receive $477.5 million in **General Fund appropriations**, an increase of $9.4 million, or 2.0%, from fiscal year 2018/19. This compares to an increase of $15.0 million, or 3.3%, received in fiscal year 2018/19 over fiscal year 2017/18. Each university's fiscal year 2019/20 appropriation is set at the same amount as it received in fiscal year 2018/19, with the increase in appropriations—net of changes in the allocations for Systemwide initiatives and the Office of the Chancellor's statutory share—prorated to universities based on the fiscal year 2017/18 amount.

Over the last five years, the Commonwealth has restored about $64 million of the nearly $90 million in funding that was cut from the State System's annual appropriation at the beginning of the 2008 recession that severely impacted both the state and national economies and led to several years of funding cuts to the State System. Even with the five consecutive years of appropriation increases, however, the current year's appropriation is just slightly higher than what the System received in fiscal year 2008/09. Pennsylvania ranks 48th in the nation in per capita funding for higher education.

The State System received an $18.4 million Realty Transfer Tax allocation from the Commonwealth's **Key '93** (Keystone Recreation, Park and Conservation) Fund, an increase of $0.4 million, or 2.2%, from fiscal year 2017/18. With the exception of fiscal years 2009/10 and 2010/11, when no funding was received, Key '93 funds have provided a consistent revenue stream for university deferred maintenance projects since 1993.

The State System was allocated $73 million in **Commonwealth capital funding** in fiscal year 2019/20, primarily for the renovation, replacement, and demolition of existing educational and general (E&G) buildings, all of which is completed under the direction and project management of the Commonwealth. This compares to $70 million allocated in fiscal year 2018/19, which was a $5 million increase over the $65 million in capital funding that has been allocated to the State System annually since fiscal year 2000/01, with the exception of fiscal years 2009/10 and 2010/11, when $130 million was allocated. Except for associated furnishings and equipment, the universities do not record the value of Commonwealth-funded capital projects as revenue or assets, since the Commonwealth retains title to any part of a capital project for which they directly provide funding.

Enrollment

Fall 2018 student headcount was 98,094, a decrease of 4,207 students, or 4.1%, from fall 2017, and a decrease of 21,419 students, or 17.9%, from fall 2010, when the State System reached its highest point of 119,513 students. This is the eighth year in a row that the State System has experienced an **enrollment decline**, following 14 years of record growth. It also is the first time in 16 years that enrollment has dropped below 100,000; enrollment first reached the 100,000 mark in fall 2002, with 101,546 students.

Following is the history of State System student headcount enrollment since 2010.

Year	Fall Enrollment	% Change from Prior Year
2018	98,094	(4.1%)
2017	102,301	(2.4%)
2016	104,779	(2.2%)
2015	107,126	(2.3%)
2014	109,606	(2.2%)
2013	112,028	(2.1%)
2012	114,471	(3.2%)
2011	118,224	(1.1%)
2010	119,513	2.2%

Following is a breakdown of selected enrollment information, with nontraditional students defined as those 25 years of age or older.

Fall Enrollment	2018/19		2017/18	
Full-time	79,694	81%	84,098	82%
Part-time	18,400	19%	18,203	18%
Total	98,094		102,301	
Undergraduate	82,805	84%	86,971	85%
Graduate	15,289	16%	15,330	15%
Total	98,094		102,301	
Traditional	79,017	81%	82,537	81%
Nontraditional	19,077	19%	19,764	19%
Total	98,094		102,301	

In academic year 2017/18, the universities awarded 25,482 degrees, a slight decrease from the 25,541 degrees awarded in academic year 2016/17, and a 2% increase over the 24,985 degrees awarded in academic year 2015/16.

Degrees Awarded (Academic Year)	2017/18	2016/17	2015/16
Undergraduate	19,518	19,604	19,397
Master's	5,486	5,470	5,243
Associate's	478	467	345
Total	25,482	25,541	24,985

With an undergraduate population comprising approximately 90% Pennsylvania residents—and the majority of those being traditional-age students enrolling right out of high school—the State System's enrollment historically has been closely tied to the state's high school demographic trends. As the number of high school graduates in the state continues to drop, most of the universities are expecting their enrollments to continue to decline, resulting in reduced revenue. In its April 2019 Credit Opinion of the Commonwealth, Moody's Investors Service, Inc., (Moody's) notes that "Pennsylvania overall is a slowly growing but quickly aging state. Since 2000, Pennsylvania's population grew at the seventh slowest rate in the U.S. and it is the seventh oldest state in the U.S. measured by the share of residents aged 55 or older." Moody's further states that "A low birth rate and domestic out-migration are offset to some degree by immigration, but the prospects for a sustained reversal of very slow population growth and a falling prime working age population are low."

Since peaking at 131,733 students in academic year 2011/12, the number of **high school graduates** has dropped by 7.8% to 121,431 in academic year 2019/20. Following is the projected number of Pennsylvania high school graduates based on estimates from the Pennsylvania Department of Education.

Projected Pennsylvania High School Graduates

Fiscal Year	Number of Graduates	% Increase (Decrease)
2018/19	124,078	(0.6%)
2019/20	121,431	(2.1%)
2020/21	122,224	0.7%
2021/22	123,597	1.1%
2022/23	122,211	(1.1%)
2023/24	124,200	1.6%
2024/25	126,328	1.7%
2025/26	126,312	(0.0%)

The impact to the universities of the reductions in the number of high school graduates is compounded by a decline in the proportion of those who pursue higher education, an overcrowded higher education marketplace in the state, and increased admissions standards at several universities designed to improve long-range retention.

Employee Compensation Costs

In August 2019, the American Federation of State, County and Municipal Employees (**AFSCME**) signed a four-year contract with the Commonwealth, the provisions of which apply to State System employees who are represented by AFSCME. For the State System, AFSCME represents primarily clerical, administrative, technical, and maintenance and trade employees. The terms of the agreement provide for successive base salary increases in each of the next four fiscal years, as well as for successive increases in the employer contributions to the Pennsylvania

Employees Benefit Trust Fund (PEBTF) over three fiscal years:

Fiscal Year	Base Salary Increase	Increase in PEBTF Contributions
2019/20	3.0%	-
2020/21	2.0%	3.3%
2021/22	2.5%	3.4%
2022/23	2.5%	3.3%

The total four-year cost to the State System, including the associated employee benefits, is $49.8 million, or a 23.4% increase in total costs over fiscal year 2018/19.

The collective bargaining agreements for most of the remaining State System labor unions expired in June 2019, and all are under negotiation. An agreement in principle was reached in September 2019 for the faculty contract with the Association of Pennsylvania State College & University Faculties (**APSCUF**). The terms of the prior contracts remain in effect until a successor agreement is achieved. The Board has not approved future merit increases for employees not represented by a union.

In May 2019 the Board approved a **Voluntary Phased Retirement Program** in anticipation of full retirement for employee members of APSCUF. The program allows eligible faculty members to reduce their work commitment by between 50% and 99% over a period of one to three years. The faculty member's base salary and retirement plan contributions are prorated accordingly, but employer healthcare contributions continue as if the employee is full-time. This program is expected to be beneficial to both the faculty member and the university, allowing both parties to effectively plan ahead, and providing adequate time for tenured faculty members to share their knowledge and experience with the next generation of faculty prior to retirement. In the first year of the program, 34 faculty members have elected to participate. An estimate of the cost impact of the program has not yet been calculated.

Pension and OPEB Liabilities

The State System's liabilities related to **unfunded future pension and retiree healthcare costs total $3.33 billion** when combined with the respective deferred inflows of resources and deferred outflows of resources. The System has virtually no control over $1.8 billion of this amount, which represents its share of the plans administered by the Commonwealth, since the Commonwealth determines the associated benefits as well as the employer and retiree contribution rates for these plans.

The **Commonwealth's combined net pension and OPEB liabilities totaled $85.6 billion** at June 30, 2019, compared to $87.4 billion at June 30, 2018. Credit rating agencies consistently site these liabilities as significant challenges for both the State System and the Commonwealth and as factors that have contributed to credit rating downgrades. Recently enacted Commonwealth **pension legislation** will modify the pension benefits for new hires, slowing the rate of growth of the pension liability, but it will not aid in reducing the existing liability. No legislation has been enacted or proposed to either reduce or slow the growth of the OPEB liabilities administered by the Commonwealth, in which the AFSCME employees participate. The State System, however, closed the State System OPEB plan to new employees—except for employees represented by APSCUF—hired after January 2016. Although this will not reduce the existing liability, the new hires bring no additional OPEB liability, now or in the future.

Capital Investment and Debt

The State System purchased $241.0 million in **capital assets** in fiscal year 2018/19, which includes $203.9 million to build or improve academic and auxiliary facilities across all 14 universities.

During fiscal year 2018/19, the State System issued **Series AV bonds**, totaling $236.9 million. Of this amount, $36.2 million was used to current refund Series AG and a portion of Series AI bonds, and the remaining $200.7 million was used to undertake various capital projects at the universities, comprising:

- $134.6 million to acquire a student housing facility at Shippensburg University.
- $66.1 million to construct a mixed-use facility incorporating classrooms, laboratory space, office space, a new dining facility, and a parking garage at West Chester University.

Bond principal of $79.2 million and bond interest of $51.2 million were paid, bringing the total outstanding **bond debt** to $1.15 billion at June 30, 2019.
In August 2019, Moody's Investors Service, Inc. maintained the State System's **bond rating** of Aa3, stable outlook. In August 2019, Fitch Ratings affirmed the State System's rating of A+, stable outlook.

THE FINANCIAL STATEMENTS

Balance Sheet

The *Balance Sheet* reports the balances of the assets, deferred outflows of resources, liabilities, deferred inflows of resources, and net position of the State System as of the end of the fiscal year.

- *Assets* include cash; investments reported at market value; the value of outstanding receivables due from students and other parties; and land, buildings, and equipment reported at cost, less accumulated depreciation.

- *Deferred Outflows of Resources*, defined as a consumption of net position that applies to future periods, reports the deferred loss on bond defeasance and certain items associated with the pension and other postemployment benefits, or OPEB, liabilities (health and tuition benefits expected to be paid to eligible current and future retirees).

- *Liabilities* include payments due to vendors, employees, and students; revenues received but not yet earned; the balance of bonds payable; and amounts estimated to be due for items such as workers' compensation (the State System is self-insured), compensated absences (the value of sick and annual leave earned by employees), pension benefits, and OPEB.

- *Deferred Inflows of Resources*, defined as an acquisition of net position that applies to future periods, reports the deferred gain on bond defeasance, the fair value of irrevocable split-interest agreements, and certain items associated with the pension and OPEB.

- *Net Position*, informally referred to as *Net Assets* or *Fund Balance* (as it was previously called), is the sum of Assets and Deferred Outflows of Resources less Liabilities and Deferred Inflows of Resources.

Following is a summary of the State System's balance sheet at June 30, 2019, 2018, and 2017.

(in millions)

Balance Sheet

	June 30, 2019	Change from Prior Year	June 30, 2018	Change from Prior Year	June 30, 2017	Change from Prior Year
Assets						
Cash and investments	$1,308.9	0.2%	$1,305.8	(4.4%)	$1,365.7	(0.8%)
Capital assets, net	2,016.2	5.0%	1,920.4	1.1%	1,899.4	14.9%
Other assets and deferred outflows	524.6	27.9%	410.1	(3.5%)	424.8	12.8%
Total assets and deferred outflows	$3,849.7	5.9%	$3,636.3	(1.5%)	$3,689.9	8.3%
Liabilities						
Workers' compensation	$22.7	1.3%	$22.4	9.8%	$20.4	(7.7%)
Compensated absences	127.6	1.1%	126.2	5.6%	119.5	3.6%
Net pension liability	1,108.3	18.2%	937.8	(8.3%)	1,022.5	8.9%
Net OPEB liability	1,976.6	(15.0%)	2,324.6	103.0%	1,145.1	3.5%
Bonds payable	1,154.7	11.5%	1,035.6	(3.5%)	1,072.9	27.3%
Other liabilities and deferred inflows	1,070.1	40.0%	764.3	36.9%	558.4	11.1%
Total liabilities and deferred inflows	5,460.0	4.8%	5,210.9	32.3%	3,938.8	11.6%
Net Position						
Net investment in capital assets	839.6	5.1%	798.7	10.6%	722.4	1.8%
Restricted	152.3	2.7%	148.2	22.2%	121.3	6.0%
Unrestricted	(2,602.2)	3.2%	(2,521.5)	130.8%	(1,092.6)	15.5%
Total net position	(1,610.3)	2.3%	(1,574.6)	532.6%	(248.9)	104.0%
Total liabilities, deferred inflows, and net position	$3,849.7	5.9%	$3,636.3	(1.5%)	$3,689.9	8.3%

Net Position
Overall, **net position decreased by $35.8 million** in fiscal year 2018/19. This compares to a decrease of $1.326 billion in fiscal year 2017/18 from fiscal year 2016/17, and a decrease of $126.9 million in fiscal year 2016/17 from fiscal year 2015/16. The exceptionally large decrease in fiscal year 2017/18 is primarily the result of the implementation of GASB Statement No. 75, which alone caused net position to decrease by $1.280 billion from the prior year. In accordance with GASB requirements, the State System reports three components of net position:

- *Net investment in capital assets*, informally referred to as *NIP* (from its former name, *Net Investment in Plant*), is the cost of land, buildings, improvements, equipment, furnishings, and library books, net of accumulated depreciation, less any associated debt (primarily bonds payable). This balance is not available for the State System's use in ongoing operations since the underlying assets would have to be sold in order to use the balance to pay current or long-term obligations. The Commonwealth prohibits the State System from selling university land and buildings without prior approval.

- *Restricted* net position represents the portion of balances of funds received from the Commonwealth, donors, or grantors, who have placed restrictions on the purpose for which the funds must be spent. *Nonexpendable* restricted net position represents the corpus of endowments and similar arrangements in which only the associated investment income can be spent. *Expendable* restricted net position represents the portion of restricted funds that is available for expenditure as long as any external purpose and time restrictions are met.

- *Unrestricted* net position includes funds that the Board, chancellor, or university presidents have designated for specific purposes, auxiliary funds, and all other funds not appropriately classified as restricted or invested in capital assets.

Unrestricted net position includes **three liabilities that the State System does not fund**, along with the respective deferred outflows and deferred inflows of resources. Because these liabilities will be realized gradually over future years, and because of their size, the universities are expected to fund these liabilities only on a "pay-as-you-go" basis; i.e., as they become due.

- The liability for **compensated absences** represents the dollar value, based on an employee's current salary, of annual and sick leave that employees have earned and could potentially receive in the form of cash payouts upon retirement or other termination. All full-time employees are eligible to be paid, upon termination, for their accumulated unused annual, personal, and holiday leave, with a maximum annual accumulation of 45 days. Sick leave payouts, however, are subject to vesting requirements, and the value of accumulated unused sick leave is paid only to those employees who retire and meet service and/or age requirements, and it is capped depending upon the number of days accumulated. The liability for sick leave is estimated based on historical sick leave payouts.

  As employees earn and accumulate leave, the compensated absences liability increases; as employees use leave or terminate, the liability decreases. The liability increased by $1.4 million to $127.6 million for the year ended June 30, 2019, compared to a $6.7 million increase over the prior year for the year ended June 30, 2018. Universities fund this liability only as cash payouts are made to employees upon termination. In fiscal year 2018/19, cash leave payouts to employees totaled $12.3 million, compared to $10.4 million and $9.7 million in fiscal years 2017/18 and 2016/17, respectively. At June 30, 2019, the vested value of sick leave payable to employees upon retirement was $50.8 million, and the value of annual leave payable upon any termination was $35.3 million, for a total of $86.1 million, or 67.5% of the total liability, due and payable to employees.

- The **net pension liability**, along with the related deferred outflows and inflows of resources, is the State System's allocated share of the difference between the Commonwealth's defined benefit pension obligations and the funding set aside by the Commonwealth in a qualified trust to pay the future benefits that are promised to current employees, retirees, and their beneficiaries. The annual increase in the liability is the amount that current employees earn each fiscal year as a pension benefit, actuarially calculated based on years of service, age, and estimates of future service and employee longevity. The liability decreases when funding of the qualified trust increases and when employees or retirees leave the pension plans. The negative effect of this liability, along with the related deferred outflows and inflows of resources, on net position at June 30, 2019, was $910.4 million, compared to $861.4 million at June 30, 2018. Universities fund this liability on a "pay-as-you-go" basis; that is, they fund only the annual contractually required contributions to the State Employees Retirement System (SERS) and the Public School Employees Retirement System (PSERS).

- The liability for **other postemployment benefits, or OPEB,** represents the estimated future healthcare costs for current and future retirees. The annual increase in the liability is the amount that current employees earn each fiscal year as a retiree healthcare benefit, actuarially calculated based on years of service, age, and estimates of future service and employee longevity. The liability also increases as healthcare costs increase. The liability decreases when required contributions by retirees are increased, when the number of eligible employees decreases, and when retirees leave the plan. The negative effect of this liability, along with the related deferred outflows and inflows of resources, on net position at June 30, 2019, was $2.4 billion, compared to $2.5 billion at June 30, 2018. Like the pension liability, universities fund these liabilities on a "pay-as-you-go" basis: For the State System plan, universities make biweekly contributions to fund the actual claims incurred by retirees during the year; for the Retired Employees Health Program (REHP) and PSERS OPEB plans, the universities make contractually required contributions as determined by the Commonwealth.

Following is a summary of the effect of the three unfunded liabilities, including the related deferred outflows of resources (DOR) and deferred inflows of resources (DIR), on the State System's net position. The State System's Alternative Retirement Plan is a defined contribution plan and has no liability. The State System was not required to report a liability for the REHP OPEB and PSERS OPEB plans at June 30, 2017.

(in millions)

Effect of the Unfunded Liabilities, including the respective Deferred Outflows of Resources and Deferred Inflows of Resources, on Unrestricted Net Position

	June 30, 2019	June 30, 2018	June 30, 2017
Unrestricted Net Position when the effect of the unfunded liabilities is included	($2,602.3)	($2,521.5)	($1,092.6)
Pension Liabilities, including DOR and DIR			
SERS Pension	833.2	785.5	761.9
PSERS Pension	77.2	75.9	73.7
Alternative Retirement Plan	0	0	0
Total Pension Liabilities	910.4	861.4	835.6
OPEB Liabilities, including DOR and DIR			
SSHE OPEB Plan	1,529.1	1,541.7	1,145.1
REHP OPEB Plan	886.4	918.6	N/A
PSERS OPEB Plan	3.7	3.7	N/A
Total OPEB Liabilities	2,419.2	2,464.0	1,145.1
Compensated Absences Liability	127.6	126.2	119.5
Total Unfunded Liabilities, including DOR and DIR	$3,457.2	$3,451.6	$2,100.2
Unrestricted Net Position when the effect of the unfunded liabilities is excluded	$854.9	$930.1	$1,007.6

When the unfunded liabilities and related DOR and DIR are excluded, unrestricted net position decreased by $75.2 million, or 8.1%, from fiscal year 2017/18 to 2018/19, compared to a decrease of $77.5 million, or 7.7%, from fiscal year 2016/17 to 2017/18. The cumulative two-year decrease of $152.7 million, or 15.2%, is indicative of the declining revenues from enrollment losses as well as the continuing increases in employee salary and benefit costs, which together are straining university operations, draining cash, and requiring universities to draw from their reserves to balance operating budgets.

Statement of Revenues, Expenses, and Changes in Net Position

The *Statement of Revenues, Expenses, and Changes in Net Position* reports the revenues earned and the expenses incurred during the fiscal year. The result is reported as an increase or decrease in net position.

In accordance with GASB requirements, the State System has classified revenues and expenses as either operating or nonoperating. GASB has determined that all public colleges' and universities' **state appropriations are nonoperating revenues**. In addition, GASB requires classification of gifts, Pell grants, investment income and expenses, unrealized gains and losses on investments, interest expense, and gains and losses on disposals and acquisitions of assets as nonoperating. The State System classifies all of its remaining activities as operating

Revenues and Gains

Following is a summary of revenues and gains for the years ending June 30, 2019, 2018, and 2017.

(in millions)

Revenues and Gains

	June 30, 2019	Change from Prior Year	June 30, 2018	Change from Prior Year	June 30, 2017	Change from Prior Year
Operating revenues						
Tuition and fees, net	$841.4	(1.1%)	$850.5	(0.6%)	$855.7	2.0%
Grants and contracts	164.8	5.4%	156.3	(1.1%)	158.1	1.7%
Auxiliary enterprises, net	320.9	1.1%	317.4	(3.2%)	327.8	1.4%
Other	58.7	(3.8%)	61.0	2.0%	59.8	29.7%
Total operating revenues	1,385.8	0.0%	1,385.2	(1.2%)	1,401.4	2.7%
Nonoperating revenues and gains						
State appropriations	486.4	3.2%	471.1	2.3%	460.3	2.5%
Investment income, net	50.2	27.4%	39.4	12.6%	35.0	45.8%
Unrealized gain on investments	0.4	-	-	-	-	(100.0%)
Gifts, nonoperating grants, and other	181.2	(3.1%)	187.0	8.3%	172.7	(7.5%)
Total nonoperating revenues and gains	718.2	3.0%	697.5	4.4%	668.0	0.8%
Total revenues and gains	$2,104.0	1.0%	$2,082.7	0.6%	$2,069.4	2.1%

Overall, fiscal year 2018/19 **operating revenues** increased slightly over the prior fiscal year. Nonoperating revenues increased by 3.0%, for an overall increase in revenues and gains of 1.0%.

Tuition and fee revenue is shown net of discounts and allowances and bad debt expense. Discounts and allowances represent financial aid to students in the form of grants, scholarships, and waivers. Despite a 2.99% tuition increase and an average 4.7% increase in the mandatory fees set by the universities, the decline in enrollment resulted in an overall decrease of **net tuition and fee revenue** of $9.1 million in fiscal year 2018/19, or 1.1%, from fiscal year 2017/18. This follows a decrease in net tuition and fee revenue of $5.2 million, or 0.6%, in fiscal year 2017/18 over fiscal year 2016/17.

Total **financial aid to students** in the form of grants, waivers, and scholarships was $306.8 million in fiscal year 2018/19, compared to $308.6 million in fiscal year 2017/18. Financial aid from outside sources decreased by $6.7 million, or 2.6%, in fiscal year 2018/19: Federal Pell grants and other federal aid decreased by $3.6 million, while Pennsylvania Higher Education Assistance Agency (PHEAA) grants decreased by $4.8 million, over fiscal year 2017/18. The decrease in PHEAA grants follows a decrease of $5.1 million in fiscal year 2017/18 from fiscal year 2016/17, for a cumulative two-year decrease of $9.9 million, or 10.8%. Financial aid from all other sources increased by $1.7 million over fiscal year 2017/18.

Following is the breakdown of financial aid in fiscal years 2018/19 and 2017/18.

(in millions)

Student Financial Aid

	2018/19	**2017/18**
Federal Pell grants	$136.0	$139.3
Other federal aid	5.2	5.5
State financial aid including PHEAA grants	81.5	86.3
Local government financial aid	0.4	0.3
Scholarships from endowments and restricted gifts and grants	18.1	17.7
Unrestricted scholarships and fellowships	12.9	11.7
Tuition and fee waivers and institutional scholarships	49.9	45.1
Housing and dining waivers and institutional scholarships	2.8	2.7
Total	$306.8	$308.6

Tuition, housing, and dining **waivers and institutional scholarships** granted by the universities increased $4.9 million in fiscal year 2018/19 over 2017/18, which follows an increase of $9.3 million in fiscal year 2017/18 over fiscal year 2016/17, for a cumulative two-year increase of $14.2 million, or 37.0%. Waivers and institutional scholarships represent discounts offered to students for which there is no outside funding source to replenish the lost operating revenue.

The new tuition policy approved by the Board in April 2019, however, will allow the universities to increase tuition discounting, under the theory that discounting can be used to optimize both enrollment and net tuition revenue; that is, it may result in more students choosing to attend the university, pay for most of their tuition, and possibly purchase student housing and dining services.

According to the EAB's *Current Higher Education Landscape, 2018*, approximately 48 percent of students attending public universities nationwide received institutional financial aid, resulting in an overall average tuition discount rate of 23%. By comparison, State System universities have discounted tuition by about 12% for approximately 27% of its students. It is expected that by allowing universities to craft their own tuition plans, taking into consideration regional economic differences such as household income, cost of living, regional buying power, individual program costs, and the specific needs of potential students, including the ability to pay, the new tuition policy will increase access, affordability, and completion for Pennsylvania's students.

Auxiliary enterprises revenue, which includes food service sales, housing fees, and fees for the operation, maintenance, debt service, and renewal of student union and recreation centers, increased by $3.5 million in fiscal year 2018/19, or 1.1%, over fiscal year 2017/18. This compares to a decrease of $10.4 million in fiscal year 2017/18 from fiscal year 2016/17. The 2017/18 decrease can be attributed to declining enrollment, while the 2018/19 increase was due primarily to the additional revenue from a housing operation that has been newly acquired by Shippensburg University from its affiliate.

State appropriations include cash as well as capital appropriations that are received in the form of noncash furnishings and equipment for the Commonwealth-funded construction projects. The fiscal year 2018/19 general cash appropriation was $468.1 million, a $15.0 million increase over fiscal year 2017/18, while capital appropriations were $18.2 million, a $0.2 million increase over fiscal year 2017/18.

Investment income (net of related investment expenses) for fiscal year 2018/19 was $50.2 million. This represents an increase of $10.8 million over fiscal year 2017/18. The increase is due partly to rising interest rates during the fiscal year. Rates moved from a low of 1.46% in fiscal year 2017/18 to a high of 2.50% during fiscal year 2018/19. The overall average change in rates from fiscal year 2017/18 to fiscal year 2018/19 was an increase of 64 basis points, or 37.7%. Also contributing to the increase in investment income is $19.4 million of investment earnings in the reimbursement bond investment portfolio, which is dedicated to pay associated debt service.

Expenses and Losses
Following is a summary of expenses and losses for the years ending June 30, 2019, 2018, and 2017.

(in millions)

Expenses and Losses

	June 30, 2019	Change from Prior Year	June 30, 2018	Change from Prior Year	June 30, 2017	Change from Prior Year
Operating expenses						
Instruction	$750.5	(0.7%)	$755.6	(3.1%)	$779.8	4.1%
Research and public service	59.4	16.5%	51.0	4.3%	48.9	7.0%
Academic support	183.3	(4.1%)	191.1	3.1%	185.4	0.8%
Student services	190.2	(0.1%)	190.3	0.4%	189.6	2.7%
Institutional support	256.0	(3.7%)	265.7	5.0%	253.0	(1.7%)
Operations and maintenance of plant	145.3	(10.3%)	162.0	1.7%	159.3	(0.4%)
Depreciation	143.9	5.5%	136.4	3.1%	132.3	8.7%
Student aid	71.9	(4.6%)	75.4	(1.3%)	76.4	(3.4%)
Auxiliary enterprises	254.5	(0.2%)	255.1	(1.5%)	259.0	2.0%
Total operating expenses	2,055.0	(1.3%)	2,082.6	(0.1%)	2,083.7	2.4%
Other expenses and losses						
Interest expense on capital asset-related debt	42.0	13.2%	37.1	(2.9%)	38.2	12.7%
Loss on disposal/acquisition of assets	28.3	1130.4%	2.3	(95.8%)	54.8	167.3%
Unrealized loss on investment	-	(100%)	19.6	(0.5%)	19.7	-
Total other expenses and losses	70.3	19.2%)	59.0	(47.6%)	112.7	107.2%
Total expenses and losses	$2,125.3	(0.8%)	$2,141.6	(2.5%)	$2,196.4	5.1%

The decrease in **operating expenses** of $27.6 million, or 1.3%, in fiscal year 2018/19 compared to fiscal year 2017/18 is attributed to the $61.3 million decrease in the actuarially calculated pension and OPEB expenses in excess of pay-as-you-go contributions. Without the effect of these non-cash expenses, fiscal year 2018/19 operating expenses increased by $33.7 million, or 1.7%, over fiscal year 2017/18. Of this amount, $24.5 million is attributed to an increase in salaries and benefits.

Salaries and wages totaled $931.8 million in fiscal year 2018/19, an increase of $19.8 million, or 2.2%, over fiscal year 2017/18. The increase is the result of the salary increases granted in collective bargaining agreements, a slight increase in complement, and a $1.9 million increase in leave payouts. Total permanent salaried complement, which excludes temporary and wage employees, increased to 10,180 in fall 2018, compared to 10,101 in fall 2017 and 10,248 in fall 2016. Complement decreased to 10,075 in fall 2019.

When the effects of the non-cash pension and OPEB expenses in excess of contributions are factored out, fiscal year 2018/19 **employee benefits** totaled $442.3 million, an increase of $4.7 million, or 1.1%, over fiscal year 2017/18.

Following is a summary of salaries, wages, and benefits expenses for the years ending June 30, 2019, 2018, and 2017.

(in millions)

Salaries, Wages, and Benefits

	June 30, 2019	Change from Prior Year	June 30, 2018	Change from Prior Year	June 30, 2017	Change from Prior Year
Salaries and wages	$931.8	2.2%	$912.0	0.6%	$906.5	3.0%
Employer benefit contributions						
Employee healthcare	123.6	(3.6%)	128.2	(2.3%)	131.2	(4.3%)
Pension benefits	152.2	3.0%	147.7	8.4%	136.3	19.6%
Retiree healthcare	63.1	6.4%	59.3	(15.9%)	70.5	(12.3%)
Other benefits	103.4	1.0%	102.4	4.1%	98.4	1.2%
Total employer benefit contributions	442.3	1.1%	437.6	(0.3%)	436.4	2.3%
Noncash pension and OPEB expense						
Pension expense	58.7	(64.9%)	35.6	(40.5%)	59.8	(4.3%)
Retiree healthcare expense	(44.7)	(212.6%)	39.7	1.5%	39.1	19.6%
Total noncash pension and OPEB expense	14.0	(81.4%)	75.3	(23.9%)	98.9	(12.3%)
Total salaries, wages, and benefits	$1,388.1	(2.6%)	$1,424.9	(1.2%)	$1,441.8	2.7%

The employer share of **employee healthcare contributions** decreased by $4.6 million in fiscal year 2018/19, or 3.6%, from fiscal year 2017/18. This follows a decrease of $3.0 million, or 2.3%, in fiscal year 2017/18, and a decrease of $5.9 million, or 4.3% in fiscal year 2016/17, over the prior fiscal years. This cumulative three-year $13.5 million decrease can be attributed to design changes in the plan administered by the State System, which increased employees' share of expenses through higher employee premium contributions, copays, deductibles, and coinsurance, and limited spousal participation. These reductions were partially offset, however, by a premium increase of 2.75%, or $1.2 million, in the plan administered by the PEBTF.

The employer share of **retiree benefits contributions** increased by $8.2 million, or 4.0%, in fiscal year 2018/19 over fiscal year 2017/18. This follows an increase of $0.3 million, or 0.1%, and an increase of $11.0 million, or 5.7%, in fiscal years 2017/18 and 2016/17, respectively, over the prior fiscal years. Following is a summary of the State System's contributions for retiree pension and healthcare benefits for the years ending June 30, 2019, 2018, and 2017.

(in millions)

State System Employer Contributions for Retiree Pension and Healthcare Benefits

	June 30, 2019	Change from Prior Year	June 30, 2018	Change from Prior Year	June 30, 2017	Change from Prior Year
Pension						
SERS	$97.5	3.0%	$94.7	13.0%	$83.8	21.4%
PSERS	8.6	8.9%	8.0	11.3%	7.1	18.3%
ARP	46.1	2.2%	45.1	(0.4%)	45.3	3.2%
Retiree Healthcare						
System Plan	37.1	(1.6%)	37.7	(2.1%)	38.5	(2.8%)
REHP	25.8	20.6%	21.4	(32.9%)	31.9	(13.8%)
PSERS Healthcare	0.2	0.0%	0.2	0.0%	0.2	0.0%
Totals	$215.3	4.0%	$207.1	0.1%	$206.8	5.7%

- **Employer contributions to SERS**, a defined benefits pension plan, were 34.63% of a participating employee's salary for the majority of participants in fiscal year 2018/19. This rate has been steadily and significantly increasing since fiscal year 2010/11, when the rate was 4.11% of an employee's salary. The rate increases to 36.04% in fiscal year 2019/20 and is expected to remain at about the same rate for the near future. According to SERS, 15% of the fiscal year 2019/20 contributions will go to fund the benefits of new SERS members in the current year and 85% will go to pay down the unfunded liability. At December 31, 2018, 56.4% of the SERS liability was funded. Approximately 40% of the State System's employees are enrolled in SERS.

- **Employer contributions to PSERS**, a defined benefits pension plan, were 16.30% of a participating employee's salary in fiscal year 2018/19. This rate also has been significantly increasing, with some fluctuation, since fiscal year 2010/11, when the rate was 2.82% of an employee's salary. The rate increases to 16.725% in fiscal year 2019/20, and is expected to steadily increase over the near future. The Commonwealth makes annual pension contributions to PSERS on behalf of State System employees at the same annual rate. According to PSERS, 75% of the employer contribution rate is for past service, a debt already earned that must be paid. At June 30, 2018, 54.0% of the PSERS liability was funded. Since approximately only 7% of the State System's employees are enrolled in PSERS, the impact of contribution rate increases from PSERS is far less than the impact from SERS.

- **Employer contributions to the ARP**, a defined contribution plan, were 9.29% of a participating employee's salary in fiscal year 2018/19, the same rate since the plan's inception, and are expected to remain at the same rate for the near future. Because it is a defined contribution plan, the ARP has no unfunded liability. Approximately 49% of the State System's employees are enrolled in the ARP.

- **Employer contributions to the State System OPEB Plan**, a defined benefits retiree healthcare plan administered by the State System, are made to a third-party health insurance vendor based on claims estimates agreed to by the State System and the third-party vendor. The vendor charges an additional assessment or issues a cash refund in the following year to reconcile to the actual claims paid. Despite the increasing population of retirees and rising healthcare costs, the State System has seen flat or declining healthcare spending in this plan from retirees for the last several years. This can be attributed in part to design changes that increased retirees' share of expenses through higher retiree premium contributions, copays, deductibles, and coinsurance. The employer rate for fiscal year 2018/19 was set at $184 per active participating employee per pay and remains the same in fiscal year 2019/20. Future year changes will depend upon actual claims experience. As of June 30, 2019, no funds have been placed in a trust to fund the future liability.

- **Employer contributions to the REHP**, a defined benefits retiree healthcare plan administered by the PEBTF, were $300 per active participating employee in fiscal year 2018/19, dropping to $230 in fiscal year 2019/20. The contribution rate is set at the discretion of the Commonwealth and periodically fluctuates, ranging from $200 in fiscal year 2010/11 to $418 in fiscal year 2015/16. The rate is projected to be $239.20 in fiscal year 2020/21. At June 30, 2019, only 2.2% of the REHP liability was funded.

- **Employer contributions to the PSERS Health Insurance** Premium Assistance Program, a defined benefits retiree healthcare plan administered by PSERS, were 0.415% of a participating employee's salary in fiscal year 2018/19. The rate has been and is expected to remain at approximately the same amount. Any State System retiree who is a member of PSERS is eligible for this additional healthcare benefit, which offers up to $100 per month of reimbursements for healthcare costs, including insurance premiums.

The cost for **all other employee benefits**, such as Social Security and workers' compensation, increased in fiscal year 2018/19 by a total of $1.0 million, or 1.0%, over fiscal year 2017/18, compared to a fiscal year 2017/18 increase of $4.0 million, or 1.7%, over fiscal year 2016/17. The increases can be attributed to the increase in salaries and wages, since these benefits are based on a percentage of salaries and wages.

Other Expenses and Losses

Interest expense on capital asset-related debt was $42.0 million, an increase of $4.9 million over fiscal year 2017/18, which can be attributed to a $119.1 million increase in debt at June 30, 2019. Offsetting the increase is the State System's annual practice of refunding existing debt with debt that carries lower interest rates. Also offsetting debt increases is the faster amortization of the State System's older, more expensive, debt, as a higher ratio of debt service is applied to principal rather than interest in the later years of the payment schedules.

Privatized Housing Acquisition

In fiscal year 2018/19, Shippensburg University acquired all six of the student residence halls on campus property that had been constructed by their affiliate, Shippensburg University Student Services, Inc. The book value of the housing at the time of acquisition was $105.0 million, but the debt issued on the housing was $132.1 million, resulting in a **loss on acquisition of $27.1 million**. Despite the negative effect on its balance sheet, over the 27-year debt term the university expects to reduce debt service payments by about $31.8 million and avoid an estimated $18.5 million in operating costs such as ground lease payments, management fees, insurance, and payments in lieu of taxes.

Statement of Cash Flows

The *Statement of Cash Flows* provides information about the State System's cash receipts and cash payments. It can be used to determine the State System's ability to generate future net cash flows and meet its obligations as they come due and its need for external financing.

The universities record their share of the State System pooled deposits and investments account at cost; that is, without regard to the fair value of the underlying investments. The associated markup or markdown for the fair value, as well as the annual unrealized gains or losses on investments, are recorded only at the consolidated level. In fiscal year 2018/19, the unrealized loss on the State System pooled deposits and investments account was $3.7 million, while the accumulated fair value markup at June 30, 2019, was $65.1 million. This compares to an unrealized loss on investments in fiscal year 2017/18 of $23.6 million and an accumulated fair value markup of $68.8 million at June 30, 2018. The unrealized losses are a result of rising interest rates, which cause the prices of fixed-income securities to decline from the prior fiscal year. It is important to note that the strategy of the investment portfolio is to buy quality investments and hold to maturity; therefore, unrealized gains and losses will not be realized.

The combination of factors such as years of relatively low appropriations, declining enrollment, low interest rates, increasing personnel costs, and high long-term debt continues to cause **cash flow pressures** for some State System universities. Total unrestricted operating cash (combined Educational & General and Auxiliary) decreased by $9.6 million, or 1.0%, in fiscal year 2018/19, to $979.6 million, compared to a balance of $989.1 million at June 30, 2018. Cash flow weaknesses, which can seriously challenge financial viability, have begun to significantly affect most universities, with West Chester University being a notable exception: West Chester increased cash by $44.4 million, to a balance of $261.2 million at June 30, 2019, although $65.3 million of this total represents bond project cash held by a trustee and $53.8 million represents cash that is pledged for capital projects and held by the Office of the Chancellor. When West Chester is excluded, the remaining universities saw a decrease in unrestricted operating cash of $53.9 million in fiscal year 2018/19.

Despite the sharp decline, most universities still have relatively strong cash balances, but the cash balances at some universities are rapidly being depleted, presenting cash flow challenges, especially during the summer months between spring and fall tuition collections. The Office of the Chancellor is monitoring universities whose cash, revenue, expenditure, and enrollment trends may be an indication of future cash flow weaknesses.

- **Cheyney University's** unrestricted operating cash and investments were $5.6 million at June 30, 2019, but the university has required interest-free short-term appropriation anticipation notes issued by the Office of the Chancellor to maintain a positive cash balance and meet biweekly payroll cash needs. The appropriation anticipation notes are paid back as the monthly appropriations are received.

  A further challenge to its cash flows is that Cheyney has been on the Department of Education's (ED) Heightened Cash Monitoring 2 (HCM2) status since September 2015, which means that the university does not receive federal student financial aid funds in advance, but must use its own cash to grant federal financial aid to its students and then request reimbursement from the ED. At June 30, 2019, the receivable from ED was $15.9 million. As a result, the Office of the Chancellor has issued federal financial aid anticipation loans to Cheyney, which totaled $6.6 million at June 30, 2019.

In addition, Cheyney borrowed more than $34 million from the State System's pooled deposits and investments account, which it owes to the other 13 universities and the Office of the Chancellor. In August 2017 the Board approved a plan to forgive this debt provided that Cheyney meets certain fiscal conditions over the next several years, but while Cheyney would benefit from this action, the other 13 universities and the Office of the Chancellor would record a $34 million reduction in cash and a corresponding expense. This would cause additional cash flow stress to the other universities, especially to those that have relatively low cash balances.

To ensure the security of the cash inflows to Cheyney that have been restricted as to purpose by the donor or grantor, separate bank and investment accounts have been established for these funds, and access to them requires the approval of the Office of the Chancellor. The university continues to reduce expenditures and is seeking alternative sources of revenue in an effort to stabilize its cash flow. Additional details on the status of Cheyney University can be found in note 15 of this document.

- After a fiscal year 2017/18 increase of $0.8 million, **Clarion University's** unrestricted operating cash and investments dropped $3.2 million in fiscal year 2018/19. Since June 30, 2014, Clarion's unrestricted cash and investments have decreased by 69.4%, or $24.9 million, from $35.9 million at June 30, 2014, to $11.0 million at June 30, 2019. Clarion's monthly payroll approximates $5.2 million and its annual debt service is about $0.9 million. Clarion's bond debt at June 30, 2019, was $6.6 million.

- **Mansfield University's** unrestricted operating cash and investments decreased by $5.6 million in fiscal year 2018/19. Since June 30, 2014, Mansfield's unrestricted cash and investments have decreased by 62.4%, or $14.6 million, from $23.4 million at June 30, 2014, to $8.8 million at June 30, 2019. With a monthly payroll approximating $2.6 million, and annual debt service approximating $6.7 million, Mansfield is projecting that its unrestricted cash reserves will be depleted by spring of 2020. Mansfield's bond debt at June 30, 2019, was $90.8 million.

- Among the universities with stronger cash balances, those with sharp decreases in fiscal year 2018/19 unrestricted operating cash and investments included **Bloomsburg University**, with a decrease of $8.5 million, to $89.5 million at June 30, 2019; **Edinboro University**, with a decrease of $10.6 million, to $33.4 million at June 30, 2019, and **Indiana University**, with a decrease of $10.1 million, to $94.7 million at June 30, 2019.

Other Economic Factors

The **Commonwealth** ended fiscal year 2018/19 with $34.9 billion in General Fund collections, just slightly higher than the previous year and 2.6% above estimate. Combined with reductions in budgeted expenditures, the Commonwealth ended the year with a projected $316.9 million surplus, which was transferred into the Commonwealth's Rainy Day Fund, the largest such transfer in nearly two decades. In June 2019, Governor Tom Wolf signed a fiscal year 2019/20 Commonwealth budget with a $34 billion spending plan that contains no new taxes. The spending plan provides more than $300 million for education, which the governor states is his top priority, and includes a funding increase of 2 percent for higher education.

Moody's Investors Service, Inc., stated the following in its April 2019 Credit Opinion of the Commonwealth:

> *The Commonwealth of Pennsylvania's (Aa3 stable) below average state rating reflects its high leverage and fixed costs, and its very slim budget reserves. Over the past several years, the state steadily increased its pension contributions to address rising unfunded liabilities and these higher costs have been a source of fiscal pressure. The state has also relied on nonrecurring solutions to address budget gaps, most recently in 2018 when it issued $1.5 billion of debt to eliminate an underlying deficit in its budget reserve account. Since eliminating the deficit, the state's rainy day fund has remained very limited and budgetary spending is often supported by cash flow support from the state treasurer. At the same time, the treasury's pool of liquidity is a credit strength that obviates the need to borrow externally for cash flow.*

Cheyney Accreditation
As detailed in note 15 of this document, the Middle States Commission on Higher Education (Middle States) accreditation organization placed Cheyney University on probation in November 2015 "because of insufficient evidence that the institution is currently in compliance with Standard 3 (Institutional Resources)." Standard 3 requires, among other things, that an institution demonstrate that it has sufficient resources to support both its programs of study and students' academic progress.

With the help of a $2.5 million unrestricted grant from the Commonwealth, and two separate gifts of $500,000 from corporate donors, Cheyney ended fiscal year 2018/19 with a $1.96 million surplus in unrestricted operations, net of the effect of the unfunded pension and OPEB liabilities. In August 2019, however, the ED notified Cheyney that it was assessing a repayment liability of $14.3 million to Cheyney for the federal student financial aid improperly administered during fiscal years 2011/12, 2012/13, and 2013/14. Recording this assessment resulted in an overall unrestricted loss of $12.3 million for fiscal year 2018/19. As of the date of this document, no action has been taken on the ED's assessment.

At June 30, 2019, Cheyney's unrestricted net position deficit was $42.0 million. This is a result of the current year loss, plus unrestricted losses of $4.6 million in fiscal year 2017/18 and $7.4 million in fiscal year 2016/17, and five previous years of annual losses totaling $18.9 million. The university has made significant cuts to administration and staff, reorganized business and campus operations, and placed some academic programs into moratorium to help balance the budget and better align academic programs with the future of the university. Cheyney's fall 2018 headcount enrollment was 469, significantly lower than its fall 2017 enrollment of 755. Due to an aggressive recruitment process, however, fall 2019 enrollment is projected to exceed 600 students.

The State System, through the Office of the Chancellor, continues to provide oversight to Cheyney's leadership in an attempt to stabilize its financial condition and implement a comprehensive plan that includes timely and accurate financial aid processing, increasing student enrollment, revitalizing its academic program array, and right-sizing personnel and facilities. Additional information on Cheyney University can be found in note 15 of this document.

Rating Agencies
In August 2019, **Fitch Ratings, Inc.**, assigned an A+ rating to the State System's Series AW bonds, and affirmed the A+ rating on the State System's remaining portfolio of outstanding bonds, with an outlook of stable. Fitch notes that the State System's position as the largest provider of public higher education in the state has garnered consistent state support, but that it remains challenged by market factors that have materially pressured demand in recent years, with a primarily in-state draw and constrained pricing flexibility against declining enrollment. Although Fitch's expectation is that the State System will have limited ability to generate increasing tuition revenue going forward, it notes that the State System has a track record of "largely managing its expense base to revenue pressures as necessary." Fitch further states that "The ongoing strategic efforts being undertaken by the new chancellor have focused in part on 'system-ness' and should yield sustainable efficiencies and support more robust strategic financial planning efforts going forward."

In its August 8, 2019, *Credit Opinion*, **Moody's Investors Service, Inc.**, reaffirmed the State System's bond rating of Aa3, with a stable outlook. Moody's notes:

> *The State System of Higher Education, PA's (PASSHE, Aa3/stable) credit profile is supported by its substantial operating scale, its essentiality as a distributed public university system for the Commonwealth of Pennsylvania (Aa3 stable), and maintenance of favorable wealth and liquidity relative to peers despite the pressured fiscal environment. New leadership is progressing on its aggressive system redesign goals that include rationalizing decision making authority, creating greater coordination and alignment among the diverse campuses, and developing strategies to ensure sufficient resources to sustain its academic and social missions. The leverage profile is elevated compared to peer systems, though debt retires rapidly and PASSHE maintains sufficient capacity to absorb the moderate level of additional borrowing planned.*

Moody's notes as the State System's challenges: operating in a highly competitive student market while challenged by weak demographics; well above average reliance on student-derived revenues, exacerbated by the impact of a tuition freeze approved for fall 2019; high overall leverage, with \$2.4 billion of debt, inclusive of affiliates, and \$1.8 billion of unfunded pension liabilities; and a challenging labor and collective bargaining environment that affects cost containment efforts. Moody's notes as the State System's strengths: its sizable balance sheet reserves, albeit at declining levels; its significant scale as one of the nation's largest higher education systems; strong fiscal oversight that maintains operating performance; a rapidly amortizing debt structure; and a highly engaged leadership team, with comprehensive strategic plans, working with its many constituent groups.

*For **further information** about these financial statements, contact Pennsylvania's State System of Higher Education, Accounting Office, 2986 North Second Street, Harrisburg, PA 17110.*

Pennsylvania's State System of Higher Education

Balance Sheet

(dollars in thousands)

Assets and Deferred Outflows of Resources

	June 30, 2019	June 30, 2018
Current Assets		
Cash and cash equivalents	$ 33,626	$ 44,017
Short-term investments	686,442	588,029
Accounts receivable, students, net	45,996	45,413
Accounts receivable, other	26,435	29,324
Governmental grants and contracts receivable	30,511	19,095
Prepaid expenses	14,443	13,599
Current portion of loans receivable	7,158	8,969
Due from component units	11,445	15,058
Other current assets	7,274	7,266
Total Current Assets	863,330	770,770
Noncurrent Assets		
Restricted cash and cash equivalents	25	25
Long-term investments, including endowments	588,807	673,748
Beneficial interests	23,917	23,493
Loans receivable	25,250	31,145
Due from component units	1,072	946
Capital assets, net of accumulated depreciation	2,016,155	1,920,448
Other noncurrent assets	704	1,300
Total Noncurrent Assets	2,655,930	2,651,105
Total Assets	3,519,260	3,421,875
Deferred Outflows of Resources	330,493	214,403
Total Assets and Deferred Outflows of Resources	$ 3,849,753	$ 3,636,278

See accompanying notes to financial statements.

Pennsylvania's State System of Higher Education

Balance Sheet *(continued)*
(dollars in thousands)

Liabilities, Deferred Inflows of Resources, and Net Position

	June 30, 2019	June 30, 2018
Current Liabilities		
Accounts payable and accrued expenses	$ 243,007	$ 233,030
Unearned revenue	48,076	49,959
Deposits	6,381	5,717
Current portion of workers' compensation liability	4,779	4,630
Current portion of compensated absences liability	12,894	11,401
Current portion of OPEB liability	62,924	59,098
Current portion of capitalized lease obligations	3,899	4,075
Current portion of bonds payable	86,590	74,270
Due to component units	12,569	11,894
Other current liabilities	54,160	54,033
Total Current Liabilities	535,279	508,107
Noncurrent Liabilities		
Unearned revenue	899	2,030
Workers' compensation liability, net of current portion	17,948	17,818
Compensated absences liability, net of current portion	114,738	114,800
Net pension liability	1,108,260	937,757
OPEB liability, net of current portion	1,913,725	2,265,515
Capitalized lease obligations, net of current portion	26,958	39,173
Bonds payable, net of current portion	1,068,070	961,300
Other noncurrent liabilities	105,628	94,998
Total Noncurrent Liabilities	4,356,226	4,433,391
Total Liabilities	4,891,505	4,941,498
Deferred Inflows of Resources	568,447	269,383
Net Position		
Net investment in capital assets	839,644	798,665
Restricted for:		
Nonexpendable:		
Scholarships and fellowships	57,339	55,200
Student loans	4,749	5,050
Other	3,228	3,249
Expendable:		
Scholarships and fellowships	30,602	29,599
Capital projects	38,265	37,405
Other	18,164	17,765
Unrestricted	(2,602,190)	(2,521,536)
Total Net Position	(1,610,199)	(1,574,603)
Total Liabilities, Deferred Inflows of Resources, and Net Position	$ 3,849,753	$ 3,636,278

See accompanying notes to financial statements.

Pennsylvania's State System of Higher Education

Statement of Revenues, Expenses, and Changes in Net Position
For the Years Ended June 30, 2019 and 2018

(dollars in thousands)

	2019	2018
Operating Revenues		
Tuition and fees, net	$ 841,415	$ 850,495
Grants and contracts	164,883	156,285
Sales and services	42,077	41,717
Auxiliary enterprises, net	320,884	317,398
Other revenues, net	16,615	19,322
Total Operating Revenues	1,385,874	1,385,217
Operating Expenses		
Instruction	750,456	755,638
Research and Public Service	59,301	50,983
Academic support	183,312	191,062
Student services	190,256	190,322
Institutional support	255,983	265,714
Operations and maintenance of plant	145,333	162,005
Depreciation	143,899	136,422
Student aid	71,911	75,369
Auxiliary enterprises	254,518	255,111
Total Operating Expenses	2,054,969	2,082,626
Operating Loss	(669,095)	(697,409)
Nonoperating Revenues (Expenses)		
State appropriations, general and restricted	468,108	453,108
Pell grants	136,010	139,304
Investment income, net	50,198	39,367
Unrealized gain (loss) on investments	402	(19,595)
Gifts for other than capital purposes	22,852	21,300
Interest expense on capital asset-related debt	(42,025)	(37,105)
Loss on disposal/acquisition of assets	(28,322)	(2,267)
Other nonoperating revenue	11,410	11,279
Net Nonoperating Revenues	618,633	605,391
Loss before other revenues and special item	(50,462)	(92,018)
State appropriations, capital	18,244	18,023
Capital gifts and grants	10,930	15,121
Loss before special item	(21,288)	(58,874)
Special item - regulatory matter	(14,308)	-
Decrease in Net Position	(35,596)	(58,874)
Net position—beginning of year, as restated	(1,574,603)	(1,515,729)
Net position—end of year	$ (1,610,199)	$ (1,574,603)

See accompanying notes to financial statements.

Pennsylvania's State System of Higher Education

Statement of Cash Flows
For the Years Ended June 30, 2019 and 2018
(dollars in thousands)

	2019	2018
Cash Flows from Operating Activities		
Tuition and fees	$ 841,039	$ 848,577
Grants and contracts	152,805	160,206
Payments to suppliers for goods and services	(486,118)	(486,334)
Payments to employees	(1,367,042)	(1,339,840)
Loans issued to students	(169)	(5,328)
Loans collected from students	6,684	6,054
Student aid	(72,519)	(75,935)
Auxiliary enterprise charges	320,334	315,836
Sales and services	41,036	41,119
Other receipts	58,048	39,268
Net cash used in operating activities	(505,902)	(496,377)
Cash Flows from Noncapital Financing Activities		
State appropriations	468,108	453,108
Gifts and nonoperating grants for other than capital purposes	158,868	160,327
PLUS, Stafford, and other loans receipts (non-Perkins)	884,992	908,840
PLUS, Stafford, and other loans disbursements (non-Perkins)	(884,992)	(909,075)
Agency transactions, net	202	4,190
Other	1,527	1,279
Net cash provided by noncapital financing activities	628,705	618,669
Cash Flows from Capital Financing Activities		
Proceeds from capital debt and leases	111,333	140,916
Capital appropriations	18,244	18,023
Capital grants and gifts received	5,635	11,840
Proceeds from sales of capital assets	151	61
Purchases of capital assets	(120,204)	(149,390)
Principal paid on capital debt and leases	(138,287)	(169,461)
Interest paid on capital debt and leases	(46,585)	(49,851)
Net cash used in capital financing activities	(169,713)	(197,862)
Cash Flows from Investing Activities		
Proceeds from sales and maturities of investments	41,026,530	31,642,468
Interest on investments	50,013	38,549
Purchase of investments	(41,040,024)	(31,579,257)
Net cash provided by investing activities	36,519	101,760
Net Increase (Decrease) in Cash and Cash Equivalents	(10,391)	26,188
Cash and cash equivalents—beginning of year	44,042	17,854
Cash and cash equivalents—end of year	$ 33,651	$ 44,042

See accompanying notes to financial statements.

Statement of Cash Flows *(continued)*
For the Years Ended June 30, 2019 and 2018
(dollars in thousands)

	2019	2018
Reconciliation of Operating Loss to Net Cash Used in Operating Activities		
Operating loss	$ (669,095)	$ (697,409)
Adjustments to reconcile operating loss to net cash used in operating activities:		
Depreciation expense	143,899	136,422
Expenses paid by Commonwealth or donor	6,344	7,251
Effect of changes in operating assets, liabilities, deferred outflows of resources, and deferred inflows of resources:		
Receivables, net	(12,471)	2,212
Other assets	6,706	3,060
Accounts payable	(426)	(6,502)
Unearned revenue	(2,930)	(2,222)
Student deposits	664	(854)
Compensated absences	1,431	6,675
Loans to students and employees	6,514	726
Defined benefit pensions	(347,964)	(84,702)
Other postemployment benefits liability (OPEB)	170,503	(100,775)
Other liabilities	9,337	(10,153)
Deferred outflows of resources related to pensions	(78,473)	86,962
Deferred outflows of resources related to OPEB	(39,141)	(59,306)
Deferred inflows of resources related to pensions	(43,006)	23,534
Deferred inflows of resources related to OPEB	342,206	198,704
Net cash used in operating activities	$ (505,902)	$ (496,377)
Noncash Activities		
Capital assets included in payables	$ 6,467	$ 6,166
Capital assets acquired by new capital leases	4,116	797
Capital assets acquired by gift or appropriation	5,220	3,464
Student housing capital assets acquired	104,984	-
Like-kind exchanges	52	1
Debt acquired for student housing acquisition	132,074	-
Commonwealth on-behalf contributions to PSERS	9,883	9,995

See accompanying notes to financial statements.

Pennsylvania's State System of Higher Education

Component Units Statement of Financial Position

(dollars in thousands)

	June 30, 2019	*(Restated)* June 30, 2018
Assets		
Cash and cash equivalents	$ 145,435	$ 160,402
Accounts and interest receivable	20,340	21,071
Contributions/pledges receivable	16,452	18,370
Due from universities	12,466	11,704
Inventories and prepaid expenses	7,243	7,353
Restricted cash and cash equivalents	59,526	57,110
Short-term investments	71,698	64,690
Long-term investments	495,448	471,272
Land, buildings, and equipment, net	942,063	1,063,319
Other assets	76,867	82,852
Total Assets	$ 1,847,538	$ 1,958,143
Liabilities		
Accounts and interest payable	$ 31,137	$ 36,680
Deferred revenue	22,159	22,744
Annuity liabilities	6,310	6,662
Due to universities	12,413	15,445
Deposits payable	37,516	36,068
Interest rate swap agreements	58,115	42,910
Capitalized leases	27,123	27,554
Bonds and notes payable	1,076,920	1,220,408
Other liabilities	16,687	14,182
Total Liabilities	1,288,380	1,422,653
Net Assets		
Without donor restrictions	110,665	106,878
With donor restrictions	448,493	428,612
Total Net Assets	559,158	535,490
Total Liabilities and Net Assets	$ 1,847,538	$ 1,958,143

See accompanying notes to financial statements.

Pennsylvania's State System of Higher Education

Component Units Statement of Activities
For the Years Ended June 30, 2019 and 2018
(dollars in thousands)

	2019	(Restated) 2018
Changes in net assets without donor restrictions		
Contributions	$ 17,523	$ 12,818
Sales and services	36,464	39,386
Student fees	31,991	33,902
Grants and contracts	9,419	8,813
Rental income	134,331	151,647
Investment return, net	17,338	11,822
Other revenues and gains	19,622	42,775
Net assets released from restrictions	31,524	35,560
Total Revenues and Gains	298,212	336,723
Expenses and Losses		
Program services:		
Scholarships and grants	21,810	20,059
Student activities and programs	31,026	27,980
University stores	22,542	24,059
Housing	120,324	134,594
Other programs	44,268	46,523
Management and general	28,059	28,021
Fundraising	11,639	11,527
Total Expenses	279,668	292,763
Other expenses and losses	12,219	3,388
Total Expenses and Losses	291,887	296,151
Change in net assets without donor restrictions	6,325	40,572
Changes in net assets with donor restrictions		
Contributions	$ 28,542	$ 35,746
Investment return, net	18,331	22,547
Other revenue and gains	2,595	3,403
Other expenses and losses	(601)	(2,020)
Net assets released from restrictions	(31,524)	(35,560)
Change in net assets with donor restrictions	17,343	24,116
Change in total net assets	23,668	64,688
Net assets—beginning of year	535,490	451,858
Restatement for change in reporting entity		18,944
Net assets—beginning of year, restated		470,802
Net assets—end of year	$ 559,158	$ 535,490

See accompanying notes to financial statements.

Pennsylvania's State System of Higher Education

Component Units Expenses by Nature and Function
For the Years Ended June 30, 2019 and 2018
(dollars in thousands)

2019

	Program Activities						Supporting Activities			
Natural Expense	Scholarships and grants	Student activities and programs	University stores	Housing	Other programs	Total Programs	Management and general	Fundraising	Total Supporting	**Total Expens**
Salaries and benefits	$415	$4,687	$5,522	$13,031	$6,286	$29,941	$14,417	$5,096	$19,513	$49,4
Gifts and grants	14,283	5,758	254	1,680	13,352	35,327	1,015	142	1,157	36,4
Supplies and travel	23	7,586	5,284	1,120	4,014	18,027	730	1,070	1,800	19,8
Services and professional fees	25	2,578	284	6,349	3,450	12,686	3,072	2,871	5,943	18,6
Office and occupancy	11	1,228	1,557	19,763	987	23,546	1,942	309	2,251	25,7
Depreciation	0	484	389	29,282	2,540	32,695	1,582	45	1,627	34,3
Interest	0	0	0	36,833	4,926	41,759	1,518	32	1,550	43,3
Other	7,053	8,705	9,252	12,266	8,713	45,989	3,783	2,074	5,857	51,8
Total Expenses	$21,810	$31,026	$22,542	$120,324	$44,268	$239,970	$28,059	$11,639	$39,698	$279,6

2018

	Program Activities						Supporting Activities			
Natural Expense	Scholarships and grants	Student activities and programs	University stores	Housing	Other programs	Total Programs	Management and general	Fundraising	Total Supporting	**Total Expens**
Salaries and benefits	$372	$4,623	$5,894	$14,282	$5,213	$30,384	$13,930	$5,056	$18,986	$49,3
Gifts and grants	13,022	4,068	0	526	14,981	32,597	1,569	174	1,743	34,3
Supplies and travel	18	7,093	5,593	946	3,276	16,926	732	981	1,713	18,6
Services and professional fees	17	2,584	484	10,550	3,645	17,280	2,888	2,825	5,713	22,9
Office and occupancy	8	1,283	1,458	19,366	882	22,997	2,036	322	2,358	25,3
Depreciation	0	517	365	33,779	2,666	37,327	1,620	7	1,627	38,9
Interest	0	0	2	43,019	5,325	48,346	1,528	0	1,528	49,8
Other	6,622	7,812	10,263	12,126	10,535	47,358	3,718	2,162	5,880	53,2
Total Expenses	$20,059	$27,980	$24,059	$134,594	$46,523	$253,215	$28,021	$11,527	$39,548	$292,7

NOTES TO FINANCIAL STATEMENTS
Years Ended June 30, 2019 and 2018

(1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization
Pennsylvania's State System of Higher Education (State System) is a body corporate and politic, created by the State System of Higher Education Act of November 12, 1982, P.L. 660, No. 188, as amended (Act 188). The State System is a component unit of the Commonwealth of Pennsylvania (Commonwealth) and is governed by a Board of Governors (Board), as provided for in Act 188. The State System comprises the 14 universities and the Office of the Chancellor.

Reporting Entity
The State System functions as a Business Type Activity, as defined by the Governmental Accounting Standards Board (GASB).

Certain affiliated organizations are included in the State System's financial statements as discretely presented component units. Some of the organizations, such as university student associations, are included because the Board has oversight responsibility for the organizations. The criteria used in determining the organizations for which the State System has oversight responsibility include financial interdependency, the ability to select members of the governing body, the ability to designate management, the ability to influence operations significantly, and accountability for fiscal matters. Other affiliated organizations for which the Board does not have oversight responsibility, such as university foundations and alumni associations, are included when the economic resources received or held by the organization are entirely or almost entirely for the direct benefit of the State System, the activity of the organization is significant to the State System universities, and the State System historically has received a majority of these economic resources. Neither the State System nor its universities control the timing or amount of receipts from these organizations.

During fiscal year 2018/19, Mansfield University of Pennsylvania reaffiliated with Mansfield University Foundation, Inc., a component unit that it had disaffiliated in fiscal year 2015/16. The combined component unit financial statements for fiscal year 2017/18 have been restated accordingly and result in an increase of $20.0 million of component unit assets and an increase of $0.3 million in component unit liabilities, which, when combined with the fiscal year 2017/18 respective change in net assets of $0.8 million, result in a restatement of beginning net assets of $18.9 million.

The State System does not consider any of its component units to be major, and has aggregated all component unit information into a separate set of financial statements. Information on individual component units can be obtained by contacting the respective universities.

Transactions between the universities and the Office of the Chancellor have been eliminated in the accompanying financial statements.

Measurement Focus, Basis of Accounting, and Basis of Presentation
The accompanying financial statements have been prepared using the economic resources measurement focus and the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America (GAAP), as prescribed by GASB. The economic resources measurement focus reports all inflows, outflows, and balances that affect an entity's net position. Under the accrual basis of accounting, revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Grants and similar items are recognized as revenue as soon as all eligibility requirements have been met.

The accompanying financial statements of the component units, which are all private nonprofit organizations, are reported in accordance with Financial Accounting Standards Board (FASB) requirements, including Accounting Standards Update No. 2016-14, *Presentation of Financial Statements of Not-for-Profit Entities*, an amendment of FASB Codification Topic 958, *Not-for-Profit-Entities*. As such, certain revenue recognition criteria and presentation features are different from GASB revenue recognition criteria and presentation features. No modifications for these differences have been made to the component units' financial information presented herein.

Operating Revenues and Expenses
The State System records tuition, all academic, instructional, and other student fees, student financial aid, auxiliary activity, and corporate partnerships as operating revenue. In addition, governmental and private grants and contracts in which the grantor receives equal value for the funds given to the university are recorded as operating revenue. All expenses, with the exception of interest expense and extraordinary expenses, are recorded as operating expenses. Appropriations, gifts, investment income, parking and library fines, capital grants, gains and losses on investments, gains and losses on the acquisition and disposal of assets, and governmental and private research grants and contracts in which the grantor does not receive equal value for the funds given to the university are reported as nonoperating.

Deferred Outflows and Deferred Inflows of Resources
The balance sheet reports separate sections for *Deferred Outflows of Resources* and *Deferred Inflows of Resources*.

Deferred Outflows of Resources, reported after *Total Assets,* is defined by GASB as a consumption of net position that applies to future periods. The expense is recognized in the applicable future period(s). *Deferred Inflows of Resources,* reported after *Total Liabilities,* is defined by GASB as an acquisition of net position that applies to future periods. The revenue is recognized in the applicable future period(s).

Transactions are classified as deferred outflows of resources or deferred inflows of resources only when specifically prescribed by GASB standards.

The State System is required to report the following as Deferred Outflows of Resources or Deferred Inflows of Resources.

- Deferred gain or loss on bond refundings, which results when the carrying value of a refunded bond is greater or less than its reacquisition price. The difference is deferred and amortized over the remaining life of the old bond or the life of the new bond, whichever is shorter.
- For defined benefit pension plans and other postemployment benefit (OPEB) plans: the difference between expected (actuarial) and actual experience, changes in actuarial assumptions, the net difference between projected (actuarial) and actual earnings on pension and OPEB plan investments, changes in the State System's proportion of expenses and liabilities of the pension and OPEB plans as a whole, differences between the State System's pension and OPEB contributions and its proportionate share of contributions, and State System pension and OPEB contributions subsequent to the respective pension or OPEB plan valuation measurement date.

Net Position
Net position is the residual of Assets, plus Deferred Outflows of Resources, less Liabilities, less Deferred Inflows of Resources. The State System maintains the following classifications of net position.

Net investment in capital assets: Capital assets, net of accumulated depreciation and outstanding principal balances of debt attributable to the acquisition, construction, repair, or improvement of those assets.

Restricted—nonexpendable: The portion of net position subject to externally imposed conditions requiring that it be maintained by the State System in perpetuity.

Restricted—expendable: The portion of net position use of which is subject to externally imposed conditions that can be fulfilled by the actions of the State System or by the passage of time.

Unrestricted: All other categories of net position. Unrestricted net position may be designated for specific purposes by the Board.

When both restricted and unrestricted funds are available for expenditure, the decision as to which funds are used first is left to the discretion of the universities.

Cash Equivalents and Investments
The State System considers all demand and time deposits and money market funds to be cash equivalents. Investments purchased are stated at fair value. Investments received as gifts are recorded at their fair value or appraised value as of the date of the gift. The State System classifies

investments as short-term when they are readily marketable and intended to be converted to cash within one year.

Accounts and Loans Receivable

Accounts and loans receivable consist of tuition and fees charged to current and former students and amounts due from federal and state governments in connection with reimbursements of allowable expenditures made pursuant to grants, contracts, and other miscellaneous sources. Accounts and loans receivable are reported at net realizable value. Accounts are written off when they are determined to be uncollectible based upon management's assessment of individual accounts. The allowance for doubtful accounts is estimated based upon the universities' historical losses and periodic review of individual accounts.

Capital Assets

Land and buildings at the 14 university campuses acquired or constructed prior to its creation on July 1, 1983, are owned by the Commonwealth and made available to the universities of the State System. Since the State System neither owns such assets nor is responsible to service associated bond indebtedness, no value is ascribed thereto in the accompanying financial statements. Likewise, no value is ascribed to the portion of any land or buildings acquired or constructed using capital funds appropriated by the Commonwealth after June 30, 1983, and made available to the universities.

All assets with a purchase cost, or fair value if acquired by gift, in excess of $5,000, with an estimated useful life of two years or greater, are capitalized. Buildings, portions of buildings, and capital improvements acquired or constructed by the universities after June 30, 1983, through the expenditure of university funds or the incurring of debt are stated at cost less accumulated depreciation.

Equipment and furnishings are stated at cost less accumulated depreciation. Library books are capitalized on a composite basis in the year of purchase. Assets under capital leases are recorded at the lower of the present value of the minimum lease payments or the fair value of the asset. The State System provides for depreciation on the straight-line method over the estimated useful lives of the related assets. Buildings and improvements are depreciated over useful lives ranging from 10 to 40 years. Equipment and furnishings are depreciated over useful lives ranging from 3 to 10 years. Library books are depreciated over 10 years. Amortization of assets under capital leases is included in depreciation expense. Normal repair and maintenance expenditures are not capitalized because they neither add to the value of the property nor materially prolong its useful life.

The State System does not capitalize collections of art, rare books, historical items, etc., as they are held for public exhibition, education, or research rather than financial gain.

Impairment of Capital Assets

Management reviews capital assets for impairment whenever events or changes in circumstances indicate that the service utility of an asset has declined significantly and unexpectedly. Any write-downs due to impairment are charged to operations at the time impairment is identified. No write-down of capital assets was required for the years ended June 30, 2019 and 2018.

Unearned Revenue

Unearned revenue includes amounts for tuition and fees, grants, corporate sponsorship payments, and certain auxiliary activities received prior to the end of the fiscal year but earned in a subsequent accounting period.

Compensated Absences

The estimated cost of future payouts of annual leave and sick leave that employees have earned for services rendered, and which the employees may be entitled to receive upon termination or retirement, is recorded as a liability.

Pension Plans and OPEB Plans

Eligible employees of the State System enroll in one of three available pension plans immediately upon employment. The State System also offers healthcare and tuition benefits to eligible employees upon employment, which vary depending upon the employee's labor group.

Scholarships and Waivers

In accordance with a formula prescribed by the National Association of College and University Business Officers (NACUBO), the State System allocates the cost of scholarships, waivers, and other student financial aid between *Discounts and allowances* (netted against tuition and fees) and *Student aid expense*. Scholarships and waivers of room and board fees are reported in Auxiliary enterprises. The cost of tuition waivers granted to employees is reported as employees' benefits expense.

Income Taxes

The State System and its member universities are tax-exempt; accordingly, no provision for income taxes has been made in the accompanying financial statements.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Reclassifications

Certain amounts in the prior period presented have been reclassified to conform to the current period financial statement presentation. These reclassifications have no effect on the previously reported net position or changes therein.

New Accounting Standards

In fiscal year 2017/18, the State System implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other than Pensions*, and GASB Statement No.81, *Irrevocable Split-Interest Agreements*, which required a restatement of net position at July 1, 2017, as follows.

(in thousands)	2017
Net position—beginning of year, as previously stated	($248,925)
Restatement for July 1, 2017, OPEB liabilities and related expenses	(1,280,301)
Restatement for July 1, 2017, beneficial interests	13,497
Net position—beginning of year, restated	($1,515,729)

GASB has issued several accounting standards that are required to be adopted by the State System in future years. The State System is evaluating the impact of the adoption of certain of these standards on its financial statements as discussed below.

In June 2017, GASB issued Statement No. 87, *Leases.* Statement No. 87 establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. In other words, most leases currently classified as operating leases will be accounted for and reported in a similar manner as capital leases, with assets and liabilities recorded at lease inception. The State System has determined that the effect on net position and results of operations will be immaterial. The provisions in Statement No. 87 are effective for reporting periods beginning after December 15, 2019.

In June 2018, GASB issued Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period.* Statement No. 89 requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred, and should no longer be capitalized as part of the cost of an asset. The State System has determined that the effect of Statement No. 89 on its financial statements will vary from year to year, depending upon the amount of new debt incurred for capital assets. The provisions of Statement No. 89 are effective for reporting periods beginning after December 15, 2019.

In May 2019, GASB issued Statement No. 91, *Conduit Debt Obligations.* Statement No. 91 is intended to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in accounting and financial reporting. The State System has determined that Statement No. 91 will have no effect on its financial statements.

(2) Deposits and Investments

On June 30, 2019 and 2018, the carrying amount of the State System's demand and time deposits and certificates of deposit for all funds was $33,831,000 and $44,056,000, respectively, compared to bank balances of $33,064,000 and $43,469,000, respectively. The difference is caused primarily by items in transit. Of the bank balances, $3,418,000 and $5,389,000, respectively, were covered by federal government depository insurance or collateralized by a pledge of U.S. Treasury obligations held by Federal Reserve banks in the name of the banking institutions; $1,279,000 and $1,164,000, respectively, were uninsured and uncollateralized; and $28,367,000 and $36,916,000, respectively, were uninsured and uncollateralized but covered under the collateralization provisions of the Commonwealth of Pennsylvania Act 72 of 1971, as amended. Act 72 allows banking institutions to satisfy the collateralization requirements by pooling eligible investments to cover total public funds on deposit in excess of federal insurance. Such pooled collateral is pledged with the financial institutions' trust departments.

Board of Governors Policy 1986-02-A: *Investment*, authorizes the State System to invest in obligations of the U.S. Treasury, repurchase agreements, commercial paper, certificates of deposit, banker's acceptances, U.S. money market funds, municipal bonds, corporate bonds, collateralized mortgage obligations (CMOs), asset-backed securities, and internal loan funds. Restricted nonexpendable funds and amounts designated by the Board or university trustees may be invested in the investments described above as well as in corporate equities and approved pooled common funds. For purposes of convenience and expedience, universities use local financial institutions for activities such as deposits of cash. In addition, universities may accept gifts of investments from donors as long as risk is limited to the investment itself. Restricted gifts of investments fall outside the scope of the investment policy.

In keeping with its legal status as a system of public universities, the State System recognizes a fiduciary responsibility to invest all funds prudently and in accordance with ethical and prevailing legal standards. Investment decisions are intended to minimize risk while maximizing asset value. Adequate liquidity is maintained so that assets can be held to maturity. High quality investments are preferred. Reasonable portfolio diversification is pursued to ensure that no single security or investment or class of securities or investments will have a disproportionate or significant impact on the total portfolio. Investments may be made in U.S. dollar-denominated debt of high quality U.S. and non-U.S. corporations. Investment performance is monitored on a frequent and regular basis to ensure that objectives are attained and guidelines are followed.

Safety of principal and liquidity are the top priorities for the investment of the State System's operating funds. Within those guidelines, income optimization is pursued. Speculative investment activity is not allowed: this includes investing in asset classes such as commodities, futures, short-sales, equities, real or personal property, options, venture capital investments, private placements, letter stocks, and unlisted securities.

The State System's operating funds are invested and reinvested in the following types of instruments with qualifications as provided. (See Board of Governors Policy 1986-02-A: *Investment*, for a complete list of and more details on permissible investments and associated qualifications.)

Investment Categories	Qualifications/Moody's Ratings Requirements
United States Government Securities	Together with repurchase agreements, must comprise at least 20% of the market value of the fund.
Repurchase Agreements	Underlying collateral must be direct obligations of the U.S. Treasury and be in the State System's or its agent's custody.
Commercial Paper	P-1 and P-2 notes only, with no more than 5% and 3%, respectively, of the market value of the fund invested in any single issuer. Total may not exceed 20% of the market value of the fund.
Municipal Bonds	Bonds must carry long-term debt rating of A or better. Total may not exceed 20% of the market value of the fund.
Corporate Bonds	15% must carry long-term debt rating of A or better; 5% may be rated Baa2 or better. Total may not exceed 20% of the market value of the fund.
Collateralized Mortgage Obligations (CMOs)	Must be rated Aaa and guaranteed by the U.S. government. Total may not exceed 20% of the market value of the fund.
Asset-Backed Securities	Must be Aaa rated. Total may not exceed 20% of the market value of the fund, with no more than 5% invested in any single issuer.
System Investment Fund Loans (university loans and bridge notes)	Total may not exceed 20% of the market value of the fund, and loan terms may not exceed 5 years.

CMO Risk: CMOs sometimes are based on cash flows from interest-only (IO) payments or principal-only (PO) payments and are sensitive to prepayment risks. The CMOs in the State System's portfolio do not have IO or PO structures; however, they are subject to extension or contraction risk based on movements in interest rates.

Moody's Rating: The State System uses ratings from Moody's Investors Service, Inc., to indicate the credit risk of investments; i.e., the risk that an issuer or other counterparty to an investment will not fulfill its obligations. An *Aaa* rating indicates the highest quality obligations with minimal credit risk. Ratings that begin with *Aa* indicate high quality obligations subject to very low credit risk; ratings that begin with *A* indicate upper-medium-grade obligations subject to low credit risk; and ratings that begin with *Baa* indicate medium-grade obligations, subject to moderate credit risk, that may possess certain speculative characteristics. Moody's appends the ratings with numerical modifiers *1*, *2*, and *3*, with *1* indicating a higher ranking and *3* indicating a lower ranking within the category. For short-term obligations, a rating of *P-1* indicates that issuers have a superior ability to repay short-term debt obligations, and a rating of *P-2* indicates that issuers have a strong ability to repay short-term debt obligations.

Modified Duration: The State System denotes interest rate risk, or the risk that changes in interest rates will affect the fair value of an investment, using *modified duration*. *Duration* is a measurement in years of how long it takes for the price of a bond to be repaid by its internal cash flows. *Modified duration* takes into account changing interest rates. The State System maintains a portfolio duration target of 1.8 years with an upper limit of 2.5 years for the intermediate-term component of the operating portion of the investment portfolio. The State System's duration targets are not applicable to its long-term investments.

Fair Value Hierarchy: GASB Statement No. 72, *Fair Value Measurement and Application*, requires that investments be classified according to a "fair value hierarchy." With respect to Statement No. 72's fair value hierarchy, GASB defines "inputs" as "the assumptions that market participants would use when pricing an asset or liability, including assumptions about risk." Statement No. 72 further categorizes inputs as *observable* or *unobservable*: *Observable inputs* are "inputs that are developed using market data, such as publicly available information about actual events or transactions, and which reflect the assumptions that market participants would use when pricing an asset or liability"; *Unobservable inputs* are "inputs for which market data are not available and that are developed using the best information available about the assumptions that market participants would use when pricing an asset or liability."

Statement No. 72's fair value hierarchy categorizes the inputs to valuation techniques used to measure fair value into three "levels":

Level 1: Investments whose values are based on unadjusted quoted prices for identical assets or liabilities in an active market, such as stocks listed in the S&P 500 or NASDAQ. If an up-to-date price of the investment can be found on a major exchange, it is a Level 1 investment.

Level 2: Investments whose values are based on their quoted prices in inactive markets or whose values are based on models, and the inputs to those models are observable either directly or indirectly for substantially the full term of the asset or liability.

Level 3: Investments that trade infrequently, and as a result do not have many reliable market prices. Valuations of Level 3 investments typically are based on management assumptions or expectations. For example, a private equity investment or complex derivative would likely be a Level 3 investment.

In addition, the fair value of certain investments that do not have a readily determinable fair value is classified as *NAV*, meaning Net Asset Value per share, when the fair value is calculated in a manner consistent with the Financial Accounting Standards Board's measurement principles for investment companies.

Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt and equity securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Securities classified in Level 3 of the fair value hierarchy lack an independent pricing source and so are valued using an internal fair value as provided by the investment manager.

Commonfund investments, held locally by some of the universities, are valued based upon the unit values (NAV) of the funds held by the universities at year end. Unit values are based upon the underlying assets of the funds derived from inputs principally from or corroborated by observable market data, by correlation, or other means. Redemption restrictions for the Commonfund vary, depending upon the type of fund in which the universities have invested, and are restricted to withdrawals only on a weekly basis or the last business day of the month. All withdrawals require five days' notice.

State System Pooled Deposits and Investments
The carrying values (fair values) of deposits and investments for the State System's pooled funds in M&T Bank on June 30, 2019 and 2018, follow.

State System Pooled Deposits and Investments
June 30, 2019
(in thousands)

	Fair Value Hierarchy Level	Moody's Rating (if applicable)	Modified Duration (if applicable)	Fair Value
Deposits				
Demand and time deposits				$1,944
Money market funds				11,026
Total deposits				12,970
Investments				
Commercial paper	2	P1	0.13	243,505
Government money market mutual fund	2	Aaa	0.00	22,970
U.S. government and agency obligations	2	Aaa	0.99	377,747
Asset-backed securities	2	Aaa	0.57	177,260
	2	A2	0.54	4,833
Collateralized mortgage obligations (CMOs)	2	Aaa	2.99	134,811
Corporate bonds and notes	2	Aaa	2.69	9,153
	2	Aa1	0.32	3,550
	2	Aa2	1.25	7,988
	2	Aa3	1.25	18,099
	2	A1	1.63	48,876
	2	A2	1.88	61,842
	2	A3	1.62	54,183
	2	Baa1	0.82	32,551
	2	Baa2	0.74	10,534
	2	Baa3	0.00	727
Total investments				1,208,629
Total deposits and investments				$1,221,599

State System Pooled Deposits and Investments
June 30, 2018
(in thousands)

	Fair Value Hierarchy Level	**Moody's Rating** (if applicable)	**Modified Duration** (if applicable)	**Fair Value**
Deposits				
Demand and time deposits				$3
Money market funds				29,931
Total deposits				29,934
Investments				
Commercial paper	2	Aaa	0.09	147,471
Government money market mutual fund	2	Aaa	0.00	57,489
	2	Aa3	1.41	5,158
U.S. government and agency obligations	2	Aaa	1.31	432,013
Asset-backed securities	2	Aaa	0.59	112,737
	2	Aa1	0.75	28,079
Collateralized mortgage obligations (CMOs)	2	Aaa	2.23	158,433
Corporate bonds and notes	2	Aa1	0.01	2,001
	2	Aa2	1.17	4,509
	2	Aa3	0.74	7,984
	2	A1	1.91	57,849
	2	A2	1.38	50,449
	2	A3	1.31	75,863
	2	Baa1	1.85	42,985
	2	Baa2	1.29	15,625
	2	Baa3	0.00	726
Total investments				1,199,371
Total deposits and investments				$1,229,305

Of the investments noted above at June 30, 2019 and 2018, $69,720,000 and $22,312,000, respectively, were held by a trustee to be used for projects funded under the Pennsylvania Higher Educational Facilities Authority/State System of Higher Education bond issues (note 11). Such investments are made subject to the restrictions of the bond indenture and may be liquidated only for the payment of costs associated with the projects described in the bond indenture.

University Local Deposits and Investments
The carrying values (fair values) of local university deposits and investments on June 30, 2019 and 2018, follow.

University Local Deposits and Investments
June 30, 2019
(in thousands)

	Fair Value Hierarchy Level	Moody's Rating (if applicable)	Modified Duration (if applicable)	Fair Value
Deposits				
Demand and time deposits				$20,681
Certificates of deposit				180
Total deposits				20,861
Investments				
U.S. government and agency obligations	1		0.53	354
	2		0.06	42
Bond mutual funds	1		5.40	3,161
	2		4.60	7,225
	NAV		4.84	6,975
Debt securities	1	A1	1.81	94
	1	A2	2.34	89
	1	A3	2.36	95
	1	Baa1	1.60	203
	1	Baa2	1.58	127
	2	Aaa	5.45	340
	2	Aa1	5.66	57
	2	Aa2	6.30	16
	2	Aa3	5.40	16
Equity/balanced mutual funds	1			21,034
	2			1,768
	3			1,647
	NAV			18,701
Common stock	1			4,496
Total investments				66,440
Total deposits and investments				$87,301

University Local Deposits and Investments
June 30, 2018
(in thousands)

	Fair Value Hierarchy Level	Moody's Rating (if applicable)	Modified Duration (if applicable)	Fair Value
Deposits				
Demand and time deposits				$14,108
Certificates of deposit				14
Total deposits				14,122
Investments				
U.S. government and agency obligations	2		0.51	78
Bond mutual funds	1		5.07	2,434
	NAV		5.11	12,690
Debt securities	2	Aa1	7.70	19
	2	Aaa	3.35	375
Equity/balanced mutual funds	1			13,558
	2			5,853
	3			1,665
	NAV			22,997
Common stock	1			2,723
Total investments				62,392
Total deposits and investments				$76,514

Investment revenue is reported net of related investment expenses. Gross investment revenue totaled $50,796,000 and $39,737,000 at June 30, 2019, and June 30, 2018, respectively. Of this amount, $598,000 and $370,000 at June 30, 2019, and June 30, 2018, respectively, represent the amount of related investment expenses.

(3) Student Revenue and Accounts Receivable

Accounts receivable for tuition and fees charged to current and former students totaled $88,398,000 and $82,715,000 at June 30, 2019, and June 30, 2018, respectively. Of this amount, $42,402,000 and $37,302,000 at June 30, 2019, and June 30, 2018, respectively, are estimated to be uncollectible based upon the universities' historical losses and periodic review of individual accounts. Other receivables are reported at net realizable value. Accounts will be written off when they are determined to be uncollectible based upon management's assessment of individual accounts.

Tuition and fee revenue is reported net of scholarship discounts and allowances. Gross tuition and fee revenue totaled $1,081,192,000 and $1,089,509,000 at June 30, 2019, and June 30, 2018, respectively. Of this amount, $239,777,000 and $239,014,000 at June 30, 2019, and June 30, 2018, respectively, represent the amount of student grants, waivers, and scholarships calculated to be a discount against tuition and fees.

Revenue from auxiliary enterprises, which primarily comprises fees from student room and board, student recreation centers, and parking, is reported net of discounts. Gross auxiliary revenue totaled $324,292,000 and $318,914,000 at June 30, 2019, and June 30, 2018, respectively. Of this amount, $3,408,000 and $1,516,000 at June 30, 2019, and June 30, 2018, respectively, represent the amount of student grants, waivers, and scholarships calculated to be a discount.

(4) Beneficial Interests

At June 30, 2019, the fair value of beneficial interests totaled $23,917,000, compared to $23,493,000 at June 30, 2018. Of this amount, $23,912,000 at June 30, 2019, and $23,483,000 at June 30, 2018, represent gifts that donors placed in trust in perpetuity with third parties, with the respective universities receiving a restricted revenue stream in accordance with the donors' wishes; and $5,255 at June 30, 2019, and $10,000 at June 30, 2018, represent a split-interest agreement that a donor placed in trust with a third party, and to which the university will take title upon the death of the donor.

(5) Capital Assets

The classifications of capital assets and related depreciation at June 30, 2019 and 2018, follow.

(in thousands)

	Balance June 30, 2017	2017/18 Additions	2017/18 Retirements/ Adjustments	Balance June 30, 2018	2018/19 Additions	2018/19 Retirements/ Adjustments	Balance June 30, 2019
Land	$32,360	$153	-	$32,513	$1,354	$143	$34,010
Construction in progress	183,303	91,004	($168,125)	106,182	60,936	(85,266)	81,852
Total capital assets not being depreciated	215,663	91,157	(168,125)	138,695	62,290	(85,123)	115,862
Buildings, including improvements	2,432,715	40,696	144,644	2,618,055	142,968	64,681	2,825,704
Improvements other than buildings	298,197	6,814	2,976	307,987	7,115	6,740	321,842
Equipment and furnishings	487,973	20,487	(5,230)	503,230	28,022	(8,774)	522,478
Library books	80,734	663	(1,895)	79,502	648	(4,709)	75,441
Total capital assets being depreciated	3,299,619	68,660	140,495	3,508,774	178,753	57,938	3,745,465
Less accumulated depreciation:							
Buildings and improvements	(996,044)	(95,205)	12,274	(1,078,975)	(102,784)	10,356	(1,171,403)
Land improvements	(149,712)	(10,904)	2,047	(158,569)	(11,208)	194	(169,583)
Equipment and furnishings	(395,696)	(28,775)	9,085	(415,386)	(28,598)	10,489	(433,495)
Library books	(74,448)	(1,538)	1,895	(74,091)	(1,309)	4,709	(70,691)
Total accumulated depreciation	(1,615,900)	(136,422)	25,301	(1,727,021)	(143,899)	25,748	(1,845,172)
Total capital assets being depreciated, net	1,683,719	(67,762)	165,796	1,781,753	34,854	83,686	1,900,293
Capital assets, net	$1,899,382	$23,395	($2,329)	$1,920,448	$97,144	($1,437)	$2,016,155

(6) Workers' Compensation

The State System is self-insured for workers' compensation losses. For claims occurring prior to July 1, 1995, State System universities must pay up to $100,000; for claims occurring on or after July 1, 1995, State System universities must pay up to $200,000. Claims in excess of the self-insurance limits are funded through the Workers' Compensation Collective Reserve Fund (Reserve Fund), to which all State System universities contribute an amount determined by an independent actuarial study. Based on updated actuarial studies, the universities contributed $690,000, $1,633,000, and $372,000 to the Reserve Fund during the years ended June 30, 2019, 2018, and 2017, respectively.

For the years ended June 30, 2019, 2018, and 2017, the aggregate liability for claims under the self-insurance limit was $9,338,000, $9,327,000, and $8,554,000, respectively. The Reserve Fund assets of $13,389,000, $13,121,000, and $11,813,000 were equal to the liability for claims in excess of the self-insurance limits for the years ended June 30, 2019, 2018, and 2017, respectively. Changes in the workers' compensation claims liability in fiscal years 2017, 2018, and 2019 follow.

(in thousands)

Year	Beginning Balance	Current Year Claims and Changes in Estimates	Claim Payments	Ending Balance
2017	$22,091	$2,313	$4,037	$20,367
2018	$20,367	$6,049	$3,968	$22,448
2019	$22,448	$4,336	$4,057	$22,727

(7) Compensated Absences

Compensated absences are absences for vacation, holiday, and sick leave for which employees will be paid in cash at termination or retirement. Changes in the compensated absences liability in fiscal years 2019 and 2018 are as follows.

(in thousands)

Year	Beginning Balance	Current Changes in Estimates	Less Payouts	Ending Balance
2018	$119,526	$17,061	$10,386	$126,201
2019	$126,201	$13,741	$12,310	$127,632

(8) Pension Benefits

Employees of the State System enroll in one of three available retirement plans immediately upon employment: the Commonwealth of Pennsylvania State Employees' Retirement System (SERS), the Public School Employees' Retirement System (PSERS), or the Alternative Retirement Plan (ARP).

Following is the total of the State System's pension liabilities, deferred outflows and inflows of resources related to pensions, and the pension expense for the fiscal years ended June 30, 2019 and 2018.

(in thousands)

	SERS		PSERS		ARP		Total	
	2019	2018	2019	2018	2019	2018	2019	2018
Net pension liabilities	**$1,020,123**	**$848,315**	**$88,137**	**$89,442**	**$0**	**$0**	**$1,108,260**	**$937,757**
Deferred outflows of resources:								
Difference between expected and actual experience	$15,309	$14,343	$709	$933	–	–	$16,018	$15,276
Net difference between projected and actual investment earnings on pension plan investments	99,252	–	432	2,073	–	–	99,684	2,073
Changes in assumptions	27,179	42,472	1,643	2,430	–	–	28,822	44,902
Difference between employer contributions and proportionate share of contributions	–	–	348	506	–	–	348	506
Changes in proportion	14,631	20,281	1,504	1,602	–	–	16,135	21,883
Contributions after the measurement date	55,177	53,756	8,565	7,880	–	–	63,742	61,636
Total deferred outflows of resources	**$211,548**	**$130,852**	**$13,201**	**$15,424**	**$0**	**$0**	**$224,749**	**$146,276**
Deferred inflows of resources:								
Difference between expected and actual experience	$11,054	$16,107	$1,364	$540	–	–	$12,418	$16,647
Net difference between projected and actual investment earnings on pension plan investments	–	33,729	–	–	–	–	–	33,729
Difference between employer contributions and proportionate share of contributions	5,449	4,899	–	–	–	–	5,449	4,899
Changes in proportion	8,068	13,301	931	1,297	–	–	8,999	14,598
Total deferred inflows of resources	**$24,571**	**$68,036**	**$2,295**	**$1,837**	**$0**	**$0**	**$26,866**	**$69,873**
Pension expense	**$145,114**	**$118,342**	**$19,646**	**$19,902**	**$46,085**	**$45,118**	**$210,845**	**$183,362**
Contributions recognized by pension plans	**$97,467**	**$94,727**	**$8,565**	**$7,880**	**N/A**	**N/A**	**$106,032**	**$102,607**

The State System will recognize the $55,177,000 reported as 2019 SERS deferred outflows of resources resulting from pension contributions after the measurement date, and the $8,565,000 reported as 2019 PSERS deferred outflows of resources resulting from pension contributions after the measurement date, as reductions of the respective net pension liabilities in the year ended June 30, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows.

(in thousands)

	Amortization	
Fiscal Year Ended	SERS	PSERS
June 30, 2020	$49,588	$2,532
June 30, 2021	27,741	954
June 30, 2022	18,266	(826)
June 30, 2022	35,984	(319)
June 30, 2023	221	0
Totals	$131,800	$2,341

SERS

Plan Description

SERS is the administrator of the State Employees' Retirement fund, a cost-sharing multiple-employer defined benefit pension plan. SERS also is the administrator of the State Employees' Defined Contribution Plan, which was established as part of Commonwealth Act 2017-5. Both the defined benefit plan and the defined contribution plan were established by the Commonwealth to provide retirement benefits for employees of state government and certain independent agencies. SERS is a component unit of the Commonwealth and is included in the Commonwealth's financial report as a pension trust fund. SERS issues a publicly available annual financial report that includes financial statements and required supplementary information for the plan. A copy of the report may be obtained from the SERS website at www.sers.state.pa.us.

Membership in SERS is mandatory for most state employees. Members and employees of the General Assembly, certain elected or appointed officials in the executive branch, department heads, and certain employees in the field of education are not required, but are given the option, to participate.

Benefits Provided

SERS provides retirement, death, and disability benefits. Article II of the Commonwealth's Constitution assigns the authority to establish and amend the benefit provisions of the plan to the General Assembly. Cost of Living Adjustments (COLA) are provided ad hoc at the discretion of the General Assembly.

Employees who were hired prior to January 1, 2011, and retire at age 60 with three years of service, or with 35 years of service if under age 60, are entitled to a normal annual retirement benefit; members of the General Assembly and certain employees classified in hazardous duty positions can retire with full benefits at age 50 with at least three years of service. Act 120 of 2010 (Act 120) preserved all benefits in place for members, but mandated a number of benefit reductions for new members effective January 1, 2011. The benefit reduction included a new class of membership that accrues benefits at 2% of members' final average salary instead of the previous 2.5%. The vesting period changed from 5 to 10 years of credited service, and the option to withdraw lump-sum accumulated deductions was eliminated. The new normal retirement age is 65 for most employees and 55 for members of the General Assembly and certain employees classified in hazardous duty positions. Act 2017-5 preserved all benefits in place for members, but fundamentally changed retirement options for new hires beginning January 1, 2019: most employees who first become SERS members on or after January 1, 2019, must choose from one of two new defined benefit/defined contribution hybrid options or a straight 401(a) defined contribution option.

According to the State Employees' Retirement Code (SERC), all obligations of SERS will be assumed by the Commonwealth should SERS terminate.

Contributions

The contribution rate for both active members and the State System depends upon when the active member was hired and what benefits class was selected. Section 5507 of the SERC (71 Pa. C.S. §5507) requires the Commonwealth and other employers whose employees are SERS members to make contributions on behalf of all active members and annuitants to fund the liabilities and provide the annuity reserves required to pay benefits. The SERS funding policy, as set by the

SERS Board, provides for periodic active member contributions at statutory rates. The SERS funding policy also provides for periodic employer contributions at actuarially determined rates based on SERS' funding valuation, expressed as a percentage of annual retirement covered payroll, such that the employer contributions, along with employee contributions and an actuarially determined rate of investment return, are adequate to accumulate assets to pay benefits when due. In fiscal year 2017/18, the Commonwealth paid the full actuarially required rate after being collared in previous years due to Act 120.

For the SERS defined benefit plan, the State System's actuarially determined contribution rate for most active members was 34.63% of active members' annual covered payroll at June 30, 2019, with less common rates ranging between 23.94% and 27.71%, depending upon the defined benefit plan chosen by the employee. For the SERS defined benefit/defined contribution hybrid plan, the State System's actuarially determined contribution rate was either 16.17% or 16.42% of annual covered payroll, depending upon the hybrid plan chosen by the employee. In addition, the State System was required to contribute to the defined benefit plan 14.89% of the annual covered payroll of employees who selected the straight 401(a) defined contribution plan. The State System's contributions to the SERS defined benefit plan for the years ended June 30, 2019, 2018, and 2017, were $97,467,000, $94,727,000, and $83,754,000, respectively, equal to the required contractual contribution.

The contribution rate of most active members who participate in the SERS defined benefit plan was 6.25% of gross salary, with less common rates ranging between 5% and 9.3% of salary, depending upon when the member was hired and what class of membership was elected. Defined benefit contribution rates for active members who participate in the defined benefit/defined contribution hybrid plan were either 4.0% or 5.0% of gross salary, depending upon what class of membership was elected.

For the SERS defined contribution plan, the State System contributed at actuarially determined rates of between 2.0% and 3.5% of active members' annual covered payroll at June 30, 2019, depending upon the plan chosen by the employee. The State System recognized $21,000 in SERS defined contribution pension expense for the year ended June 30, 2019, the first year of the plan's implementation. The vesting period for employer contributions to the defined contribution plan, both for members who participate in the straight 401(a) defined contribution plan and those who participate in one of the defined benefit/defined contribution hybrid plans, is three years. Once money is contributed to the plan, it cannot be removed from the plan, except for making distribution payments to participants. Forfeitures of unvested employer contributions and earnings are invested in the PA Treasury short-term investment fund. The funds are forfeited to the employee's most recent employer and used to offset future contributions to the plan and correct funding discrepancies. Forfeitures seized under the Pension Forfeiture Act are used for administrative expenses of the plan.

The contribution rate to the defined contribution plan for active members who participate in the SERS defined benefit/defined contribution hybrid plan was either 3.25% or 3.5% of gross salary (in addition to the required contributions to the defined benefit plan), depending upon what class of membership was elected. The contribution rate to the defined contribution plan for active members who participate in the straight 401(a) defined contribution plan was 7.5% of gross salary.

Actuarial Methods and Assumptions
Every five years, SERS is required to conduct an actuarial experience study to determine whether the assumptions used in its annual actuarial valuations remain accurate based on current and anticipated demographic trends and economic conditions. The *18th Investigation of Actuarial Experience* study for the period 2011–2015 was released in March 2016. The actuary, under oversight of the SERS Board, reviewed economic assumptions (such as the assumed future investment returns and salary increases) as well as demographic assumptions (such as employee turnover, retirement, disability, and death rates). Some assumption adjustments increased projected cost and some decreased it, but the overall result was a slight increase to the net pension liability. The SERS Board adopted the actuarial assumptions set forth in the *18th Investigation of Actuarial Experience* at its March 2016 meeting. In addition, SERS reviews its investment return assumption in light of economic conditions every year. At its April 2017 meeting, the SERS Board approved a reduction in the assumed investment rate of return from 7.5% to 7.25%. The next SERS review occurred in summer 2019 and will be used for its 2019 annual valuation.

The following methods and assumptions were used in the actuarial valuation for the December 31, 2018, measurement date.

- Entry age actuarial cost method.
- Investments amortized on a straight-line, closed-period basis over five years; assumption changes and noninvestment gains/losses amortized over the average expected remaining service lives of all employees that are provided benefits.
- Inflation of 2.60%.
- Investment return of 7.25%, net of manager fees and including inflation.
- Salary increases based on an average of 5.60%, with a range of 3.70% to 8.90%, including inflation.
- Asset valuation using fair (market) value.
- Mortality rates based on the projected RP-2000 Mortality Tables, adjusted for actual plan experience and future improvement.
- No cost of living adjustments.

The long-term expected real rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of manager fees and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in SERS' target asset allocation as of December 31, 2018, are summarized below.

Asset Class	Target Allocation	Long-Term Real Rate of Return
Private equity	16.00%	7.25%
Global public equity	48.00%	5.15%
Real estate	12.00%	5.26%
Multi-strategy	10.00%	4.44%
Fixed income	11.00%	1.26%
Cash	3.00%	-
	100.00%	

The discount rate used to measure the total SERS pension liability was 7.25%. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the rates applicable for each member and that employer contributions will be made based on rates determined by the actuary and as set by statute. Based on those assumptions, SERS' fiduciary net position was projected to be available to make all projected future benefit payments of current active and non-active SERS members. The long-term expected rate of return on SERS' investments, therefore, was applied to all periods of projected benefit payments to determine the total pension liability.

The following presents the State System's proportionate share of the SERS net pension liability at June 30, 2019, calculated using the discount rate of 7.25%, as well as what the SERS net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.25%) or one percentage point higher (8.25%) than the current rate.

Sensitivity of the State System's Proportionate Share of the SERS Net Pension Liability to Changes in the Discount Rate
(in thousands)

1% Decrease 6.25%	Current Rate 7.25%	1% Increase 8.25%
$1,252,627	$1,020,123	$820,879

The following presents what the State System's proportionate share of the SERS net pension liability was at June 30, 2018, calculated using the discount rate of 7.25%, as well as what the SERS net pension liability would have been if it had been calculated using a discount rate that was one percentage point lower (6.25%) or one percentage point higher (8.25%) than the rate used.

Sensitivity of the State System's Proportionate Share of the SERS Net Pension Liability to Changes in the Discount Rate
(in thousands)

1% Decrease 6.25%	Current Rate 7.25%	1% Increase 8.25%
$1,076,776	$848,315	$652,611

Fiduciary Net Position

The fiduciary net position of SERS, as well as additions to and deductions from SERS fiduciary net position, have been determined on the same basis as they are reported in the SERS financial statements, which can be found at www.sers.state.pa.us.

Proportionate Share
At June 30, 2019, the amount recognized as the State System's proportionate share of the SERS net pension liability, measured at December 31, 2018, was $1,020,123,000. At June 30, 2018, the amount recognized as the State System's proportionate share of the SERS net pension liability, measured at December 31, 2017, was $848,315,000.

The allocation percentage assigned to each participating employer is based on a projected-contribution method. For the allocation of the December 2018 amounts, this methodology applies the most recently calculated contribution rates for fiscal year 2019/20, from the December 31, 2018, funding valuation, to the expected funding payroll. For the allocation of the December 2017 amounts, this methodology applies the most recently calculated contribution rates for fiscal year 2018/19, from the December 31, 2017, funding valuation, to the expected funding payroll. At the December 31, 2018, measurement date, the State System's proportion was 4.897%, an decrease of 0.009% from its proportion calculated as of the December 31, 2017, measurement date.

PSERS
Plan Description
PSERS is a governmental cost-sharing multiple-employer defined benefit pension plan that provides retirement, disability, and death benefits to public school employees of the Commonwealth. The members eligible to participate in PSERS include all full-time public school employees, part-time hourly public school employees who render at least 500 hours of service in the school year, and part-time per diem public school employees who render at least 80 days of service in the school year in any of the reporting entities in Pennsylvania. The Public School Employees' Retirement Code (Act No. 96 of October 2, 1975, as amended) (24 Pa. C.S. §§8101–8535) (the Code) is the authority by which PSERS benefits provisions and contribution requirements are established. The Commonwealth's General Assembly has the authority to amend the benefit terms by passing bills in the Senate and House of Representatives and sending them to the Governor for approval. The Code requires contributions by active members, the employer (State System), and the Commonwealth. PSERS is a component unit of the Commonwealth and is included in the Commonwealth's financial report as a pension trust fund. PSERS issues a comprehensive annual financial report that may be obtained at www.psers.state.pa.us.

Benefits Provided
Members who joined prior to July 1, 2011, are eligible for monthly retirement benefits upon reaching age 62 with at least one year of credited service, age 60 with 30 or more years of credited service, or any age with 35 or more years of service. Act 120 preserved the benefits of members who joined prior to July 1, 2011, and introduced benefit reductions for individuals who become new members on or after July 1, 2011, by creating two new membership classes: Class T-E and Class T-F. To qualify for normal retirement, Class T-E and Class T-F members must complete a minimum of 35 years of service with a combination of age and service that totals 92 or greater, or they must work until age 65 with a minimum of three years of service.

Depending upon membership class, benefits are generally 2% or 2.5% of the member's final average salary (as defined in the Code) multiplied by the number of years of credited service. Members who joined prior to July 1, 2011, vest after completion of five years of service and may elect early retirement benefits. Class T-E and Class T-F members vest after completion of 10 years of service.

Participants are eligible for disability retirement benefits after completion of five years of credited service. Such benefits are generally equal to 2% or 2.5%, depending upon membership class, of the member's final average salary (as defined in the Code) multiplied by the number of years of credited service, but not less than one-third of such salary nor greater than the benefit the member would have had at normal retirement age. Members over normal retirement age may apply for disability benefits.

Death benefits are payable upon the death of an active member who has reached age 62 with at least one year of credited service (age 65 with at least three years of credited service for Class T-E and Class T-F members) or has at least five years of credited service (10 years for Class T-E and Class T-F members). Such benefits are actuarially equivalent to the benefit that would have been effective if the member had retired on the day before death.

Member Contributions
Active members who joined PSERS prior to July 22, 1983, contribute at 5.25% (Class T-C members) or at 6.50% (Class T-D members) of the member's

qualifying compensation. Members who joined PSERS on or after July 22, 1983, and who were active or inactive as of July 1, 2001, contribute at 6.25% (Class T-C) or at 7.5% (Class T-D) of the member's qualifying compensation. Members who joined PSERS after June 30, 2001, and before July 1, 2011, contribute at 7.5% (Class T-D). For these hires and for members who elected Class T-D, the 7.5% contribution rate began with service rendered on or after January 1, 2002. Members who joined PSERS after June 30, 2011, contribute at the rate of 7.5% (Class T-E) or 10.3% (Class T-F) of their qualifying compensation. Class T-E and Class T-F members are subject to a "shared risk" provision in Act 120 that could cause the rate in future years to fluctuate between 7.5% and 9.5% for Class T-E and 10.3% and 12.3% for Class T-F.

Employer Contributions
The State System's contractually required contribution rate for PSERS for fiscal year ended June 30, 2019, was 32.60% of covered payroll, actuarially determined as an amount that, when combined with employee contributions, is expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. Per §8327 of the Code, the Commonwealth is required to contribute 50% of the contribution rate directly to PSERS on behalf of the State System, meaning that the amount that the State System actually contributed was 16.30% of covered payroll. The State System's contribution to PSERS for the year ending June 30, 2019, June 30, 2018, and June 30, 2017, was $8,565,000, $7,880,000, and $7,107,000, respectively, equal to the required contractual contribution.

Actuarial Assumptions
The total PSERS pension liability as of June 30, 2018, was determined by rolling forward PSERS' total pension liability at June 30, 2017, to June 30, 2018, using the following actuarial assumptions, applied to all periods included in the measurement.

- Actuarial cost method is entry age normal, level percent of pay.
- Investment return of 7.25% with 2.75% inflation.
- Salary increases based on an effective average of 5.0%, which comprises a 2.75% allowance for inflation and 2.25% for real wage growth and merit or seniority increases.
- Mortality rates based on the RP-2014 Mortality Tables for Males and Females, adjusted to reflect PSERS' experience and projected using a modified version of the MP-2015 Mortality Improvement Scale.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

PSERS' policy in regard to the allocation of invested plan assets is established and may be amended by the PSERS Board of Trustees. Plan assets are managed with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension. Following is the PSERS Board of Trustees' adopted asset allocation policy and best estimates of geometric real rates of return for each major asset class as of June 30, 2018.

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global public equity	20.0%	5.2%
Fixed income	36.0%	2.2%
Commodities	8.0%	3.2%
Absolute return	10.0%	3.5%
Risk parity	10.0%	3.9%
Infrastructure/MLPs	8.0%	5.2%
Real estate	10.0%	4.2%
Alternative investments	15.0%	6.7%
Cash	3.0%	0.4%
Financing (LIBOR)	(20.0%)	0.9%
	100.0%	

The discount rate used to measure the total PSERS pension liability was 7.25%. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate and that contributions from employers will be made at contractually required rates, actuarially determined. Based on those assumptions, PSERS' fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on PSERS' investments was applied to all periods of projected benefit payments to determine the total pension liability.

The following presents the State System's proportionate share of the PSERS net pension liability at June 30, 2019, calculated using the discount rate of 7.25%, as well as what the PSERS net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.25%) or one percentage point higher (8.25%) than the current rate.

Sensitivity of the State System's Proportionate Share of the PSERS Net Pension Liability to Changes in the Discount Rate
(in thousands)

1% Decrease 6.25%	Current Rate 7.25%	1% Increase 8.25%
$109,252	$88,137	$70,283

The following presents what the State System's proportionate share of the PSERS net pension liability was at June 30, 2018, calculated using the discount rate of 7.25%, as well as what the PSERS net pension liability would have been if it had been calculated using a discount rate that was one percentage point lower (6.25%) or one percentage point higher (8.25%) than the rate used.

Sensitivity of the State System's Proportionate Share of the PSERS Net Pension Liability to Changes in the Discount Rate
(in thousands)

1% Decrease 6.25%	Current Rate 7.25%	1% Increase 8.25%
$110,096	$89,442	$72,005

Fiduciary Net Position
For purposes of measuring the net pension liability, deferred outflows of resources, and deferred inflows of resources related to pensions and pension expense, the fiduciary net position of PSERS and additions to or deductions from PSERS' fiduciary net position have been determined on the same basis as they are reported in the PSERS' financial statements. For this purpose, benefit payments, including refunds of employee contributions, are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value. Detailed information about PSERS' fiduciary net position is available in the PSERS Comprehensive Annual Financial Report, which can be found at www.psers.state.pa.us.

Proportionate Share
The amount recognized as the State System's proportionate share of the PSERS net pension liability, plus the related PSERS pension support provided by the Commonwealth, is as follows.

(in thousands)	2019	2018
Total PSERS net pension liability associated with the State System	$176,274	$178,884
Commonwealth's proportionate share of the PSERS net pension liability associated with the State System	(88,137)	(89,442)
State System's proportionate share of the PSERS net pension liability	$88,137	$89,442

PSERS measured the 2019 and 2018 net pension liabilities as of June 30, 2018, and June 30, 2017, respectively. PSERS calculated the employer's proportion of the net pension liability using the employer's one-year reported covered payroll in relation to all participating employers' one-year reported covered payroll. At June 30, 2018, the State System's proportion was .1836%, an increase of .0025% from its proportion calculated as of June 30, 2017.

ARP
The ARP is a defined contribution pension plan administered by the State System. Benefits equal amounts contributed to the plan plus investment earnings. Act 188 empowers the Board to establish and amend benefits provisions. The State Employees' Retirement Code establishes the employer contribution rate for the ARP, while the Board establishes the employee contribution rates. Active members contribute at a rate of 5% of their qualifying compensation. The State System recognizes annual pension expenditures equal to its contractually required contributions to the plan. The State System's contribution rate on June 30, 2019 and 2018, was 9.29% of qualifying compensation. The contributions to the ARP for the years ended June 30, 2019 and 2018, were $46,085,000 and $45,118,000, respectively, from the State System; and $24,803,000 and $23,535,000, respectively, from active members. No liability is recognized for the ARP.

(9) Other Postemployment Benefits (OPEB)

Other postemployment benefits (OPEB) are benefits such as healthcare benefits that are paid in the period after employment and that are provided separately from a pension plan. OPEB does not include termination benefits or termination payments for sick leave. (See note 7.)

State System employees who retire after meeting specified service and age requirements are eligible to receive healthcare and tuition benefits in retirement. Employee members of the Association of Pennsylvania State College and University Faculties (APSCUF), the State College and University Professional Association (SCUPA), Security Police and Fire Professionals of America (SPFPA), Office and Professional Employees International Union (OPEIU), and nonrepresented employees participate in a defined benefit healthcare plan administered by the State System (System Plan). Employee members of the American Federation of State, County and Municipal Employees (AFSCME), Pennsylvania Doctors Alliance (PDA), and Pennsylvania Social Services Union (PSSU) participate in the Retired Employees Health Program (REHP), which is a defined benefit healthcare plan sponsored by the Commonwealth and administered by the Pennsylvania Employee Benefits Trust Fund (PEBTF). In addition to the above, any employee who participates in the Public School Employees' Retirement System (PSERS) pension plan is eligible to receive benefits from the PSERS Health Insurance Premium Assistance Program (Premium Assistance), a defined benefit plan, and all eligible retirees and their eligible dependents receive tuition waivers at any of the 14 State System universities.

Following is the total of the State System's OPEB liabilities, deferred outflows and inflows of resources related to OPEB, and the OPEB expense for the fiscal years ended June 30, 2019, and 2018.

(in thousands)

	System Plan		REHP		Premium Assistance		Total	
	2019	2018	2019	2018	2019	2018	2019	2018
Net OPEB liabilities	**$1,314,607**	**$1,460,042**	**$658,214**	**$860,881**	**$3,828**	**$3,690**	**$1,976,649**	**$2,324,613**
Deferred outflows of resources:								
Differences between actual and expected experience	–	–	–	–	$24	–	$24	–
Net difference between projected and actual investment earnings on OPEB plan investments	N/A	N/A	–	–	6	$4	6	$4
Changes in assumptions	–	–	–	–	60	–	60	–
Changes in proportion	–	–	$35,170	–	46		35,216	–
Contributions after the measurement date	$37,137	$37,657	25,787	$21,441	217	204	63,141	59,302
Total deferred outflows of resources	**$37,137**	**$37,657**	**$60,957**	**$21,441**	**$353**	**$208**	**$98,447**	**$59,306**
Deferred inflows of resources:								
Differences between actual and expected experience	$146,516	–	$201,596	–	–	–	$348,112	–
Net difference between projected and actual investment earnings on OPEB plan investments	N/A	N/A	1,006	$719	–	–	1,006	$719
Changes in assumptions	105,085	$119,334	86,528	78,438	$145	$172	191,758	197,944
Changes in proportion	N/A	N/A	–	–	34	41	34	41
Total deferred inflows of resources	**$251,601**	**$119,334**	**$289,130**	**$79,157**	**$179**	**$213**	**$540,910**	**$198,704**
OPEB expense	**$24,488**	**$58,709**	**($6,423)**	**$39,964**	**$354**	**$303**	**$18,419**	**$98,976**
Contributions recognized by OPEB plans	N/A	N/A	**$25,787**	**$21,441**	**$217**	**$204**	**$26,004**	**$21,645**

The State System will recognize the deferred outflows of resources resulting from contributions after the measurement date, totaling $37,137,000 for the System Plan, $25,787,000 for the REHP plan, and $217,000 for the PSERS OPEB plan, as reductions of the respective net OPEB liabilities in the year ended June 30, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows.

(in thousands)

	Amortization		
Fiscal Year Ended	**System Plan**	**REHP**	**Premium Assistance**
June 30, 2020	$55,094	$64,691	$12
June 30, 2021	55,094	64,691	13
June 30, 2022	55,093	64,691	13
June 30, 2023	55,093	59,546	13
June 30, 2024	31,227	35,084	14
Thereafter	0	(34,743)	(22)
Totals	$251,601	$253,960	$43

System Plan

Plan Description

The System Plan is a single-employer defined benefit healthcare plan administered by the Office of the Chancellor. Act 188 empowers the Board to establish and amend benefit provisions and to require the Office of the Chancellor to pay OPEB as the benefits come due. The Office of the Chancellor discretely accounts for and accumulates all System Plan contributions that have been collected from the universities (employer) and retirees, but not yet been paid to the provider; however, the System Plan has no assets accumulated in a trust in which the employer contributions are irrevocable, are dedicated to providing OPEB to plan members, or are legally protected from creditors.

The System Plan provides eligible retirees and their eligible dependents with healthcare benefits, including hospital, medical/surgical, prescription drugs, and major medical coverage, as well as a Medicare supplement for individuals over age 65. Retirees receive varying coverages based on the benefits in effect when they retired, and benefits may continue for the retiree's lifetime. Spouse benefits cease upon the retiree's death, but the surviving spouse may continue coverage at full cost. Non-spouse dependents may be covered until age 19 or until age 25 if a certified full-time student. SCUPA, SPFPA, OPEIU, and nonrepresented employees whose retirement date is on or after January 1, 2016, and APSCUF employees whose retirement date is on or after July 1, 2017, receive the same pre-Medicare benefits as active employees, with benefits changing as active employee benefits change. All other pre-Medicare retirees continue to receive the same benefits to which they were entitled at retirement.

A total of 12,122 individuals are covered by the benefit terms (down from 12,511 in the prior year), including 7,235 active employees that may be entitled to receive benefit payments upon retirement, 47 retired participants entitled to but not yet receiving benefits, and 4,840 retired participants receiving benefits. Effective January 16, 2016, the State System OPEB plan became closed to newly hired SCUPA, SPFPA, OPEIU, and nonrepresented employees, while newly hired APSCUF employees (faculty and coaches) continue to be eligible to participate in the plan.

Plan members receiving benefits contribute at various rates, depending upon when they retire, whether they are eligible for Medicare, the contribution rate in effect on the day of their retirement or the contribution rate for active employees, and applicable collective bargaining agreements. Following are the contribution rates of eligible plan members receiving benefits as of June 30, 2019.

- Plan members who retired prior to July 1, 2005, are not required to make contributions.
- Plan members, with the exception of nonfaculty coaches, who retired on or after July 1, 2005, and prior to July 1, 2008, and who are under age 65, pay the same dollar amount they paid as active employees on the day of retirement. When these plan members become eligible for Medicare, they pay 18% of the current cost of their Medicare coverage and current cost of coverage for covered dependents. The rate changes annually, and future adjustments will apply if contributions increase for active employees.
- Plan members, with the exception of nonfaculty coaches, who retire on or after July 1, 2008, pay 18% of the plan premium in effect for active employees on their retirement date. Future adjustments will apply if contributions increase for active employees.
- Nonfaculty coaches who retired on or after July 1, 2005, pay 3.0% of their final annual gross salary at the time of retirement.

Actuarial Assumptions and Other Inputs

The actuarial valuation on which the total OPEB liability is based is dated July 1, 2018, which is the measurement date. The total OPEB liability was measured using the following actuarial assumptions and other inputs, applied to all periods included in the measurement, unless otherwise specified:

- Healthcare cost trend rate of 6.0% in 2018 and 5.5% in 2019 through 2021, with rates gradually decreasing from 5.4% in 2022 to 3.8% in 2075 and later, based on the Society of Actuaries Long-Run Medical Cost Trend Model.
- Annual salary increase of 4%.
- 90% of employees eligible for a subsidy and 15% of employees not eligible for a subsidy are assumed to elect coverage. 75% of vested former members who have not yet reached age 65 are assumed to begin electing coverage at age 65.
- The per capita claims cost for medical and prescription drugs is based on the expected portion of the group's overall cost attributed to individuals in specified age and gender brackets.

- The cost due to the excise tax under the Patient Protection and Affordable Care Act beginning in 2022 is 40% of the projected premiums in excess of the annual limits, calculated using an inflation rate of 2%.
- The annual cost of living increase beginning in 2018 is assumed to be 2.2% per year.
- Retiree premium cost sharing is assumed to remain at 18% and increase at the same rate as the Health Care Cost Trend Rate.
- Mortality rates based on the RP-2014 Total Mortality Tables, which incorporate rates based on a generational projection using Scale MP-2018 to reflect mortality improvement, updated from Scale MP-2017.
- The discount rate decreased from 3.13% to 2.98%, based on S&P Municipal Bond 20-Year High Grade Rate Index at July 1, 2018.
- Participant data is based on census information as of July 1, 2018.
- Experience assumptions for withdrawal and retirement, expected vs. actual, and election percentages were reviewed in 2019, and it was determined that the results were reasonable and did not warrant a further formal study.
- Costs have been loaded by 0.7% to account for tuition waiver benefits, which are offered to all eligible retirees, regardless of employee bargaining unit when active, and including those not represented when active, who meet years of service and/or age criteria.

The following presents the System Plan's net OPEB liability at June 30, 2019, as well as what the liability would be if it were calculated using healthcare cost trend rates that are one percentage point lower (4.5% decreasing to 2.8%) or one percentage point higher (6.5% decreasing to 4.8%) than the current healthcare cost trend rates (5.5% decreasing to 3.8%).

Sensitivity of the System Plan's Net OPEB Liability to Changes in the Healthcare Cost Trend Rate
(in thousands)

1% Decrease (4.5% decreasing to 2.8%)	Healthcare Cost Trend Rates (5.5% decreasing to 3.8%)	1% Increase (6.5% decreasing to 4.8%)
$1,100,605	$1,314,607	$1,591,538

The following presents what the System Plan's net OPEB liability was at June 30, 2018, as well as what the liability would have been if it had been calculated using healthcare cost trend rates that were one percentage point lower (5.0% decreasing to 2.9%) or one percentage point higher (7.0% decreasing to 4.9%) than the June 30, 2018, healthcare cost trend rates used (6.0% decreasing to 3.9%).

Sensitivity of the System Plan's Net OPEB Liability to Changes in the Healthcare Cost Trend Rate
(in thousands)

1% Decrease (5.0% decreasing to 2.9%)	Healthcare Cost Trend Rates (6.0% decreasing to 3.9%)	1% Increase (7.0% decreasing to 4.9%)
$1,208,892	$1,460,042	$1,787,836

The following presents the State System's net OPEB liability at June 30, 2019, as well as what the liability would be if it were calculated using a discount rate that is one percentage point lower (1.98%) or one percentage point higher (3.98%) than the current discount rate (2.98%).

Sensitivity of the System Plan's Net OPEB Liability to Changes in the Discount Rate
(in thousands)

1% Decrease 1.98%	Current Rate 2.98%	1% Increase 3.98%
$1,542,936	$1,314,607	$1,133,474

The following presents what the State System's net OPEB liability was at June 30, 2018, as well as what the liability would have been if it had been calculated using a discount rate that was one percentage point lower (2.13%) or one percentage point higher (4.13%) than the discount rate used (3.13%).

Sensitivity of the System Plan's Net OPEB Liability to Changes in the Discount Rate
(in thousands)

1% Decrease 2.13%	Current Rate 3.13%	1% Increase 4.13%
$1,720,829	$1,460,042	$1,254,178

System Plan OPEB Liability
The System Plan's total OPEB liability of $1,314,607,000 was measured as of July 1, 2018, and was determined by an actuarial valuation as of July 1, 2018. The System Plan's total OPEB liability of $1,460,042,000 was measured as of July 1, 2017, and was determined by an actuarial valuation as of July 1, 2016, that was rolled forward to July 1, 2017.

Changes in the System Plan Total OPEB Liability
(in thousands)

	Fiscal Year Ending June 30, 2019	Fiscal Year Ending June 30, 2018
Balance beginning of year	$1,460,042	$1,559,134
Service cost	42,364	48,636
Interest	46,251	39,441
Changes of benefit terms	(1,018)	-
Differences between expected and actual experience	(175,819)	-
Changes of assumptions	(11,542)	(143,201)
Benefit payments	(45,671)	(43,968)
Net Changes	(145,435)	(99,092)
Balance end of year	$1,314,607	$1,460,042

REHP

Plan Description

The Retired Employees Health Program (REHP) is a single-employer defined benefit OPEB plan that includes Commonwealth agencies and some component units. The REHP is established as a trust equivalent arrangement. The REHP is administered by the Pennsylvania Employees Benefit Trust Fund (PEBTF), which acts as a third-party administrator under an agreement with the Commonwealth. The REHP is provided as part of collective bargaining agreements with most Commonwealth labor unions. All policy decisions and types and levels of benefits for the REHP fall under the purview of the Commonwealth's Executive Board and the Secretary of Administration. The REHP does not have a governing board. The REHP neither issues a stand-alone financial report nor is it included in the report of a public employee retirement system or other entity, but is reported in the Commonwealth's Comprehensive Annual Financial Report (CAFR) as a Pension (and Other Employee Benefit) Trust. The CAFR is an audited financial statement and is available at www.budget.pa.us.

The REHP provides eligible retirees and their eligible dependents with subsidized healthcare for the retiree's lifetime. Benefits include healthcare, including hospital, medical/surgical, prescription drugs, and major medical coverage, as well as a Medicare supplement for individuals over age 65. Retirees receive varying coverages based on the plan they choose. Spouse benefits cease upon the retiree's death, but the surviving spouse may continue coverage at full cost. Non-spouse dependents may be covered until age 26.

Plan members receiving benefits contribute at various rates, depending upon when they retire, whether they are eligible for Medicare, and their salary at retirement. Following are the contribution rates of eligible plan members receiving benefits as of June 30, 2019.

- Plan members who retired prior to July 1, 2005, are not required to make contributions.
- Plan members who retired on or after July 1, 2005, and prior to July 1, 2007, pay 1% of their final annual salary.
- Plan members who retired on or after July 1, 2007, and prior to July 1, 2011, pay 3% of either final gross annual base salary or final average salary, whichever is less. Members eligible for Medicare pay 1.5% of either final gross annual base salary or final average salary, whichever is less.
- Plan members who retire on or after July 1, 2011, pay 3% of final average salary. Members eligible for Medicare pay 1.5% of final gross annual base salary.

Employer contribution requirements are established by the Commonwealth as provided by pertinent statutory authority. With the exception of certain employing agencies, employers contributed to the REHP Trust a retiree health assessment rate of $300 for each current REHP eligible active employee during the fiscal year ended June 30, 2018. The rate during the period July 1, 2017, through January 18, 2018, was $300, and the rate from January 19, 2018, though June 30, 2018, was $188.

Actuarial Assumptions and Other Inputs

The total OPEB liability in the June 30, 2018, actuarial valuation was determined using the following actuarial assumptions and other inputs, applied to all periods included in the measurement, unless otherwise specified:

- Actuarial Cost Method is Entry Age Normal, which requires an estimate of the projected benefit payable at retirement to determine costs and liabilities.
- Inflation of 2.60%.
- Healthcare cost trend rate of 6.2%, with rates gradually decreasing to 4.1% in 2075 and later, based on the SOA-Getzen trend rate model version 2016_a.
- Average career salary growth of 2.65% per year and an assumed 2.90% general salary increase.

- Projected benefits based on estimates of future years of service and projected health benefit costs.
- Mortality rates based on the RP-2000 Male and Female Combined Healthy Mortality Tables or the RP-2000 Male and Female Disabled Retiree Mortality Tables, as appropriate, adjusted to ensure sufficient margin improvement in certain age ranges.
- Participant data based on census information as of December 31, 2017.

The Commonwealth's State Employees' Retirement System (SERS) performs experience studies periodically to determine reasonable and appropriate economic and demographic assumptions for purposes of valuing the defined benefit pension plan. The most recent SERS experience study covered the years 2011 through 2015 and was presented to the SERS Board in March 2016. The approved recommendations from that study were used to determine the assumptions in the REHP valuation, where applicable.

The following assumptions were made with regard to the discount rate:

- Discount rate of 3.87% as of June 30, 2018, and 3.58% as of June 30, 2017.
- Since the REHP has insufficient assets to meet next year's projected benefit payments, the discount rate is based on the index rate for the 20-year tax-exempt general obligation municipal bond index with an average rating of AA/Aa or higher as of the measurement date. The Commonwealth elected to determine the discount rate using the Bond Buyer 20-Bond General Obligation Index.
- The long-term expected rate of return on REHP plan investments is determined using a risk premium review. This review compares the current relationship between fixed income and equity and their relationship over long periods of time to come up with an expected rate of return. Other variables considered in the expected rates of return are a reversion to the mean for each asset class. Best estimates of arithmetic real rates of return for each major asset class included in the target asset allocation are summarized as follows:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	47.00%	6.6%
International equity	20.00%	8.6%
Fixed income	25.00%	3.0%
Real estate	8.00%	6.9%
Cash and cash equivalents	0.00%	1.0%
	100.00%	

The actuarial valuation on which the total REHP OPEB liability is based was dated June 30, 2018. The Commonwealth calculated an allocated share of the REHP OPEB liability for each participating employer based upon their actual contributions made to the REHP. The State System's proportion of the collective net OPEB liability was 4.573% for the measurement date of June 30, 2018.

The following presents the State System's share of the REHP net OPEB liability at June 30, 2019, as well as what the liability would be if it were calculated using healthcare cost trend rates that are one percentage point lower (5.2% decreasing to 3.1%) or one percentage point higher (7.2% decreasing to 5.1%) than the current healthcare cost trend rates (6.2% decreasing to 4.1%).

Sensitivity of the REHP Net OPEB Liability to Changes in the Healthcare Cost Trend Rate
(in thousands)

1% Decrease (5.2% decreasing to 3.1%)	Healthcare Cost Trend Rates (6.2% decreasing to 4.1%)	1% Increase (7.2% decreasing to 5.1%)
$565,023	$658,214	$774,049

The following presents what the State System's share of the REHP net OPEB liability was at June 30, 2018, as well as what the liability would have been if it had been calculated using healthcare cost trend rates that were one percentage point lower (5.0% decreasing to 2.9%) or one percentage point higher (7.0% decreasing to 4.9%) than the healthcare cost trend rates used (6.0% decreasing to 3.9%).

Sensitivity of the REHP Net OPEB Liability to Changes in the Healthcare Cost Trend Rate *(in thousands)*		
1% Decrease (5.0% decreasing to 2.9%)	**Healthcare Cost Trend Rates (6.0% decreasing to 3.9%)**	**1% Increase (7.0% decreasing to 4.9%)**
$747,111	$860,881	$1,031,191

The following presents the State System's share of the REHP net OPEB liability at June 30, 2019, as well as what the liability would be if it were calculated using a discount rate that is one percentage point lower (2.87%) or one percentage point higher (4.87%) than the current discount rate (3.87%).

Sensitivity of the REHP Net OPEB Liability to Changes in the Discount Rate *(in thousands)*		
1% Decrease 2.87%	**Current Rate 3.87%**	**1% Increase 4.87%**
$754,090	$658,214	$579,224

The following presents what the State System's share of the REHP net OPEB liability was at June 30, 2018, as well as what the liability would have been if it had been calculated using a discount rate that was one percentage point lower (2.58%) or one percentage point higher (4.58%) than the discount rate used (3.58%).

Sensitivity of the REHP Net OPEB Liability to Changes in the Discount Rate *(in thousands)*		
1% Decrease 2.58%	**Current Rate 3.58%**	**1% Increase 4.58%**
$1,008,673	$860,881	$762,857

REHP Fiduciary Net Position
The REHP is reported in the Commonwealth's Comprehensive Annual Financial Report (CAFR) as a Pension (and Other Employee Benefit) Trust. The REHP is reported using the economic resources measurement focus and the accrual basis of accounting. The CAFR is an audited financial statement and is available at www.budget.pa.us.

The assets of the REHP are managed by the Commonwealth's Treasury in an investment pool. The REHP investments are made based upon an interagency agreement, dated June 17, 2008, and the prudent investor standard set forth in the Commonwealth of Pennsylvania's amendment to fiscal code 72 P.S. §30.1, the principles of Prudent Investors Standards.

Premium Assistance
Plan Description
The Health Insurance Premium Assistance Program (Premium Assistance) is a governmental cost sharing, multiple-employer OPEB plan administered by the administrative staff of PSERS. The members eligible to participate in the program include all full-time public school employees, part-time hourly public school employees who render at least 500 hours of service in the school year, and part-time per diem public school employees who render at least 80 days of service in the school year in any of the reporting entities in Pennsylvania. The control and management of PSERS, including the investment of its assets, is vested in the Board of Trustees (PSERS Board). The Commonwealth's General Assembly has the authority to amend the benefit terms of PSERS by passing bills in the Senate and House of Representatives and sending them to the Governor for approval.

Effective January 1, 2002, under the provisions of Act 9 of 2001, participating eligible retirees are entitled to receive premium assistance payments equal to the lesser of $100 per month or their out-of-pocket monthly health insurance premium. To receive premium assistance, eligible retirees must obtain their health insurance through either their school employer or the PSERS Health Options Program. As of June 30, 2018, there were no assumed future benefit increases to participating eligible retirees. Plan members receiving benefits are not required to make contributions.

Employer contribution rates for Premium Assistance are established to provide reserves in the Health Insurance Account that are sufficient for the payment of Premium Assistance benefits for each succeeding year. The contribution policy is governed by applicable provisions of the Retirement Code. The contractually required employer contribution rate was 0.83% of covered payroll for the fiscal years ended June 30, 2019 and 2018. Per §8327 of the Code, the Commonwealth is required to contribute 50% of the contribution rate directly to PSERS on behalf of the State System, meaning that the amount that the State System actually contributed was 0.415% of covered payroll.

Actuarial Assumptions and Other Inputs
The total OPEB liability as of June 30, 2018, was determined by rolling forward the PSERS total OPEB liability as of June 30, 2017, to June 30, 2018, using

the following actuarial assumptions, applied to all periods included in the measurement:

- Actuarial cost method was entry age normal, level percent of pay.
- Effective average salary growth of 5.0%, comprising 2.75% for inflation and 2.25% for real wage growth and for merit and seniority increases.
- Premium Assistance reimbursement benefits capped at $1,200 per year.
- Assumed healthcare cost trends were applied to retirees with less than $1,200 in premium assistance per year.
- Mortality rates were based on the RP-2014 Mortality Tables for Males and Females, adjusted to reflect PSERS' experience and projected using a modified version of the MP-2015 Mortality Improvement Scale.
- Eligible retirees pre-age 65 are assumed to participate at 50%, while eligible retirees post-age 65 are assumed to participate at 70%.

The following assumptions were used to determine the contribution rate:

- The results of the actuarial valuation as of June 30, 2016, determined the employer contribution rate for fiscal year 2017/18.
- Cost method was developed using the amount necessary to assure solvency of Premium Assistance through the third fiscal year after the valuation date.
- Asset valuation method was market value.
- Participation rate assumed that 63% of eligible retirees will elect premium assistance.
- Mortality rates and retirement ages were based on the RP-2014 Mortality Tables for Males and Females, adjusted to reflect PSERS' experience and projected using a modified version of the MP-2015 Mortality Improvement Scale.

The following assumptions were made with regard to the discount rate:

- The discount rate used to measure the total OPEB liability was 2.98% at June 30, 2018, and 3.13% at June 30, 2017.
- Under the plan's funding policy, contributions are structured for short-term funding of Premium Assistance. The funding policy sets contribution rates necessary to assure solvency of Premium Assistance through the third fiscal year after the actuarial valuation date.
- The Premium Assistance account is funded to establish reserves that are sufficient for the payment of Premium Assistance benefits for each succeeding year. Due to the short-term funding policy, the OPEB plan's fiduciary net position was not projected to be sufficient to meet projected future benefit payments; therefore, the plan is considered to be a pay-as-you-go plan. A discount rate of 2.98%, which represents the S&P 20-year Municipal Bond Rate at June 30, 2018, was applied to all projected benefit payments to measure the total OPEB liability.
- Investments consist primarily of short-term assets designed to protect the principal of the plan assets. The OPEB plan's policy with regard to the allocation of invested plan assets is established and may be amended by the PSERS Board. Under the program, as defined in the retirement code, employer contribution rates for Premium Assistance are established to provide reserves in the health insurance account that are sufficient for the payment of premium assistance benefits for each succeeding year. Following is the PSERS Board's adopted asset allocation policy and best estimates of geometric real rates of return for each major asset class, as of June 30, 2018.

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Cash	5.9%	0.3%
US Core Fixed Income	92.8%	1.2%
Non-US Developed Fixed	1.3%	0.4%
	100.00%	

The actuarial valuation on which the total Premium Assistance OPEB liability is based was dated June 30, 2017, and was rolled forward to June 30, 2018. An employer's proportion is calculated utilizing the employer's one-year reported covered payroll as a percentage of total one-year reported covered payroll. The State System's proportion of the collective net OPEB liability was 0.1836% for the measurement date of June 30, 2018.

The following presents the State System's share of the Premium Assistance net OPEB liability at June 30, 2019, as well as what the liability would be if it were calculated using healthcare cost trend rates that are one percentage point lower (between 4% and 6.75%) or one percentage point higher (between 6% and 8.75%) than the current healthcare cost trend rates (between 5% and 7.75%).

Sensitivity of the Premium Assistance Net OPEB Liability to Changes in the Healthcare Cost Trend Rate
(in thousands)

1% Decrease (between 4% and 6.75%)	Healthcare Cost Trend Rates (between 5% and 7.75%)	1% Increase (between 6% and 8.75%)
$3,827	$3,828	$3,829

The following presents what the State System's share of the Premium Assistance net OPEB liability was at June 30, 2018, as well as what the liability would have been if it had been calculated using healthcare cost trend rates that were one percentage point lower (between 4% and 7%) or one percentage point higher (between 6% and 9%) than the healthcare cost trend rates used (between 5% and 8%).

Sensitivity of the Premium Assistance Net OPEB Liability to Changes in the Healthcare Cost Trend Rate
(in thousands)

1% Decrease (between 4% and 7%)	Healthcare Cost Trend Rates (between 5% and 8%)	1% Increase (between 6% and 9%)
$3,689	$3,690	$3,691

The following presents the State System's share of the Premium Assistance net OPEB liability at June 30, 2019, as well as what the liability would be if it were calculated using a discount rate that is one percentage point lower (1.98%) or one percentage point higher (3.98%) than the current healthcare cost trend rates (2.98%).

Sensitivity of the Premium Assistance Net OPEB Liability to Changes in the Discount Rate
(in thousands)

1% Decrease 1.98%	Current Rate 2.98%	1% Increase 3.98%
$4,353	$3,828	$3,392

The following presents what the State System's share of the Premium Assistance net OPEB liability was at June 30, 2018, as well as what the liability would have been if it had been calculated using a discount rate that was one percentage point lower (2.13%) or one percentage point higher (4.13%) than the discount rate used (3.13%).

Sensitivity of the Premium Assistance Net OPEB Liability to Changes in the Discount Rate
(in thousands)

1% Decrease 2.13%	Current Rate 3.13%	1% Increase 4.13%
$4,194	$3,690	$3,271

Premium Assistance Fiduciary Net Position
For purposes of measuring the net OPEB liability, deferred outflows of resources, and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of PSERS, and additions to and deductions from PSERS' fiduciary net position, have been determined on the same basis as they are reported by PSERS. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value. Additional plan information can be found in the PSERS Comprehensive Annual Financial Report at www.psers.pa.gov.

(10) Leases

Total rent expense for the State System operating leases amounted to $13,488,000 and $15,033,000 for the years ended June 30, 2019 and 2018, respectively.

Capital assets acquired through leases that have been capitalized are as follows.

(in thousands)	June 30, 2019	June 30, 2018
Cost:		
Buildings	$54,336	$76,133
Equipment	7,726	3,826
Total	$62,062	$79,959
Accumulated Depreciation:		
Buildings	$42,490	$46,246
Equipment	1,210	1,800
Total	$43,700	$48,046

Future minimum payments, by year and in the aggregate, under capital and noncancelable operating leases, with initial or remaining terms of one year or more, are as follows.

(in thousands)

	Operating Leases	Capital Leases
2020	$5,993	$5,332
2021	4,070	5,173
2022	3,092	4,919
2023	2,287	4,610
2024	1,867	4,543
Thereafter	43,701	13,667
Total minimum lease payments	$61,010	38,244
Amount representing interest on capital leases		7,387
Present value of net minimum capital lease payments		$30,857

Changes in the liability for capital leases in fiscal years 2018 and 2019 follow.

(in thousands)

Year	Beginning Balance	Capital Lease Additions	Capital Lease Payments	Ending Balance
2018	$46,306	$798	$3,856	$43,248
2019	$43,248	$4,116	$16,507	$30,857

(11) Bonds Payable

Bonds payable on June 30, 2019 and 2018, consisted of several outstanding tax-exempt revenue bond series issued by the Pennsylvania Higher Educational Facilities Authority (PHEFA). In connection with the bond issuance, the State System entered into a loan agreement with PHEFA under which the State System has pledged its full faith and credit for the repayment of the bonds. The loan constitutes an unsecured general obligation of the State System. The bonds were issued to provide funds to undertake various capital projects at the universities or to advance refund certain previously issued bonds.

Activity for the various bond series for the years ended June 30, 2019 and 2018, was as follows.

Bonds Payable
June 30, 2019 and 2018
(in thousands)

Description	Original Issuance	Weighted Average Interest Rate	Balance June 30, 2017	2018 Bonds Issued	2018 Bonds Redeemed/ Refunded	Balance June 30, 2018	2019 Bonds Issued	2019 Bonds Redeemed/ Refunded	Balance June 30, 2019	Current Portion
Series AG issued March 2008, final maturity June 2024	$101,335	4.52%	$36,070	-	$11,105	$24,965	-	$24,965	-	-
Series AH issued July 2008, final maturity June 2038	140,760	4.66%	105,695	-	97,535	8,160	-	390	$7,770	$410
Series AI issued August 2008, final maturity June 2025	32,115	4.36%	15,980	-	2,070	13,910	-	13,720	190	30
Series AJ issued July 2009, final maturity June 2039	123,985	4.85%	89,520	-	6,080	83,440	-	6,570	76,870	6,995
Series AK issued Sept. 2009, final maturity June 2024	47,310	4.00%	20,455	-	4,220	16,235	-	4,405	11,830	3,255
Series AL issued July 2010, final maturity June 2035	135,410	5.00%	66,420	-	5,955	60,465	-	6,525	53,940	6,845
Series AM issued July 2011, final maturity June 2036	119,085	4.64%	94,895	-	4,900	89,995	-	4,955	85,040	5,215
Series AN issued March 2012, final maturity June 2023	76,810	5.00%	53,700	-	9,705	43,995	-	14,400	29,595	21,530
Series AO issued July 2013, final maturity June 2038	30,915	4.49%	26,775	-	1,130	25,645	-	1,170	24,475	1,210
Series AP issued May 2014, final maturity June 2024	46,110	4.62%	39,285	-	1,240	38,045	-	1,275	36,770	6,775
Series AQ issued May 2015, final maturity June 2036	94,975	4.61%	86,410	-	7,480	78,930	-	7,855	71,075	8,250
Series AR issued Sept. 2015, final maturity June 2040	102,365	3.92%	98,070	-	2,595	95,475	-	2,725	92,750	2,860
Series AS issued June 2016, final maturity June 2037	47,280	3.97%	46,430	-	2,135	44,295	-	3,060	41,235	3,115
Series AT issued Sept. 2016, final maturity June 2055	298,110	3.44%	293,210	-	7,100	286,110	-	7,425	278,685	7,765
Series AU issued Sept. 2017, final maturity June 2042	128,260	3.51%	-	$128,260	2,355	125,905	-	5,200	120,705	6,165
Series AV issued Sept. 2018, final maturity June 2045	236,945	4.22%	-	-	-	-	$236,945	13,215	223,730	6,170
Total	**$1,761,770**		**$1,072,915**	**$128,260**	**$165,605**	**$1,035,570**	**$236,945**	**$117,855**	**$1,154,660**	**$86,590**

Principal and interest requirements to maturity are as follows.

(in thousands)	Principal	Interest	Total
2020	$86,590	$49,467	$136,057
2021	71,685	45,469	117,154
2022	72,390	42,189	114,579
2023	73,735	38,704	112,439
2024	80,575	35,135	115,710
2025–2029	264,300	131,926	396,226
2030–2034	213,695	78,752	292,447
2035–2039	171,725	40,214	211,989
2040–2044	107,225	13,292	120,517
2045–2049	8,580	1,721	10,301
2050–2054	3,680	690	4,370
2055	480	24	504
Total	**$1,154,660**	**$477,583**	**$1,632,243**

The State System's outstanding bonds contain a provision that in an event of default, PHEFA may declare the outstanding principal plus accrued interest to be immediately due and payable. An event of default occurs if the State System fails to make a required payment when due, if the State System fails to perform any of its other covenants or obligations, or if a State System bankruptcy is instituted or commenced.

(12) Debt Refunding

In September 2018, $36.2 million of the net proceeds from the Series AV-1 tax-exempt revenue bonds were used to current refund Series AG and a portion of Series AI bonds. The refunding resulted in an accounting gain of approximately $144,000 and was performed to reduce debt service by approximately $2,700,000, resulting in an economic gain (difference between the present values of the old and new debt service payments) of approximately $2,400,000. The accounting gain, or deferred gain on refunding, is reported as a deferred inflow of resources that will be amortized over the remaining life of the old bond or the life of the new bond, whichever is shorter.

(13) Rating Actions

In August 2019, Moody's Investors Service, Inc., maintained the State System's bond rating of Aa3 with an outlook of *stable*. In August 2019, Fitch Ratings affirmed the State System's rating of A+ with an outlook of *stable*.

(14) Deferred Outflows of Resources and Deferred Inflows of Resources

The classifications of deferred outflows of resources and deferred inflows of resources at June 30, 2019 and 2018, follow.

(in thousands)	**June 30, 2019**	**June 30, 2018**
Deferred Outflows of Resources		
Pension related (see note 8)	$224,749	$146,276
OPEB related (see note 9)	98,447	59,306
Unamortized loss on refunding of debt	7,297	8,821
Total Deferred Outflows of Resources	$330,493	$214,403
Deferred Inflows of Resources		
Pension related (see note 8)	$26,866	$69,873
OPEB related (see note 9)	540,910	198,704
Unamortized gain on refunding of debt	661	796
Split-interest agreements	10	10
Total Deferred Inflows of Resources	$568,447	$269,383

(15) Contingencies and Commitments

Contingencies

The nature of the educational industry is such that, from time to time, the State System is exposed to various risks of loss related to torts; alleged negligence; acts of discrimination; breach of contract; labor disputes; disagreements arising from the interpretation of laws or regulations; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. While some of these claims may be for substantial amounts, they are not unusual in the ordinary course of providing educational services in a higher education system.

The State System receives support from federal and Commonwealth grant programs, primarily for student financial assistance. Entitlement to the resources requires compliance with terms of the grant agreements and applicable regulations, including the expenditure of the resources for eligible purposes. Substantially all grants are subject to financial and compliance audits by the grantors. As of June 30, 2019, the State System estimates that adjustments, if any, as a result of such audits would not have a material adverse effect on the accompanying financial statements, with the exception of potential adjustments related to Cheyney University of Pennsylvania, as detailed in the following section.

Cheyney University of Pennsylvania

In July 2014, Cheyney University voluntarily self-reported to the U.S. Department of Education (ED) that $29.6 million of federal student financial aid was improperly administered and delivered in fiscal years 2011/12, 2012/13, and 2013/14, covering almost 4,400 student records. The State System has been engaged with the ED since reporting these findings. The ED required the university to take specified corrective actions, including submitting file reviews, reconciliations, and updated policies and procedures, and further requiring that Cheyney engage an independent Certified Public Accountant to attest to the file reviews and reconciliations. Although the university made every effort to comply with the ED's requirements, on August 8, 2019, in a letter to Cheyney President Aaron Walton, the ED stated that:

> As Cheyney's overall response to the program review report did not fully address the findings nor document accurately the federal student aid funds that were disbursed, the Department under normal circumstances would assess full Federal Pell Grant and Federal Direct Loan liabilities for the financial aid award years reviewed in the amount of $57,531,566.

The letter continued, however, that in recognition of Cheyney's significant efforts to accurately document its administration of federal student aid funds, and the limitations of its ability to do so given the deficiencies in the records, the ED would be willing to establish Cheyney's repayment liability in the amount of $14,308,377, in conjunction with a waiver of any administrative appeal and an acceptable repayment agreement. The letter also stated that the ED would "not entertain further reductions to this amount." As a result, the university has recorded the liability and associated expense as a special item in fiscal year 2018/19 in the amount of $14,308,377. As of the date of this document, no additional actions have been taken on the ED's settlement proposal.

In September 2015, the ED placed the university on Heightened Cash Monitoring 2 (HCM2) status, meaning that the university does not receive federal student financial aid funds in advance, but must use its own cash to grant federal financial aid to its students and then request reimbursement from the ED. After demonstrating compliance with HCM2 requirements, the university has begun to slowly receive its funds, but only after providing extensive detailed documentation for every student's financial aid account. At June 30, 2018, Cheyney was awaiting receipt of $12.38 million in federal student financial aid funds. Funds were not received from ED until March 2019, when Cheyney received $1.39 million for fiscal year 2017/18. An additional $126,000 was received in June 2019 for fiscal year 2018/19 activity. At June 30, 2019, the receivable from ED was $15.93 million, comprising $5.27 million due for fiscal year 2018/19; $10.15 million due for fiscal year 2017/18; $0.49 million due for fiscal year 2016/17, and $14,000 due for fiscal year 2015/16. Subsequently, in July 2019, Cheyney has received $1.98 million for fiscal year 2017/18, and an additional $135,000 was received in August 2019 for FY 2018/19.

In January 2016, the U.S. Department of Justice (DOJ) notified the State System that it was investigating the application and use of federal student financial aid by Cheyney University and the oversight of the university by the State System. The DOJ requested that the university and State System preserve and produce certain documents. The State System has fully complied and continues to comply with the DOJ's requests. No determination has yet been conveyed by the DOJ, and the possible resulting outcomes from the investigation are uncertain.

In November 2015, the Middle States Commission on Higher Education (Middle States) accreditation organization placed Cheyney University on probation "because of insufficient evidence that the institution is currently in compliance with Standard 3 (Institutional Resources)." Standard 3 requires, among other things, that an institution demonstrate that it has sufficient resources to support both its programs of study and students' academic progress. The university was given two years to address the deficiencies noted by Middle States. In November 2017, Middle States extended Cheyney's accreditation for an additional year, noting that Cheyney had made "significant progress toward the resolution of its non-compliance issues" and is "making a good-faith effort to remedy existing deficiencies." In November 2018, Middle States informed Cheyney of the following actions:

> To require the institution to continue to show cause, by August 15, 2019, to demonstrate why its accreditation should not be withdrawn because of insufficient evidence that the institution is in compliance with Standard VI (Planning, Resources, and Institutional Improvement) and Requirement of Affiliation 11. To grant a final, second extension for good cause to extend the period to demonstrate compliance by one year, to November 21, 2019,

because the institution has provided written and compelling evidence that the quality of student learning has not been compromised, demonstrated significant progress towards the resolution of its noncompliance issues, is making a good faith effort to remedy existing deficiencies, and a reasonable expectation exists that such deficiencies will be remedied within the period of the extension. To note that the institution remains accredited while on show cause. To require a show cause report, due August 15, 2019, documenting evidence that the institution has achieved and can sustain ongoing compliance with the Commission's standards, requirements, policies and procedures, and federal compliance requirements.

On August 15, 2019, Cheyney submitted a report to Middle States documenting evidence of its current and future compliance with the above standards, requirements, policies and procedures, and federal requirements. A response from Middle States as to whether or not Cheyney's accreditation will be further extended is expected in November 2019.

In August 2017, to help the university secure continued accreditation, the Board approved a motion that, if over the subsequent four years the university demonstrates fiscal stability, the more than $34 million in loans made to Cheyney from the 13 other universities and the Office of the Chancellor would be forgiven. The motion states that one-third would be forgiven when Cheyney demonstrates a $7.5 million annual expense reduction from fiscal year 2017/18 operations and maintains a balanced budget of revenues greater than or equal to annual expenses for fiscal year 2018/19. The next two-thirds would be forgiven when Cheyney maintains a balanced budget in each of the subsequent two fiscal years. Failure to meet the requirements during the four fiscal year term will render any and all outstanding amounts due and payable. While the Board's loan forgiveness plan for Cheyney University remains in effect, the Board has not yet made a determination regarding the first installment of debt forgiveness.

The delay in receipt of ED funds exacerbates the university's severe cash shortage. To enable Cheyney to meet its cash needs, the Office of the Chancellor issued interest-free short-term appropriation anticipation loans to Cheyney through January 2019, which were paid back as monthly appropriations were received. In August 2019, the Office of the Chancellor again began issuing to Cheyney appropriation anticipation loans by advancing the next three months of appropriations. In addition, at June 30, 2019, $6.6 million of federal financial aid anticipation loans previously issued to Cheyney by the Office of the Chancellor remained outstanding; these loans are to be repaid when the funds are received from the ED. The Office of the Chancellor also has advanced $.7 million to Cheyney in anticipation of insurance proceeds.

The Office of the Chancellor continues to monitor the university's level of debt and payables and its ability to generate revenue and cash. Securing removal from HCM2 status and obtaining reimbursement of past financial aid awards is a priority. The university continues to look for program and operating efficiencies, has launched a new fundraising campaign, and is seeking ways to develop income-producing strategies using campus assets and strategic alliances with third parties.

Insurance
The State System is self-insured for workers' compensation up to stated limits (note 6). For all other risks of loss, the State System pays annual premiums to the Commonwealth to participate in its Risk Management Program. The State System does not participate in any public entity risk pools, and does not retain risk related to any aforementioned exposure, except for those amounts incurred relative to policy deductibles that are not significant. The State System has not significantly reduced any of its insurance coverage from the prior year. Settled claims have not significantly exceeded the State System's insurance coverage in any of the past three years. It is not expected that the resolution of any outstanding claims and litigation will have a material adverse effect on the accompanying financial statements.

Construction Commitments
Authorized expenditures for construction projects unexpended as of June 30, 2019 and 2018, were approximately $151,248,000 and $57,531,000, respectively.

Labor Concentration
Approximately 86% of PASSHE's employees are covered by collective bargaining agreements, most of which expired June 30, 2019. In August 2019 the Commonwealth and AFSCME signed a four-year contract, the provisions of which apply to the State System's clerical, administrative, technical, and maintenance and trade employees whom AFSCME represents, or approximately 29% of the State System's labor force.

The collective bargaining agreements for the remaining State System labor unions are under negotiation. In September 2019, negotiators reached an agreement in principle for the APSCUF faculty contract, which represents approximately 45% of the labor force. Negotiations are ongoing with SCUPA, which represents approximately 6% of the State System's labor force and includes professional employees working in areas such as admissions, financial aid, and residence life. Negotiations also are ongoing with the five smaller labor units representing 6% of the State System's labor force. The terms of the prior contracts remain in effect until a successor agreement is achieved.

(16) Subsequent Events

In September 2019, PHEFA issued Series AW tax-exempt revenue bonds in the amount of $84,980,000. The net proceeds from the Series AW revenue bonds were used to finance replacement of HVAC equipment at Bloomsburg University and to reimburse the acquisition of parking garages at West Chester University, as well as to current refund portions of Series AJ and Series AK revenue bonds. The refunding was performed to reduce debt service by approximately $14,000,000 and resulted in an economic gain (difference between the present values of the old and new debt service payments) of $1,500,000. In connection with the bond issuance, the State System entered into a loan agreement with PHEFA under which the State System pledged its full faith and credit for repayment of bonds.

REQUIRED SUPPLEMENTARY INFORMATION

Years Ended June 30, 2019 and 2018
(Unaudited)

Schedule of Proportionate Share of SERS Net Pension Liability (NPL)

Determined as of SERS' December 31 measurement dates
(in thousands)

Fiscal Year	State System's Proportion	State System's Proportionate Share	State System's Covered-Employee Payroll	State System's Proportionate Share of NPL as a Percentage of Covered-Employee Payroll	SERS Fiduciary Net Position as a Percentage of Total Pension Liability
2014/15	4.901%	$728,094	$296,967	245%	64.8%
2015/16	4.721%	$858,417	$297,714	288%	58.9%
2016/17	4.837%	$931,620	$300,803	310%	57.8%
2017/18	4.906%	$848,315	$309,084	275%	63.0%
2018/19	4.897%	$1,020,123	$318,501	320%	56.4%

SERS Schedule of Contributions

Determined as of State System's June 30 fiscal year end dates
(in thousands)

Fiscal Year	Contractually Required Contributions	Contributions Recognized by SERS	Contribution Deficiency (Excess)	Covered-Employee Payroll	Contributions as a Percentage of Covered-Employee Payroll
2014/15	$57,234	$57,234	$0	$293,506	19.50%
2015/16	$69,021	$69,021	$0	$291,594	23.67%
2016/17	$83,754	$83,754	$0	$301,828	27.75%
2017/18	$94,727	$94,727	$0	$304,575	31.10%
2018/19	$97,467	$97,467	$0	$315,369	30.90%

Schedule of Proportionate Share of PSERS Net Pension Liability (NPL)

Determined as of PSERS' June 30 measurement dates
(in thousands)

	PSERS Net Pension Liability						
Fiscal Year	State System's Proportion	State System's Proportionate Share	Commonwealth's Proportionate Share	Total	State System's Covered-Employee Payroll	State System's Proportionate Share of NPL as a Percentage of Covered-Employee Payroll	PSERS Fiduciary Net Position as a Percentage of Total Pension Liability
2014/15	.1785%	$70,650	$70,650	$141,350	$45,552	155%	57.2%
2015/16	.1852%	$80,220	$80,220	$160,440	$47,670	168%	54.4%
2016/17	.1833%	$90,838	$90,838	$181,676	$47,485	191%	50.1%
2017/18	.1811%	$89,442	$89,442	$178,884	$48,236	185%	51.8%
2018/19	.1836%	$88,137	$88,137	$176,274	$49,437	178%	54.0%

PSERS Pension Schedule of Contributions

Determined as of State System's June 30 fiscal year end dates
(in thousands)

Fiscal Year	Contractually Required Contributions	Contributions Recognized by PSERS	Contribution Deficiency (Excess)	Covered-Employee Payroll	Contributions as a Percentage of Covered-Employee Payroll
2014/15	$5,236	$5,236	$0	$51,086	10.25%
2015/16	$6,012	$6,012	$0	$48,419	12.41%
2016/17	$7,107	$7,107	$0	$49,518	14.35%
2017/18	$7,880	$7,880	$0	$50,586	15.58%
2018/19	$8,565	$8,565	$0	$53,394	16.04%

State System Plan OPEB Liability

Determined as of the July 1 measurement dates
(in thousands)

	Fiscal Year June 30, 2019	Fiscal Year June 30, 2018
Changes in the System Plan Total OPEB Liability		
Total OPEB Liability – Beginning Balance	$1,460,042	$1,559,134
Service cost	42,364	48,636
Interest	46,251	39,441
Changes of benefit terms	(1,018)	
Differences between expected and actual experience	(175,819)	
Changes of assumptions	(11,542)	(143,201)
Benefit payments	(45,671)	(43,968)
Net Changes	(145,435)	(99,092)
Total OPEB Liability—Ending Balance	$1,314,607	$1,460,042
Covered Employee Payroll	$582,841	$592,245
OPEB Liability as a Percent of Covered Payroll	225.55%	246.53%

Note to Schedule: *The System Plan has no assets accumulated in a trust in which the employer contributions are irrevocable, are dedicated to providing OPEB to plan members, or are legally protected from creditors.*

Schedule of Proportionate Share of the REHP Net OPEB Liability

Determined as of REHP's June 30 measurement dates
(in thousands)

Fiscal Year	State System's Proportion	State System's Proportionate Share	State System's Covered-Employee Payroll	State System's Proportionate Share of Net OPEB Liability as a Percentage of Covered-Employee Payroll	REHP's Fiduciary Net Position as a Percentage of Total OPEB Liability
2017/18	4.374%	$860,881	$117,366	733.5%	1.4%
2018/19	4.573%	$658,214	$117,400	560.7%	2.2%

REHP Schedule of Contributions

Determined as of State System's June 30 fiscal year end dates
(in thousands)

Fiscal Year	Contractually Required Contributions	Contributions Recognized by SERS	Contribution Deficiency (Excess)	Covered-Employee Payroll	Contributions as a Percentage of Covered-Employee Payroll
2017/18	$21,441	$21,441	$0	$141,268	15.18%
2018/19	$25,787	$25,787	$0	$144,385	17.86%

Schedule of Proportionate Share of PSERS Net OPEB Liability

Determined as of PSERS' June 30 measurement dates
(in thousands)

	PSERS Net OPEB Liability						
Fiscal Year	**State System's Proportion**	**State System's Proportionate Share**	**Commonwealth's Proportionate Share**	**Total**	**State System's Covered-Employee Payroll**	**State System's Proportionate Share of Net OPEB Liability as a Percentage of Covered-Employee Payroll**	**PSERS Fiduciary Net Position as a Percentage of Total OPEB Liability**
2017/18	.1811%	$3,690	$3,690	$7,380	$48,236	7.65%	5.73%
2018/19	.1836%	$3,828	$3,828	$7,656	$49,437	7.74%	5.56%

PSERS OPEB Schedule of Contributions

Determined as of State System's June 30 fiscal year end dates
(in thousands)

Fiscal Year	Contractually Required Contributions	Contributions Recognized by PSERS	Contribution Deficiency (Excess)	Covered-Employee Payroll	Contributions as a Percentage of Covered-Employee Payroll
2017/18	$204	$204	$0	$50,586	0.40%
2017/18	$217	$217	$0	$53,394	0.40%

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Appendix III

Summary of Legal Documents

Appendix III

SUMMARY OF LEGAL DOCUMENTS

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DEFINITIONS OF CERTAIN TERMS

The following definitions apply to the summaries of the Indenture and the Loan Agreement and to terms not otherwise defined in the Official Statement.

"Act" shall mean the Pennsylvania Higher Educational Facilities Authority Act of 1967, Act of December 6, 1967, P.L. 678, as from time to time amended or supplemented.

"Additional Bonds" shall mean Bonds duly executed, authenticated and delivered pursuant to the provisions of the Indenture, but shall not refer to or apply to any bonds issued under any other indenture or resolution of the Authority.

"Administrative Expenses" shall mean those expenses reasonably and properly incurred by the Authority in carrying out its responsibilities and duties, or in providing its services and facilities to the State System, under the Act or the Indenture or pursuant to the Loan Agreement or by the Authority in protecting its rights to indemnification pursuant to the Indenture and shall include the fees and expenses of the Trustee with respect to its duties under the Indenture.

"Annual Administrative Fee" shall mean the annual fee for the general administrative services of the Authority.

"Authority" shall mean the Pennsylvania Higher Educational Facilities Authority. "Authority Board" shall mean the governing body of the Authority.

"Authorized Officer" of the Authority or the State System shall mean a "Responsible Officer."

"Bond" or "Bonds" shall mean one of the notes or bonds or all of the notes or bonds, as the case may be, to be authenticated and delivered pursuant to the Indenture, including any Bond issued in lieu of or in exchange for such Bond.

"Bond Proceeds Fund" shall mean the special account so designated which is established and created pursuant to the Indenture.

"Bondowner", "owner" or "registered owner" or words of similar import, when used with reference to a Bond, shall mean any person who shall from time to time be the registered owner of any Outstanding Bond.

"Business Day" shall mean a date when the Trustee and the Authority are open for business.

"Certificate" shall mean (i) a signed document either attesting to or acknowledging the circumstances, representations or other matters therein stated or setting forth matters to be determined pursuant to the Indenture or (ii) the report of an accountant as to audit or other procedures called for by the Indenture.

"Certified Resolution" of the Authority or the State System shall mean a copy of one or more resolutions certified by the Secretary or Assistant Secretary of the Authority or the State

System, as the case may be, under its seal to have been duly adopted by the Board of the Authority or the State System board, as the case may be, and to be in effect on the date of such certification.

"Code" shall mean the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

"Commonwealth" shall mean the Commonwealth of Pennsylvania.

"Cost" or "Costs" in connection with any Project, shall mean all expenses which are properly chargeable thereto under Generally Accepted Accounting Principles or which are incidental to the financing, acquisition and construction of such Project, including, but without limiting the generality of the foregoing:

amounts payable to contractors and costs incident to the award of contracts;

costs for labor, facilities and services furnished by or for the State System or an institution thereof or the Authority and their employees or others, materials and supplies purchased by the State System or an institution thereof or the Authority or others, and permits and licenses obtained by the State System, an institution thereof, the Authority or others;

engineering, legal, accounting and other professional and advisory fees;

premiums for surety bonds and insurance during construction and costs on account of personal injuries and property damage in the course of construction and insurance against the same;

interest during construction;

the Authority's initial fee and the Annual Administrative Fee and Administrative Expenses during the period prior to completion of any Project;

Costs of issuance of the Bonds;

fees and expenses in connection with the acquisition of real and personal property or rights therein, including premiums for title insurance;

costs of equipment purchased by the State System or an institution thereof and necessary for the completion and proper operation of any Project or property in question;

amounts required to repay temporary loans or advances from other funds of the State System or an institution thereof made to finance the Costs of any Project;

Costs of acquisition of real estate, construction and prior construction and/or site costs and improvements performed by the State System or any institution thereof in anticipation of any Project; and moneys necessary to fund the Funds created under the Indenture.

"Debt Service" shall mean, with respect to any particular calendar year or Fiscal Year, an amount equal to the sum of (i) all interest payable on the Outstanding Bonds during such calendar year or Fiscal Year, respectively, plus (ii) the principal due on such Bonds during such calendar year or Fiscal Year, respectively.

"Debt Service Payment" shall mean with respect to any Interest Payment Date, the amount of interest and principal due.

"Depositary" shall mean any bank, trust company, national banking association, savings bank or savings and loan association, the unsecured debt obligations of which are rated at least an "A+" rating with the Rating Agency, selected by the Authority or the Trustee as a depositary of moneys or securities held under the provisions of the Indenture and permitted by law to be a depositary of Authority funds, and may include the Trustee, provided that all amounts held by the Depositary shall be in the name of the Trustee.

"Educational Facility" shall have the same meaning as used in the Act.

"Event of Default" shall mean any of the events specified in the Indenture or the Loan Agreement.

"Fiscal Year" shall mean a twelve-month period commencing on the first day of July of any year or any other twelve-month period as the Authority may by resolution determine from time to time, and shall include such shorter or longer period as the Authority shall deem advisable for transitional purposes.

"Forty-Seventh Supplemental Indenture" shall mean the Forty-Seventh Supplemental Indenture of Trust dated as of October 1, 2020, between the Authority and the Trustee and under which the Series AY Bonds will be issued.

"Forty-Seventh Supplemental Loan Agreement" shall mean the Forty-Seventh Supplemental Loan and Security Agreement dated as of October 1, 2020, between the Authority and the State System.

"Fund" shall mean one of the special funds created pursuant to the Indenture.

"Generally Accepted Accounting Principles" shall mean those accounting principles, not contrary to those promulgated by a nationally recognized financial standards body, applicable to the preparation of financial statements of institutions of higher learning or public authorities, as appropriate.

"Indenture" shall mean the Indenture of Trust dated as of June 1, 1985 between the Authority and the Trustee, as previously amended and supplemented, and as further supplemented by the Forty- Sixth Supplemental Indenture.

"Interest Payment Date" shall mean any date upon which interest on Bonds is due and payable in accordance with their terms.

"Investment Securities" shall mean and include any of the following obligations, to the extent the same are at the time legal for investment of funds of the Authority under the Act, including amendments thereto hereafter made, or under other applicable law:

direct obligations of or obligations guaranteed by the United States of America;

any bond, debenture, note, participation certificate or other similar obligation issued by any of the following agencies: Government National Mortgage Association, Federal Land Bank, Federal Home Loan Banks, Federal Intermediate Credit Banks, Federal Farm Credit Banks Consolidated Statewide, Tennessee Valley Authority, United States Postal Service, Farmers Home Administration, Export-Import Bank and Federal National Mortgage Association;

any other obligation of the United States of America or any federal agency to the payment of the principal of and interest on which the full faith and credit of the United States of America is pledged which may then be purchased with Authority funds or which are legal investments for savings banks, savings associations, or savings and loan associations in the Commonwealth but only if such investments are rated "AA" or better by the Rating Agency, or, upon the discontinuance of such service, another nationally recognized rating service;

tax-exempt obligations of any state or any instrumentality, agency or political subdivision thereof which are fully secured as to principal and interest by direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, the United States of America, and which are rated in the highest rating category by the Rating Agency and which are not by their terms subject to redemption prior to the date on which they are needed for the purposes for which they have been deposited;

direct and general obligations of any state of the United States, to the payment of which the full faith and credit of such state are pledged, but only if such obligations are rated "AA" or better by the Rating Agency, or, upon the discontinuance of such service, another nationally recognized rating service;

deposits in interest-bearing time or demand deposits, or certificates of deposit, with an institution the unsecured deposits of which are rated "AA" or better by the Rating Agency at the time of purchase, or, upon discontinuance of such service, another nationally recognized rating service;

repurchase agreements with an institution rated "A+" or better by the Rating Agency, or, upon discontinuance of such service, another nationally recognized rating service;

commercial paper (except that of the Authority or an affiliate) or finance company paper rated "A-1" by Standard & Poor's Corporation;

investment agreements with an entity whose unsecured debt obligations are rated not less than "AA" by the Rating Agency;

interest bearing time deposits or certificates of deposit (such deposits or certificates of deposit may be in or issued by the Trustee), or other similar banking arrangements with the Trustee or a member bank or banks of the Federal Reserve System or a bank, the deposits of which are insured by the Federal Deposit Insurance Corporation or its successor, or a savings and loan association, the deposits of which are insured by the Federal Savings and Loan Insurance Corporation or its successor. Each such interest bearing time deposit or certificate shall be fully insured by the United States of America or the federal corporations enumerated above;

certificates of participation, lease and sublease obligations or other similar instruments evidencing the leasing or subleasing of capital assets to any state of the United States whose general obligation bonds are rated "AA" or better by the Rating Agency at the time of purchase, or, upon discontinuance of such service, another nationally recognized rating service; or

shares or certificates in any short-term investment fund, which short-term investment fund invests not less than 98% of its assets in obligations described in subparagraphs (1) through (11) above, including, without limitation, any mutual fund for which the Trustee or an affiliate of the Trustee serves as investment manager, administrator, shareholder servicing agent, and/or custodian or subcustodian, notwithstanding that (i) the Trustee or an affiliate of the Trustee receives fees from such funds for services rendered, (ii) the Trustee charges and collects fees for services rendered pursuant to the Indenture, which fees are separate from the fees received from such funds, and (iii) services performed for such funds and pursuant to the Indenture may at times duplicate those provided to such funds by the Trustee or its affiliates.

"Loan Agreement" shall mean the Loan and Security Agreement dated as of June 1, 1985, between the Authority, as lender, and the State System, as borrower, as previously amended and supplemented and as further supplemented by the Forty-Sixth Supplemental Loan Agreement.

"Outstanding" when used with reference to Bonds, shall mean, as of any date, all Bonds theretofore or thereupon being authenticated and delivered under the Indenture except:

any Bond canceled by the Trustee or the Authority at or prior to such date;

any Bond (or portion of a Bond) for the payment or redemption of which there shall be held in trust and set aside either:

(a) moneys in an amount sufficient to effect payment when due of the principal or the applicable Redemption Price thereof, together with all accrued interest, or

(b) Investment Securities as described in clauses (1), (2) and (4) of the definition of Investment Securities above in such principal amounts, of such maturities, bearing such interest, and otherwise having such terms and qualifications, as shall be necessary to provide moneys (whether as principal or interest) in an amount sufficient to effect payment when due of the principal or applicable Redemption Price thereof, together with all accrued interest, or

(c) any combination of (a) and (b) above,

and, if such Bond or portion of a Bond is to be redeemed, for which notice of redemption shall have been given or provision satisfactory to the Trustee shall have been made for the giving of such notice;

any Bond in lieu of or in substitution for which other Bonds shall have been authenticated and delivered pursuant to the Indenture; and

any Bond deemed to have been paid as provided in the Indenture.

"Pledged Revenues" shall mean all amounts payable by the State System to the Authority under the Loan Agreement (except those representing the Annual Administrative Fee and Administrative Expenses of the Authority).

"Project" shall mean each individual Educational Facility financed under the Indenture and shall include acquiring, holding, constructing, improvement, maintaining and operating by the State System or an institution thereof, of grounds, premises, buildings, and other property constituting "educational facilities" as defined in the Act and used or useful in providing construction, housing, recreation, or other services related to higher education and related activities, including the financing of the Costs thereof by the Authority and the refinancing by the Authority of the Cost of Educational Facilities previously financed. Project shall also include refunding or redeeming any Outstanding Bonds.

"Rating Agency" shall mean Standard & Poor's Corporation or Moody's Investors Service, Inc. or Fitch Ratings or any successor thereto.

"Record Date" shall mean, with respect to fixed rate issues, the close of business on the fifteenth day of the calendar month preceding an Interest Payment Date if the Interest Payment Date is on the first day of the month and the first day of the month when an Interest Payment Date is on the fifteenth day of a month, and shall mean with respect to variable rate issues, the close of business on the last Business Day preceding an Interest Payment Date, unless a Special Record Date is otherwise defined and provided for in any Supplemental Indenture.

"Redemption Date" shall mean the date upon which any Bond is to be called for redemption pursuant to the Indenture.

"Redemption Fund" shall mean the special fund so designated which is established and created pursuant to the Indenture.

"Redemption Price" shall mean, with respect to any Bond or portion thereof, the amount payable upon redemption thereof, not including interest, if any, accrued to the Redemption Date.

"Resolution" shall mean the resolution or resolutions of the Authority authorizing the issuance of Bonds and the execution and delivery of the Indenture.

"Responsible Officer" shall mean (i) when used with respect to the Authority, the President, any Vice President, the Secretary, any Assistant Secretary, the Treasurer, any Assistant Treasurer, the Controller, the Assistant Controller, the Executive Director or any Assistant Executive Director, (ii) when used with respect to the State System, the Chancellor, Vice Chancellor, President, Chairperson, Vice Chairperson or any person designated as an Administrative Officer by Certificate of the State System, and (iii) when used with respect to either the State System or the Authority, as the case may be, any other person designated by certified resolution of the Board of the Authority or the State System to act for any of the foregoing, either generally or with respect to the execution of any particular document or other specific matter, a certified copy of which resolution shall be on file with the Trustee.

"Revenues" shall mean all unrestricted receipts, revenues, income, gains and all other moneys received by the State System from any source, including without limitation, tuition and fee revenues, Commonwealth appropriations and other operating and non-operating revenues required to be recorded as revenue under Generally Accepted Accounting Principles, exclusive of net assets released from restriction, gifts, grants, bequests and donations which are designated by the donor at the time of making as being for specific purposes.

"Revenue Fund" shall mean the special fund so designated which is established and created pursuant to the Indenture.

"Series AI Bonds" shall mean the Authority's Refunding Revenue Bonds, State System of Higher Education, Series AI, issued under the Indenture.

"Series AM Bonds" shall mean the Authority's Revenue Bonds, State System of Higher Education, Series AM, issued under the Indenture.

"Series AN Bonds" shall mean the Authority's Revenue Bonds, State System of Higher Education, Series AN, issued under the Indenture.

"Series AO Bonds" shall mean the Authority's Revenue Bonds, State System of Higher Education, Series AO, issued under the Indenture.

"Series AP Bonds" shall mean the Authority's Refunding Revenue Bonds, State System of Higher Education, Series AP, issued under the Indenture.

"Series AQ Bonds" shall mean the Authority's Refunding Revenue Bonds, State System of Higher Education, Series AQ, issued under the Indenture.

"Series AR Bonds" shall mean the Authority's Revenue Bonds, State System of Higher Education, Series AR, issued under the Indenture.

"Series AS Bonds" shall mean the Authority's Revenue Bonds, State System of Higher Education, Series AS, issued under the Indenture.

"Series AT Bonds" shall mean the Authority's Revenue Bonds, State System of Higher Education, Series AT, issued under the Indenture.

"Series AT Insurer" shall mean Assured Guaranty Municipal Corp.

"Series AU Bonds" shall mean the Authority's Revenue Bonds, State System of Higher Education, Series AU, issued under the Indenture.

"Series AV Bonds" shall mean the Authority's Series AV Bonds, State System of Higher Education, Series AV, issued under the Indenture.

"Series AV Bond Insurer" shall mean Build America Mutual Assurance Company.

"Series AW Bonds" shall mean the Authority's Series AW Bonds, State System of Higher Education, Series AW, issued under the Indenture.

"Series AX Bonds" shall mean the Authority's Series AX Bonds, State System of Higher Education, Series AX, issued under the Indenture.

"Series AX Bond Insurer" shall mean Assured Guaranty Municipal Corp.

"Series AY Bonds" shall mean the Authority's Series AY Bonds, State System of Higher Education, Series AY, issued under the Indenture.

"Series AY Bond Insurer" shall mean Build America Mutual Assurance Company.

"Series AY Project" shall mean the issuance of the Authority's Series AY Bonds and the application of the proceeds to the costs included in the "Series AY Project" as defined in and described in the forepart of this Official Statement.

"Sinking Fund Payment" shall mean, as of any particular date of calculation, the amount required to be paid in all events on a single future date for the retirement of Outstanding Bonds which mature after said future date, but does not include any amount payable by reason of the maturity of a Bond.

"State System of Higher Education" or "State System" or "System" shall mean the State System of Higher Education, a body corporate and politic constituting a public corporation and governmental instrumentality consisting of institutions of higher education recognized by the Board of Education of the Commonwealth.

"Supplemental Indenture" shall mean any indenture supplemental to or amendatory of the Indenture, executed and delivered by the Authority and effective in accordance with the Indenture.

"Trustee" shall mean The Bank of New York Mellon Trust Company, N.A., or its successor or successors, as successor trustee under the Indenture.

"Trust Estate" shall mean the security for the Bonds granted to the Trustee by the Authority in the granting clauses under the Indenture.

SUMMARY OF LEGAL DOCUMENTS

The following are summaries of certain provisions of the Loan Agreement and the Indenture. The summaries should not be regarded as full statements of the documents themselves or of the portions summarized. For complete statements of the provisions thereof, reference is made to the documents in their entireties, copies of which will be available for inspection at the principal corporate trust office of the Trustee.

THE LOAN AGREEMENT

The Loan Agreement, as previously supplemented and as further supplemented by the Forty-Sixth Supplemental Loan Agreement, was entered into between the Authority, as lender, and the State System, as borrower.

(i) The Projects

The State System shall use the proceeds of the Bonds in accordance with the Loan Agreement to undertake the Projects, including the Series AY Project, from time to time authorized thereunder and under the Indenture.

(ii) Agreement to Lend; Use of Bond Proceeds

Under the Loan Agreement, the Authority agrees to make, solely from the proceeds of Bonds, and the State System agrees to accept, the loans of Bond proceeds to finance the Costs of Projects. The State System agrees to accept disbursement of the proceeds of such loans to be used in the manner provided in the Indenture, including the construction and/or renovation, improvement and installation of the Projects and the making of all payments required by the Loan Agreement as and when the same shall become due.

(iii) Loan Repayments and Additional Sums

The Loan Agreement is a general obligation of the State System and the full faith and credit of the State System is pledged to the payment of all sums due thereunder. The State System shall pay to the Trustee, as assignee of the Authority, for deposit in the Revenue Fund created under the Indenture, the following amounts in immediately available funds: (a) with respect to fixed rate issues, fifteen days prior to an Interest Payment Date, and with respect to variable rate issues, no later than one day prior to an Interest Payment Date, an amount which is sufficient to pay interest on the Bonds to be paid on the next Interest Payment Date (taking into account as a credit against such installments, any amounts representing accrued and capitalized interest on deposit in any account of the Bond Proceeds Fund and moneys on deposit in the Revenue Fund for such purpose) and (b) principal of the Bonds due (at stated maturity or through sinking fund redemption) and (c) in each year, the State System shall pay directly to the Authority its Annual Administrative Fees and, when due, the Authority's Administrative Expenses incurred from time to time in connection with the Projects, as provided in the Indenture.

In lieu of the portion of the loan repayments payable with respect to principal of the Bonds becoming due (at stated maturity or through sinking fund redemption) on the next following principal or sinking fund payment date, the State System, or at its direction, the Authority, may purchase on the open market Bonds of the maturity becoming due and present such Bonds to the Trustee for cancellation. The Bonds so presented to the Trustee shall be credited to the principal amount of the next payment due thereunder at 100% of the principal amount of such Bonds.

The State System may make advance payments as required or permitted by the Loan Agreement. So long as any of the Bonds remain Outstanding, the obligation of the State System to pay sums due under the Loan Agreement shall be absolute and unconditional and shall not be suspended, abated, reduced, abrogated, waived, diminished or otherwise modified in any manner or to any extent whatsoever, regardless of any rights of setoff, recoupment or counterclaim that the State System might otherwise have against the Authority or the Trustee or any other party or parties and regardless of any contingency, act of God, event or cause whatsoever and notwithstanding any circumstances or occurrence that may arise or take place after the date of the Loan Agreement.

(iv) Concerning the Projects

The State System will undertake and proceed to complete any Projects financed by the Authority under the Loan Agreement with all reasonable dispatch and will use its best efforts to complete or cause the completion of such component parts to take place on or before the dates specified in the Indenture or as soon thereafter as may be practicable, except for delays incident to strikes, riots, acts of God or the public enemy or any delay beyond the reasonable control of the State System; but if for any reason the State System's undertakings with respect to any Project shall not be completed by such dates there shall be no resulting diminution in or postponement of the loan repayments required to be made by the State System under the Loan Agreement.

The State System shall enforce any construction contracts and purchase orders relating to a Project and will cause the State System's undertakings with respect to such Project to be completed substantially in accordance with any plans and specifications which may have been prepared therefor.

The State System agrees to obtain, or cause to be obtained, in connection with the construction of any Project, a surety bond or bonds covering performance of contracts and payment for labor and materials. Such bonds shall be executed by responsible surety companies and shall be in amounts aggregating not less than 100% of the contract price. The State System shall have the exclusive right to receive the proceeds of such bonds.

The State System will not do or refrain from doing any act whereby any surety on any bond may be released in whole or in part from any obligations assumed by it or from any agreement to be performed by it under any surety bond and the State System will comply with all present and future laws, acts, rules, regulations, orders, and requirements lawfully made relating to any acquisition or construction undertaken in accordance with the Loan Agreement.

The State System may amend the plans and specifications, if any, at any time prior to the completion date thereof, including amendments which change the proposed allocation of moneys in the account established for the State System in the Bond Proceeds Fund among components of such Project or which delete components of its undertakings under the Loan Agreement with respect to the Project. No such changes shall be made, and no amendment shall be made to the plans and specifications, if any, which shall so modify the State System's undertakings with respect to a Project that they fail to qualify as Educational Facilities eligible for assistance by the Authority under the Act.

The State System is also required to maintain builder's risk insurance (or equivalent coverage) upon work done or materials furnished (except excavations, foundations and other structures not customarily covered), worker's compensation insurance, employer's liability insurance and public liability, comprehensive automobile liability insurance and property insurance with respect to construction of new facilities.

(v) Costs of Projects

The State System shall direct to the Trustee requisitions for payment of proper Costs with respect to the Projects in accordance with the procedures established in the Indenture; provided, however, that the State System shall not submit any requisition which, if paid, would result in the proceeds of the Bonds being used other than to pay the Costs of the State System's undertakings with respect to a Project.

(vi) Completion of Projects

Under the Loan Agreement, the State System is obligated to complete its undertakings with respect to Projects at its own expense regardless of the adequacy of the moneys allocated to the State System in any particular account established in the Bond Proceeds Fund under the Indenture or the adequacy of other moneys made available to the State System by the Authority. The Authority makes no warranty, either express or implied, that the amounts to be deposited pursuant to the Indenture in any account established for the State System in the Bond Proceeds Fund will be sufficient to complete payment of the Costs of any Projects. The State System agrees that if, after exhaustion of the moneys allocated to the State System in the account established for the State System in the Bond Proceeds Fund and any other moneys made available by the Authority, the State System should pay any portion of the Costs of a Project, it shall not be entitled to any reimbursement therefor from the Authority, the Trustee or the owners of any of the Bonds, nor shall it be entitled to any diminution in or postponement of the amounts payable under the Loan Agreement.

(vii) Additional Projects

In the event that the State System should wish to undertake an additional Project with unused balances in the account established for the State System in the Bond Proceeds Fund (whether because of the deletion of a component of the State System's undertakings with respect to the Project or otherwise), the State System may provide for the payment of the Costs of such additional Project from the unused balances in such account in the Bond Proceeds Fund, provided that it shall comply with the foregoing requirements with respect to changes in a

Project, and provided further that both an Officer's Certificate of the Authority to the effect that the additional Project is duly authorized under the Act and applicable Authority resolutions shall have been delivered.

(viii) Assignment to Trustee

The Authority shall assign the Loan Agreement and all sums payable under the Loan Agreement (other than amounts representing payments of the Authority's Annual Administrative Fees and Administrative Expenses and amounts representing the Authority's rights to indemnification pursuant to the Loan Agreement), to the Trustee, in trust, to be held and applied pursuant to the provisions of the Indenture. The State System (1) consents to the assignment to the Trustee and accepts notice thereof; (2) agrees to pay directly to the Trustee all such sums without any defense, set-off or counterclaim arising out of any default on the part of the Authority under the Loan Agreement or any transaction between the State System and the Authority; and (3) agrees that the Trustee may exercise all rights granted the Authority thereunder.

(ix) Additional Authority Financing

If the State System shall deem it necessary or advisable that additional Projects be undertaken, or if it is deemed necessary by the State System to refund Outstanding Bonds or obtain additional financing for the completion of a Project, the State System may request the Authority to provide a loan for all or part of Costs thereof. Upon receipt of a request of the State System, the Authority shall use its best efforts to provide such money from available sources under the Indenture or through the issuance of Additional Bonds or other evidences of indebtedness of the Authority.

(x) Certain Additional Covenants of the State System

The State System represents and covenants in the Loan Agreement that it is (i) a body corporate and politic constituting a public corporation and governmental instrumentality; (ii) organized and operated exclusively for educational purposes; and (iii) not for pecuniary profit. The State System agrees that it shall not perform any act nor enter into any agreement which shall change such status.

The State System covenants that it will preserve and maintain its existence as a public corporation under the laws of the Commonwealth, and to the extent permitted by law at any given time, remain free from Federal, state and local income, property, franchise and other taxes, and preserve and maintain its authority to operate the Projects.

The State System covenants that it will maintain the necessary accreditation to enable it to maintain its authority to operate its constituent educational institutions as institutions of higher education in the Commonwealth within the meaning of the Act.

The State System covenants that throughout the term of the Loan Agreement:

(A) it will take whatever actions are necessary to continue to be organized and operated in a manner which will preserve and maintain the exemption from federal income taxation of the State System; and

(B) it will not perform any acts nor enter into any agreements which shall cause any revocation or adverse modification of such federal income tax status of the State System; and

(C) it will not carry on or permit to be carried on in any Project (or with Bond proceeds or the proceeds of any loan refinanced with Bond proceeds) any trade or business the conduct of which would cause the interest paid by the Authority on the Bonds to be subject to Federal income tax in the hands of the owners thereof; and

(D) it will not take any action or permit any action to be taken on its behalf, or cause or permit any circumstances within its control to arise or continue, if such action or circumstances would cause the interest paid by the Authority on the Bonds to be subject to Federal income tax in the hands of the owners thereof; and

(E) neither it nor any person related to it within the meaning of the Code, pursuant to an arrangement, formal or informal, will purchase the Bonds in an amount related to the total amount payable under and secured by the Loan Agreement.

The State System covenants that it shall not pledge more than twenty percent (20%) of its Revenues to secure any indebtedness it may incur or guaranties it may undertake without simultaneously granting such a lien for the benefit of the Bonds.

The State System further covenants that:

(1) during the term of the Loan Agreement it will not initiate any proceedings or take any action whatsoever to dissolve or liquidate or to terminate its existence as a public corporation or otherwise dispose of all or substantially all of its assets, or the Projects, either in a single transaction or in a series of related transactions, except as provided in the Loan Agreement.

(2) it shall pay or cause to be paid to the public officers charged with the collection thereof, promptly as the same become due, all taxes (or contributions or payments in lieu thereof).

(3) it will, at its own expense, keep and maintain or cause to be kept and maintained the Projects in good order, repair and operating condition.

(4) all actions taken by the State System to acquire and carry out the Projects, including the making of contracts or the entering into of purchase orders, have been and will be in full compliance with all pertinent laws, ordinances, rules, regulations and orders applicable to the State System.

(5) it will keep accurate records and books of account with respect to the revenues and expenses of the State System in accordance with generally accepted

accounting principles and, within 150 days after the end of each Fiscal Year during the term of the Loan Agreement, provide a statement of revenue and expenses to the Authority and the Trustee.

(6) the Authority, by its duly authorized representatives, at reasonable times, and for purposes of determining compliance with the Loan Agreement and confirming the progress and completion of a Project, may inspect any part of a Project.

(xi) Events of Default and Remedies

"Events of Default" as defined in the Loan Agreement include the State System's failure:

(1) to make payments required under Section 4.01 thereof relating to payment of the principal of and interest on Bonds when the same shall become due and payable;

(2) to make any other payment required thereunder and such failure continues for 10 days after the Authority or the Trustee gives notice that such other payment is due and unpaid; or

(3) to perform any of its other covenants or to perform any of its obligations under the Loan Agreement and such failure continues for 60 days after the Authority gives the State System notice thereof; provided, however, that if such performance requires work to be done, actions to be taken, or conditions remedied, which by their nature cannot reasonably be done, taken or remedied, as the case may be, within such 60-day period, no Event of Default shall be deemed to have occurred or to exist if, and so long as, the State System shall commence such performance within such 60-day period and shall diligently and continuously prosecute the same to completion.

An "Event of Default" also occurs if the State System shall become insolvent or unable to pay its debts as they mature, or shall file a voluntary petition seeking reorganization or to effect a plan or other arrangement with creditors, or shall file an answer admitting the jurisdiction of the court and the material allegations of an involuntary petition, pursuant to any act relating to bankruptcy or to any act purporting to be amendatory thereof, or shall be adjudicated bankrupt or insolvent, or shall make an assignment for the benefit of creditors or to an agent authorized to liquidate any substantial amount of its assets, or shall apply for or consent to or suffer the appointment of any receiver or trustee for it or a substantial part of its property or assets; or a proceeding shall be instituted, without the application, approval or consent of the State System pursuant to any act relating to bankruptcy or to any act purporting to be amendatory thereof, seeking (i) adjudication of the State System as bankrupt or insolvent, (ii) reorganization of, or an order appointing any receiver or trustee for a substantial part of the property or assets of the State System, or (iii) issuance of a writ of attachment or any similar process against a substantial part of the property or assets of the State System and any such proceeding shall result in the entry of an order for relief or any such adjudication or appointment shall continue undismissed, or pending and unstayed, for any period of 30 consecutive days.

If any of the foregoing Events of Default shall happen, then and at any time thereafter while such Event of Default is continuing, the Authority may, in addition to its other remedies at law or equity or provided for in the Loan Agreement, if the Trustee shall have declared the principal of any Bonds then Outstanding to be immediately due and payable pursuant to the Indenture, with the prior written consent of the Trustee, declare amounts payable under the Loan Agreement to be immediately due and payable; then there shall become due and payable under the Loan Agreement as then current damages an amount equal to the principal of all Bonds so declared to be immediately due and payable plus accrued interest to the date of payment of such Bonds and all other amounts then due and payable under the Loan Agreement to the Authority. Until said amounts are paid by the State System, the Authority shall continue to have all of the rights, powers and remedies herein set forth, and the State System's obligations thereunder shall continue in full force and effect.

(xii) Amendment of Loan Agreement

The Authority and the State System may execute an appropriate supplement or amendment to the Loan Agreement in connection with the issuance of Additional Bonds as contemplated by the Indenture. In addition, the Authority and the State System may enter into any written amendments to the Loan Agreement as shall not adversely affect the rights of or the security of the owners of the Bonds, only for the following purposes:

(1) to cure any ambiguity, defect, or inconsistency or omission in the Loan Agreement or any amendment thereto;

(2) to grant to or confer upon the Authority any additional rights, remedies, powers, authority or security that lawfully may be granted to or conferred upon it;

(3) to reflect a change in applicable law; or

(4) to provide terms not inconsistent with the Indenture or the Loan Agreement; provided, however, that the Loan Agreement as so amended or supplemented shall provide at least the same security for owners of Bonds issued under the Indenture as the Loan Agreement prior to such amendment.

All other amendments to the Loan Agreement must be approved by the Trustee and, if the Indenture must be amended with the Bondowners' consent, by the Bondowners also, in the same manner and to the same extent as is set forth in the Indenture.

(xiii) Series AY Bond Insurer Provisions.

(A) Amendments, Supplements and Consents. The Series AY Bond Insurer's prior written consent is required for all amendments and supplements to the Indenture and Loan Agreement, with the exceptions of amendment or supplements:

(1) To cure any ambiguity or formal defect or omissions or to correct any inconsistent provisions in the transaction documents or in any supplement thereto, or

(2) To grant or confer upon the holders of the Series AY Bonds any additional rights, remedies, powers, authority or security that may lawfully be granted to or conferred upon the holders of the Series AY Bonds, or

(3) To add to the conditions, limitations and restrictions on the issuance of bonds or other obligations under the provisions of the Indenture and/or the Forty-Seventh Supplemental Loan Agreement other conditions, limitations and restrictions thereafter to be observed, or

(4) To add to the covenants and agreements of the State System in the Indenture and/or the Forty-Seventh Supplemental Loan Agreement other covenants and agreements thereafter to be observed by the State System or to surrender any right or power therein reserved to or conferred upon the State System.

(5) To issue additional parity debt in accordance with the requirements set forth in the Indenture (unless otherwise specified therein).

(B) Special Provisions for Insurer Default. If an Insurer Default shall occur and be continuing, then, notwithstanding anything in the Loan Agreement to the contrary, (1) if at any time prior to or following an Insurer Default, the Series AY Bond Insurer has made payment under the Policy, to the extent of such payment the Series AY Bond Insurer shall be treated like any other holder of the Series AY Bonds for all purposes, including giving of consents, and (2) if the Series AY Bond Insurer has not made any payment under the Policy, the Series AY Bond Insurer shall have no further consent rights until the particular Insurer Default is no longer continuing or the Series AY Bond Insurer makes a payment under the Policy, in which event, the foregoing clause (1) shall control. For purposes of this paragraph, "Insurer Default" means: (A) the Series AY Bond Insurer has failed to make any payment under the Policy when due and owing in accordance with its terms; or (B) the Series AY Bond Insurer shall (i) voluntarily commence any proceeding or file any petition seeking relief under the United States Bankruptcy Code or any other Federal, state or foreign bankruptcy, insolvency or similar law, (ii) consent to the institution of or fail to controvert in a timely and appropriate manner, any such proceeding or the filing of any such petition, apply for or consent to the appointment of a receiver, trustee, custodian, sequestrator or similar official for such party or for a substantial part of its property file an answer admitting the material allegations of a petition filed against it in any such proceeding, (v) make a general assignment for the benefit of creditors, or (vi) take action for the purpose of effecting any of the foregoing; or (C) any state or federal agency or instrumentality shall order the suspension of payments on the Policy or shall obtain an order or grant approval for the rehabilitation, liquidation, conservation or dissolution of the Series AY Bond Insurer (including without limitation under the New York Insurance Law).

(C) The Series AY Bond Insurer As Third Party Beneficiary. The Series AY Bond Insurer is recognized as and shall be deemed to be a third party beneficiary of the Indenture and the Loan Agreement and may enforce the provisions of the Indenture and the Loan Agreement as if it were a party thereto.

(D) If the event of default occurs under any agreement pursuant to which any Obligation of the State System has been incurred or issued and that permits the holder of such Obligation or trustee to accelerate the Obligation or otherwise exercise rights or remedies that are adverse to the interest of the holders of the Series AY Bonds or the Series AY Bond Insurer, as the Series AY Bond Insurer may determine in its sole discretion, then an event of default shall be deemed to have occurred under the Loan Agreement and the Indenture for which the Series AY

Bond Insurer or the Trustee, at the direction of the Series AY Bond Insurer, shall be entitled to exercise all available remedies under the Forty-Seventh Supplemental Indenture and the Forty-Seventh Supplemental Loan Agreement, at law and in equity. For purposes of the foregoing "Obligation" shall mean any bonds, loans, certificates, installment or lease payments or similar obligations that are payable and/or secured on a parity or subordinate basis to the Series AY Bonds.

THE INDENTURE

The Series AY Bonds are being issued under and subject to the provisions of the Indenture to which reference must be made for complete details of the terms of the Series AY Bonds as well as the Series AI Bonds, the Series AM Bonds, the Series AN Bonds, the Series AO Bonds, the Series AP Bonds, the Series AQ Bonds, the Series AR Bonds, the Series AS Bonds, the Series AT Bonds, the Series AU Bonds, the Series AV Bonds, the Series AW Bonds, the Series AX Bonds and any other Additional Bonds which may be issued under the Indenture.

(i) Pledge and Assignment

The Bonds are limited obligations of the Authority payable under the Indenture solely from the Trust Estate. Under the Indenture, the Pledged Revenues payable to the Authority from the State System under the Loan Agreement and all income and receipts earned on funds held by the Trustee under the Indenture have been pledged to the Trustee for the equal and ratable benefit (except as set forth in the Indenture) of the registered owners of all Bonds Outstanding under the Indenture. The rights of the Authority under the Loan Agreement (other than the rights to receive payment of its Annual Administrative Fees and Administrative Expenses and the Authority's right to receive indemnification pursuant to the Loan Agreement) have been assigned to the Trustee to secure the payment of the Bonds and the performance and observance of the covenants in the Indenture.

(ii) Disposition of the Proceeds of the Sale of the Series AY Bonds

Upon the issuance and delivery of the Series AY Bonds, the Authority shall forthwith transfer the proceeds to the Trustee and the Trustee shall deposit the same in the Settlement Account of the Bond Proceeds Fund established under the Indenture and the Forty-Fifth Supplemental Indenture to be transferred and applied upon the order of the Authority and approved by the State System. From the proceeds of the Series AY Bonds, the Trustee shall make the following transfers or expenditures from the Settlement Account: (1) amounts representing accrued interest on the Series AY Bonds shall be transferred to an account established in the Revenue Fund and applied to the payment of interest on the Series AY Bonds on the first Interest Payment Date following issuance thereof, (2) payment of the costs of issuance of the Series AY Bonds shall be paid, and (3) the balance remaining shall be transferred to the Series AY Account of the Revenue Fund for application to the payment of the Series AY Project in accordance with the procedures established in the Indenture.

(iii) Additional Bonds

Under the Indenture, the Authority is authorized to issue, at the request of the State System under the Loan Agreement, Additional Bonds for the purpose of undertaking any additional Projects on behalf of the State System or to refund any prior series of Bonds outstanding under the Indenture. Such Additional Bonds, if issued, will be equally and ratably secured under the Indenture with the Series AG Bonds, the Series AH Bonds, the Series AI Bonds, the Series AM Bonds, the Series AN Bonds, the Series AO Bonds, the Series AP Bonds, the Series AQ Bonds, the Series AR Bonds, the Series AS Bonds, the Series AT Bonds, the Series AU Bonds, the Series AV Bonds, the Series AW Bonds, the Series AX Bonds and the Series AY Bonds except to the extent expressly limited under the Indenture.

(iv) Establishment of Funds

The "Bond Proceeds Fund" established under the Indenture shall contain funds deposited therein pursuant to the Indenture and shall be expended only (i) to pay the cost of financing a Project, (ii) to pay Costs of issuance, and (iii) to pay accrued and capitalized interest on Bonds. Under the Indenture, the Trustee is directed to establish separate accounts in which to deposit proceeds of the various series of Bonds. Amounts in the Bond Proceeds Fund or any account established therein shall be held for the benefit of all Bonds Outstanding under the Indenture (other than with respect to any capitalized interest account created for a specific series of Bonds which shall be held and applied solely for the particular specified Bonds).

Payments shall be made from any account of the Bond Proceeds Fund to pay Costs of each Project, but only upon receipt by the Trustee of the requisitions and certifications required by the Indenture. Upon the completion of each Project, evidenced in the manner provided in the Indenture, amounts in the applicable account of the Bond Proceeds Fund may, at the option of the Authority upon the direction of the State System, be transferred to the Revenue Fund to be applied to the payment of Debt Service on the applicable series of Bonds or to the redemption of Bonds or to any other account of the Bond Proceeds Fund to be used to pay costs of additional Projects.

The "Revenue Fund" established under the Indenture shall contain Pledged Revenues of the Authority received by the Trustee under the Loan Agreement. Under the Indenture, the Trustee is directed to establish separate accounts within the Revenue Fund in connection with each series of Bonds. Moneys in the Revenue Fund are pledged for the equal and ratable benefit of all Bonds Outstanding under the Indenture, except as expressly limited by the Indenture.

The Trustee shall pay out of the Revenue Fund the following amounts in the following order, on the dates specified, for the following purposes (i) on each Interest Payment Date, the amounts required, taking into consideration the amounts otherwise available, for the payment of principal, Sinking Fund Payments, Redemption Price, if any, and interest due on the Outstanding Bonds on such date; (ii) on the Redemption Date or date of purchase of Bonds the amounts required for the payment of accrued interest on Bonds redeemed or purchased for retirement, unless the payment of such accrued interest shall be otherwise provided for; (iii) upon the written direction of the Authority on each Interest Payment Date to the payment of certain fees and expenses of the Trustee, including costs of redemption of Bonds; and (iv) all remaining amounts shall be transferred to the Redemption Fund upon the written direction of the Authority at the request of the State System.

The "Redemption Fund" shall contain amounts which are required to be deposited therein pursuant to the Indenture and any other amounts available therefor and determined by the State System pursuant to the Loan Agreement to be deposited therein subject to the provisions of the Indenture, and the Trustee shall apply all amounts so deposited to the redemption of Bonds. At any time prior to the date upon which notice is given that Bonds are to be redeemed from such amounts, the Trustee shall apply any amounts in the Redemption Fund to the purchase of any of the Bonds which may be redeemed by application of such amounts upon the direction of the Authority at the written direction of the State System. The Trustee shall purchase Bonds at such times, for such prices, in such amounts and in such manner as the Authority upon written direction of the State System shall from time to time direct.

(v) Deposits

In order to permit any amount to be available for use at the time when needed, amounts held under the Indenture by the Trustee or any Depositary, as such, may if and as directed by the State System, be deposited in the commercial banking department of the Trustee or Depositary which may honor checks and drafts on such deposit with the same force and effect as if it were not such Trustee or Depositary. The Trustee or Depositary shall allow and credit on such amounts at least such interest, if any, as it customarily allows upon similar funds of similar size and under similar conditions or as required by law.

All amounts deposited by the Trustee or Depositary shall be continuously and fully secured (a) by lodging with the Trustee, as custodian, as collateral security, Investment Securities having a market value (exclusive of accrued interest) not less than the amount of such deposit, and (b) in such manner as may then be required by applicable federal or state laws and regulations regarding security for the deposit of public funds provided that in no event shall such security be in an amount less than such deposit. It shall not be necessary, unless required by applicable law, for the Trustee to give security for the deposit of any amounts to the extent that such deposit is insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation, or their respective successors, or which are held in trust and set aside by them for the payment of the principal or Redemption Price of or interest on any Bonds, or for the Trustee or any Depositary to give security for any moneys which shall be represented by obligations or certificates of deposit purchased as an investment of such moneys.

All amounts so deposited by the Trustee or Depositary shall be credited to the particular Fund from which such amounts were derived.

(vi) Investment of Funds

Moneys in any Fund shall be continuously invested and reinvested and/or deposited and redeposited by the Trustee, as permitted in the Indenture, as the State System shall direct the Trustee in writing. The State System shall consult with the Trustee from time to time as to the investment of amounts in the Funds and Accounts established or confirmed by the Indenture. Except as otherwise provided herein, the State System shall give written directions to the Trustee to invest and reinvest the moneys in said Funds and Accounts in Investment Securities so that the maturity date or date of redemption at the option of the holder thereof shall coincide as nearly as practicable with the times at which moneys are needed by the Authority to be so expended. The

Investment Securities purchased shall be held by the Trustee and shall be deemed at all times to be part of such Fund or Account, and the Trustee shall keep the Authority and the State System advised as to the details of all such investments.

Except as otherwise provided therein, Investment Securities purchased as an investment of moneys in any Fund held by the Trustee under the provisions of the Indenture shall be deemed at all times to be a part of such Fund, but the income or interest earned and gains realized in excess of losses suffered by a Fund due to the investment thereof may be deposited in the Bond Proceeds Fund during the construction period of any Project and thereafter shall be deposited in the Revenue Fund as Pledged Revenues or shall be credited to the Revenue Fund from time to time as Pledged Revenues and reinvested.

Except as otherwise provided herein, the Trustee shall sell at the best price obtainable with reasonable diligence, or present for redemption or exchange, any Investment Security purchased by it pursuant to the Indenture whenever it shall be necessary in order to provide moneys to meet any payment or transfer from the fund for which such investment was made. The Trustee shall advise the Authority and the State System in writing, on or before the twentieth day of each calendar month, or as soon as practicable thereafter of all investments held for the credit of each Fund in its custody under the provisions of the Indenture as of the last business day of the preceding month.

(vii) Valuation of Funds

In computing the amount in any Fund, obligations purchased as an investment of moneys therein shall be valued at the lower of cost or fair market value.

(viii) Covenants of the Authority

The Authority shall, among other things, promptly pay solely from the Trust Estate the principal or Redemption Price, if any, of every Bond and all interest thereon. The Authority shall preserve and protect the pledge of the Trust Estate, Pledged Revenues and other assets and revenues.

The Authority shall at all times do and perform all acts and things necessary in order to assure that interest paid on the Bonds shall, for the purposes of federal income taxation, be and remain excludable from the gross income of the recipients thereof and be and remain exempt from such taxation.

The Authority shall not permit at any time or times any of the proceeds of the Bonds or any other funds of the Authority to be used directly or indirectly to acquire any securities or obligations the acquisition of which would cause any Bond to be an "arbitrage bond" as defined in the Code. The Authority shall not permit at any time or times any proceeds of any Bonds or any other funds of the Authority to be used, directly or indirectly, in a manner which would result in the exclusion of any Bond from the treatment afforded by subsection (a) of Section 103 of the Code; and has covenanted with respect to the Series AY Bonds, to comply with all applicable provisions of the Code as from time to time in effect so as to maintain the federal tax exempt status of the interest payable on the Series AY Bonds, including, without limiting the generality of the foregoing, the arbitrage rebate provisions of Section 148(f) of the Code to the extent applicable.

Notwithstanding any terms, provisions or covenants to the contrary contained in the Indenture, the Authority shall not be prohibited from issuing obligations not exempt from federal income taxation so long as the tax exempt status of any Bonds Outstanding immediately prior to the issuance of such taxable obligations shall not be adversely affected thereby.

(ix) Additional Obligations

The Authority shall not create or permit the creation of or issue any obligations or create any additional indebtedness which will be secured by a superior or equal charge and lien on the revenues and assets pledged under the Indenture, except that Additional Bonds may be issued from time to time pursuant to a Supplemental Indenture of the Authority subsequent to the issuance of the initial issue of Bonds under the Indenture on a parity with the Bonds of such initial issue of Bonds and secured by an equal charge and lien on the revenues and assets pledged under the Indenture and payable equally therefrom (except for certain funds held under the Indenture).

(x) Supplements and Amendments

For any one or more of the following purposes and at any time or from time to time, a Supplemental Indenture of the Authority may be executed and delivered which, upon the filing with the Trustee of a copy thereof certified by an Authorized Officer of the Authority, shall be fully effective in accordance with its terms:

to close the Indenture against, or to provide limitations and restrictions in addition to the limitations and restrictions contained in the Indenture on, the authentication and delivery of Bonds; or

to add to the covenants and agreements of the Authority in the Indenture other covenants and agreements to be observed by the Authority which are not contrary to or inconsistent with the Indenture as theretofore in effect; or

to add to the limitations and restrictions in the Indenture other limitations and restrictions to be observed by the Authority which are not contrary to or inconsistent with the Indenture as theretofore in effect; or

to surrender any right, power or privilege reserved to or conferred upon the Authority by the terms of the Indenture, but only if the surrender of such right, power or privilege is not contrary to or inconsistent with the covenants and agreements of the Authority contained in the Indenture; or

to confirm, as further assurance, any pledge under, and the subjection to any lien or pledge created or to be created by, the Indenture, of the Pledged Revenues or of any other revenues or assets; or to modify any of the provisions of the Indenture in accordance therewith; or

to provide for the issuance of Additional Bonds pursuant to the Indenture.

For any one or more of the following purposes and at any time or from time to time, a Supplemental Indenture may be entered into, which, upon (i) the filing with the Trustee of a copy thereof certified by an Authorized Officer, and (ii) the filing with the Trustee and the Authority of an instrument in writing made by the Trustee consenting thereto, shall be fully effective in accordance with its terms:

to cure any ambiguity, supply any omission, or cure or correct any defect or inconsistent provision in the Indenture; or

to insert such provisions clarifying matters or questions arising under the Indenture as are necessary or desirable and are not contrary to or inconsistent with the Indenture as theretofore in effect; or

to provide for additional duties of the Trustee.

Any other modification of or amendment to the Indenture and of the rights and obligations of the Authority and of the owners of the Bonds may be made by a Supplemental Indenture, but only with the written consent of the owners of at least two-thirds in principal amount of the Bonds Outstanding at the time such consent is given. In case the modification or amendment changes the terms of any Sinking Fund Payment, the written consent of owners of at least two-thirds in principal amount of each of the Bonds entitled to such Sinking Fund Payment is required. No such modification or amendment shall permit a change in the terms of redemption or maturity of the principal of any Outstanding Bond or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon without the consent of the holder of such Bond, or shall reduce the percentages or otherwise affect the classes of Bonds the consent of the owners of which is required to effect any such modification or amendment, or shall change or modify any of the rights or obligations of any fiduciary without its written assent thereto.

Upon the written consent of the owners of all the Bonds then Outstanding, the terms and provisions of the Indenture and the rights and obligations of the Authority and the owners of the Bonds may be modified or amended in any respect. However, any provision of the Indenture expressly recognizing or granting rights in or to a bond insurer may not be amended in any manner which affects its rights under the Indenture without the insurer's prior written consent.

(xi) Defaults and Remedies

Events of Default, as defined in the Indenture, include, among other things, the following:

the Authority shall default in the payment of the principal of or Redemption Price, if any, on any Bond when and as the same shall become due, whether at maturity or upon call for redemption or otherwise; or payment of any installment of interest on any of the Bonds shall not be made as the same shall become due; or

the Authority shall file a petition in bankruptcy or seek a composition of its indebtedness; or

an Event of Default (as defined in the Loan Agreement) under the Loan Agreement; or

the Authority shall fail or refuse to comply with the other provisions of the Indenture, or shall default in the performance or observance of any of the other covenants, agreements, or conditions on its part contained in the Indenture or the Bonds, and such failure, refusal or default shall continue for a period of forty-five days after written notice thereof by the Trustee or the owners of not less than twenty-five percent (25%) in principal amount of the Outstanding Bonds.

Upon the happening and continuance of any Event of Default specified in paragraphs (1) through (3) above, the Trustee shall proceed, or upon the happening and continuance of any Event of Default specified in paragraphs (4) and (5) above, the Trustee may proceed and, upon the written request of the owners of not less than twenty-five percent (25%) in principal amount of the Outstanding Bonds, shall proceed, in its own name to protect and enforce the rights of the Bond owners by such of the following remedies, as the Trustee, being advised by counsel, shall deem most effectual to protect and enforce such rights:

by mandamus or other suit, action or proceeding at law or in equity, to enforce all rights of the Bond owners, including the right to require the Authority to receive and collect revenues, including Pledged Revenues, adequate to carry out the covenants and agreements as to, and to require the Authority to carry out any other covenants or agreements with Bond owners and to perform its duties under the Act;

by bringing suit upon the Bonds;

by action or suit in equity, to require the Authority to account as if it were the trustee of an express trust for the owners of the Bonds;

by action or suit in equity, to enjoin any acts or things which may be unlawful or in violation of the rights of the owners of the Bonds; or

by declaring all Bonds due and payable and, if all defaults shall be cured, then with the written consent of the owners of not less than sixty-six and two-thirds percent (66-2/3%) in principal amount of the Outstanding Bonds, by annulling such declaration and its consequences.

Anything in the Indenture to the contrary notwithstanding, upon the happening and continuance of an Event of Default with respect to a particular series of Bonds, if such Bonds are insured by a municipal bond insurance policy, the insurer thereunder shall be entitled to control and direct the enforcement of all rights and remedies granted to the holders of the such series of Bonds or the Trustee for the benefit of the holders of such series of Bonds under the Indenture.

In the enforcement of any rights and remedies under the Indenture, the Trustee shall be entitled to sue for, enforce payment of and receive any and all amounts then or during any default becoming, and at any time remaining, due and unpaid from the Authority for principal, Redemption Price, interest or otherwise, under any provisions of the Indenture or a Supplemental Indenture or of the Bonds, with interest on overdue payments at the rate of interest specified in such Bonds, together with any and all costs and expenses of collection and of all proceedings thereunder and under such Bonds, without prejudice to any other right or remedy of the Trustee or of the Bond owners, and to recover and enforce a judgment or decree against the Authority for any portion of such amounts remaining unpaid, with interest, costs and expenses, and to collect from any moneys available for such purpose, in any manner provided by law, the moneys adjudged or decreed to be payable.

Upon the occurrence of any Event of Default and upon the filing of a suit or commencement of other judicial proceedings to enforce the rights of the Bond owners under the Indenture, the Trustee shall be entitled, as a matter of right, to the appointment of a receiver or receivers for the Authority, but only with respect to the Trust Estate, pending such proceedings, with such powers as the court making such appointment shall confer.

(xii) Limitation on Actions by Bond Owners

Bond owners shall have no right to pursue any remedy under the Indenture unless (a) the Trustee shall have given written notice of an Event of Default, (b) the owners of at least 25% in principal amount of the Bonds then Outstanding shall have requested the Trustee, in writing, to exercise the powers granted under the Indenture or to pursue such remedy, and (c) the Trustee shall have been offered indemnity satisfactory to it against costs, expenses and liabilities.

(xiii) Removal of Trustee

The Trustee shall be removed by the Authority if at any time so requested by an instrument or concurrent instruments in writing, filed with the Trustee and the Authority and signed by the owners of a majority in principal amount of the Bonds then Outstanding or their attorney-in-fact duly authorized. The Authority may remove the Trustee at any time, except during the existence of an Event of Default under the Indenture, for such cause as shall be determined in the sole discretion of the Authority.

(xiv) Defeasance

If the Authority shall pay or cause to be paid to the owners of the Bonds, the principal or Redemption Price and interest to become due thereon and make all other payments under the Indenture then the pledge of any revenues and assets hereby pledged and all other rights granted thereby shall be discharged and satisfied. In such event, the Trustee shall, upon the request of the Authority, execute and deliver to the Authority all such instruments as may be desirable to evidence such discharge and satisfaction and the Trustee shall pay over and deliver to the Authority all moneys or securities held by it pursuant to the Indenture which are not required for the payment or redemption of Bonds not theretofore surrendered for such payment or redemption.

All Outstanding Bonds and all interest installments appertaining to such Bonds shall, prior to the maturity or Redemption Date thereof, be deemed to have been paid if (i) in case any of said Bonds are to be redeemed on any date prior to their maturity, the Authority shall have given to the Trustee in form satisfactory to it irrevocable instructions to publish notice or redemption on said date of such Bonds; (ii) there shall have been deposited with the Trustee either moneys in an amount which shall be sufficient, or Investment Securities the principal of and the interest on which when due will provide moneys which, together with the moneys, if any, deposited with the Trustee at the same time, shall be sufficient, to pay when due the principal or Redemption Price, if any, and interest due and to become due on said Bonds on and prior to the redemption Date or maturity date thereof, as the case may be, and (iii) in the event said Bonds are not by their terms subject to redemption within the next succeeding sixty days, the Authority shall have given the Trustee irrevocable instructions to mail notice to the owners of such Bonds that the deposit required by (ii) above has been made with the Trustee and that said Bonds are deemed to have been paid and stating such maturity or Redemption Date upon which moneys are to be available for the payment of the principal or Redemption Price, if any, on said Bonds. For purposes of defeasance, Investment Securities shall mean and only such obligations as are described in clauses (1), (2) and (4) of the definition of Investment Securities (to the extent such securities are guaranteed or otherwise secured by the United States of America), or deposits in interest-bearing time or demand deposits or certificates of deposit secured by obligations of the types described in paragraphs (1) and (2) of the definition of Investment Securities.

Notwithstanding anything to the contrary, in the event that the principal and/or interest due on an outstanding series of Bonds shall be paid pursuant to a municipal bond insurance policy, such series of Bonds shall remain Outstanding for all purposes, not be defeased or otherwise satisfied and not be considered paid by the Authority, and the assignment and pledge of the Trust Estate and all covenants, agreements and other obligations of the Authority to the registered owners shall continue to exist and shall run to the benefit of the insurer under such municipal bond insurance policy who shall also be subrogated to the rights of such registered owners.

(xv) Provisions Relating to the Series AY Bond Insurer

(A) *Amendments, Supplements and Consents.* The Series AY Bond Insurer's prior written consent is required for all amendments and supplements to the Indenture and Loan Agreement, with the exceptions of amendment or supplements as set forth above under the "THE LOAN AGREEMENT – Provisions Relating to the Series AY Bond Insurer."

(B) *Consent of the Series AY Bond Insurer in Addition to Bondholder Consent.* Any amendment, supplement, modification to, or waiver of, the Indenture or the Loan Agreement that requires the consent of holders of the Series AY Bonds or adversely affects the rights or interests of the Series AY Bond Insurer shall be subject to the prior written consent of the Series AY Bond Insurer.

(C) *Insolvency.* Any reorganization or liquidation plan with respect to the Authority or the State System must be acceptable to the Series AY Bond Insurer. The Trustee and each owner of the Series AY Bonds hereby appoint the Series AY Bond Insurer as their agent and attorney-in-fact with respect to the Series AY Bonds and agree that the Series AY Bond Insurer may at any time during the continuation of any proceeding by or against the Authority or the State System under the United States Bankruptcy Code or any other applicable bankruptcy, insolvency, receivership, rehabilitation or similar law (an "Insolvency Proceeding") direct all matters relating to such Insolvency Proceeding, including without limitation, (A) all matters relating to any claim or enforcement proceeding in connection with an Insolvency Proceeding (a "Claim"), (B) the direction of any appeal of any order relating to any Claim, (C) the posting of any surety, supersedeas or performance bond pending any such appeal, and (D) the right to vote to accept or reject any plan of adjustment. In addition, the Trustee and each owner of the Series AY Bonds delegate and assign to the Series AY Bond Insurer, to the fullest extent permitted by law, the rights of the Trustee and each owner of the Series AY Bonds with respect to the Series AY Bonds in the conduct of any Insolvency Proceeding, including, without limitation, all rights of any party to an adversary proceeding or action with respect to any court order issued in connection with any such Insolvency Proceeding.

(D) *Control by the Series AY Bond Insurer Upon Default.* Anything in the Indenture or the Loan Agreement to the contrary notwithstanding, upon the occurrence and continuance of a default or an event of default, the Series AY Bond Insurer shall be entitled to control and direct the enforcement of all rights and remedies granted to the holders of the Series AY Bonds or the Trustee for the benefit of the holder of the Series AY Bonds under any Security document. No default or event of default may be waived without the Series AY Bond Insurer's written consent.

(E) *The Series AY Bond Insurer as Owner.* Upon the occurrence and continuance of a default or an event of default, the Series AY Bond Insurer shall be deemed to be the sole owner of the Series AY Bonds for all purposes under the Indenture or the Loan Agreement, including, without limitations, for purposes of exercising remedies and approving amendments.

(F) *Consent of the Series AY Bond Insurer for Acceleration.* The Series AY Bond Insurer's prior written consent is required as a condition precedent to and in all instances of acceleration.

(G) *Grace Period for Payment Defaults.* No grace period shall be permitted for payment defaults on the Series AY Bonds. No grace period for a covenant default shall exceed 30 days without the prior written consent of the Series AY Bond Insurer.

(H) *Special Provisions for Insurer Default.* If an Insurer Default shall occur and be continuing, then, notwithstanding anything in paragraphs above to the contrary, (1) if at any time prior to or following an Insurer Default, the Series AY Bond Insurer has made payment under the Policy, to the extent of such payment the Series AY Bond Insurer shall be treated like any other holder of the Series AY Bonds for all purposes, including giving of consents, and (2) if the Series AY Bond Insurer has not made any payment under the Policy, the Series AY Bond Insurer shall have no further consent rights until the particular Insurer Default is no longer continuing or the Series AY Bond Insurer makes a payment under the Policy, in which event, the foregoing clause (1) shall control. For purposes of this paragraph, "Insurer Default" means: (A) the Series AY Bond Insurer has failed to make any payment under the Policy when due and owing in accordance with its terms; or (B) the Series AY Bond Insurer shall (i) voluntarily commence any proceeding or file any petition seeking relief under the United States Bankruptcy Code or any other Federal, state or foreign bankruptcy, insolvency or similar law, (ii) consent to the institution of or fail to controvert in a timely and appropriate manner, any such proceeding or the filing of any such petition, apply for or consent to the appointment of a receiver, trustee, custodian, sequestrator or similar official for such party or for a substantial part of its property file an answer admitting the material allegations of a petition filed against it in any such proceeding, (v) make a general assignment for the benefit of creditors, or (vi) take action for the purpose of effecting any of the foregoing; or (C) any state or federal agency or instrumentality shall order the suspension of payments on the Policy or shall obtain an order or grant approval for the rehabilitation, liquidation, conservation or dissolution of the Series AY Bond Insurer (including without limitation under the New York Insurance Law).

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Appendix IV

Form of Opinion of Co-Bond Counsel

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October 1, 2020

Pennsylvania Higher Educational Facilities Authority
1035 Mumma Road
Harrisburg, Pennsylvania 17043

State System of Higher Education
Dixon University Center
2986 North 2nd Street
Harrisburg, Pennsylvania 17108

The Bank of New York Mellon Trust Company, N.A., as Trustee
1735 Market Street, Sixth Floor
Philadelphia, Pennsylvania 19103

Citigroup Global Markets Inc., as Representative
Municipal Securities Division
300 S. Grand Ave
31st Floor, Suite 3120
Los Angeles, California 90071

Build America Mutual Assurance Company,
200 Liberty Street, 27th Floor
New York, New York 10281
Attention: Surveillance
Re: Policy No.

Re: $78,925,000 Pennsylvania Higher Educational Facilities Authority State System of Higher Education Refunding Revenue Bonds, Series AY (Federally Taxable)

Ladies and Gentleman:

We have acted as co-bond counsel to the Pennsylvania Higher Educational Facilities Authority (the "Authority") in connection with the issuance of $78,925,000 principal amount of its State System of Higher Education Refunding Revenue Bonds, Series AY (Federally Taxable) (the "Bonds") pursuant to the Indenture of Trust dated as of June 1, 1985, as supplemented from time to time (the "Indenture"), including by a Forty-Seventh Supplemental Indenture of Trust dated as of October 1, 2020 (the "Forty-Seventh Supplemental Indenture"), between the Authority and The Bank of New York Mellon Trust Company, N.A., as Trustee (the "Trustee").

We have examined (i) an executed copy of the Indenture, (ii) an executed copy of the Loan and Security Agreement dated as of June 1, 1985, as supplemented from time to time (the "Loan Agreement"), between the Authority and the State System of Higher Education (the "System"), and each supplement thereto, including the Forty-Seventh Supplemental Loan and Security Agreement dated as of October 1, 2020 (the "Forty-Seventh Supplemental Agreement") between the Authority and the System pursuant to which the System unconditionally agrees to pay the principal of, and interest on, the Bonds when and as the same shall become due, subject to the terms and conditions of the Loan Agreement and the Indenture, (iv) the form of Bonds, and (iv) such constitutional and statutory provisions and such other resolutions, certificates, instruments and documents as we have deemed necessary or appropriate in order to enable us to render an informed opinion as to matters set forth herein.

In rendering this opinion we have assumed the genuineness of all signatures on all documents and certificates that we examined, the legal capacity and authority of all persons executing such documents, the authenticity of all documents submitted to us as originals, and the conformity to originals of all documents submitted to us as copies and the authenticity of the originals of said copies. As to questions of fact material to our opinion, we have relied upon the representations of the Authority and the System contained in the Indenture and the Loan Agreement and in certified proceedings and other certifications of public officials and others furnished to us without undertaking to verify the same by independent investigation.

We express no opinion herein relating to the accuracy, completeness or sufficiency of the Preliminary Official Statement or Official Statement pertaining to the Bonds or any other offering material relating to the Bonds and make no representation that we have independently verified the contents of any such offering material, including the appendices thereto.

An officer of the Authority responsible for issuing the Bonds and a representative of the System have executed a certificate stating the reasonable expectations of the Authority and the System on the date of issue of the Bonds as to future events that are material for the purposes of Section 148 of the Code (as defined below) pertaining to arbitrage bonds.

Based upon the foregoing, it is our opinion, under existing law and as of the date hereof, subject to the qualifications and limitations set forth herein, that:

1. The Authority is a body corporate and politic constituting a public corporation and a government instrumentality organized and existing under the Pennsylvania Higher Educational Facilities Authority Act of December 6, 1967, P.L. 678, No. 318, as amended (the "Act"), of the Commonwealth of Pennsylvania and has the power to enter into the transactions contemplated by the Indenture and the Loan Agreement and to carry out its obligations thereunder.

2. The Forty-Seventh Supplemental Indenture and the Forty-Seventh Supplemental Loan Agreement have been duly authorized, executed and delivered by the Authority and constitute the valid and binding obligations of the Authority enforceable against it in accordance with their respective terms.

3. The Bonds have been duly and validly authorized, executed, issued and delivered by the Authority and constitute the valid and binding limited obligations of the Authority enforceable against it in accordance with their terms, payable from the sources provided therefor in the Indenture.

4. All right, title and interest of the Authority in and to the installment payments due under the Loan Agreement have been duly assigned to the Trustee (except for the fees and expenses payable to the Authority and the Authority's right to indemnification).

5. Under the laws of the Commonwealth of Pennsylvania as enacted and construed on the date of issuance of the Bonds, the interest on the Bonds is exempt from the Commonwealth personal income tax and the Commonwealth corporate net income tax.

6. Interest (including original issue discount) on the Bonds is not excludable from gross income for purposes of federal income. We express no opinion regarding other federal tax consequences of ownership or disposition of, or the accrual or receipt of interest on, the Bonds.

Original issue premium on a Bond issued at an issue price that exceeds its principal amount is amortizable periodically over the term of a Bond through reductions in the holder's tax basis for the Bond for determining taxable gain or loss from sale or from redemption prior to maturity. Amortization of premium does not create a deductible expense or loss.

The rights of any owner of the Bonds and the enforceability of the Bonds, the Indenture, and the Loan Agreement are subject to: (a) the exercise of judicial discretion in accordance with general principles of equity (whether applied by a court of law or a court of equity), including judicial limitations on rights to specific performance; (b) the valid exercise of the constitutional powers of the United States of America and of the sovereign police and taxing powers of state or other governmental units having jurisdiction; and (c) bankruptcy, insolvency, reorganization, moratorium or other similar laws heretofore or hereafter in effect affecting creditors' rights, to the extent constitutionally applicable.

This opinion letter is rendered on the basis of federal law and the laws of the Commonwealth of Pennsylvania as enacted and construed on the date hereof. We undertake no obligation to update or supplement this letter under any circumstance including if, after the date hereof, facts or events come to our attention or changes in law occur which could affect the opinions expressed herein. We express no opinion herein as to any matter not set forth in the numbered sections above.

Attention is called to the facts that the Bonds are limited obligations of the Authority, payable only out of the revenues of the Authority pledged under the Indenture and certain other moneys available therefor as provided in the Indenture; that the Bonds do not pledge the credit or taxing power of the Commonwealth of Pennsylvania or any political subdivision thereof; and that the Authority has no taxing power.

Very truly yours,

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Appendix V

Specimen Municipal Bond Insurance Policy

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MUNICIPAL BOND INSURANCE POLICY

ISSUER: [NAME OF ISSUER]

Policy No: _____

MEMBER: [NAME OF MEMBER]

BONDS: $_________ in aggregate principal amount of [NAME OF TRANSACTION] [and maturing on]

Effective Date: _________

Risk Premium: $_________
Member Surplus Contribution: $ _________
Total Insurance Payment: $_________

BUILD AMERICA MUTUAL ASSURANCE COMPANY ("BAM"), for consideration received, hereby UNCONDITIONALLY AND IRREVOCABLY agrees to pay to the trustee (the "Trustee") or paying agent (the "Paying Agent") for the Bonds named above (as set forth in the documentation providing for the issuance and securing of the Bonds), for the benefit of the Owners or, at the election of BAM, directly to each Owner, subject only to the terms of this Policy (which includes each endorsement hereto), that portion of the principal of and interest on the Bonds that shall become Due for Payment but shall be unpaid by reason of Nonpayment by the Issuer.

On the later of the day on which such principal and interest becomes Due for Payment or the first Business Day following the Business Day on which BAM shall have received Notice of Nonpayment, BAM will disburse (but without duplication in the case of duplicate claims for the same Nonpayment) to or for the benefit of each Owner of the Bonds, the face amount of principal of and interest on the Bonds that is then Due for Payment but is then unpaid by reason of Nonpayment by the Issuer, but only upon receipt by BAM, in a form reasonably satisfactory to it, of (a) evidence of the Owner's right to receive payment of such principal or interest then Due for Payment and (b) evidence, including any appropriate instruments of assignment, that all of the Owner's rights with respect to payment of such principal or interest that is Due for Payment shall thereupon vest in BAM. A Notice of Nonpayment will be deemed received on a given Business Day if it is received prior to 1:00 p.m. (New York time) on such Business Day; otherwise, it will be deemed received on the next Business Day. If any Notice of Nonpayment received by BAM is incomplete, it shall be deemed not to have been received by BAM for purposes of the preceding sentence, and BAM shall promptly so advise the Trustee, Paying Agent or Owner, as appropriate, any of whom may submit an amended Notice of Nonpayment. Upon disbursement under this Policy in respect of a Bond and to the extent of such payment, BAM shall become the owner of such Bond, any appurtenant coupon to such Bond and right to receipt of payment of principal of or interest on such Bond and shall be fully subrogated to the rights of the Owner, including the Owner's right to receive payments under such Bond. Payment by BAM either to the Trustee or Paying Agent for the benefit of the Owners, or directly to the Owners, on account of any Nonpayment shall discharge the obligation of BAM under this Policy with respect to said Nonpayment.

Except to the extent expressly modified by an endorsement hereto, the following terms shall have the meanings specified for all purposes of this Policy. "Business Day" means any day other than (a) a Saturday or Sunday or (b) a day on which banking institutions in the State of New York or the Insurer's Fiscal Agent (as defined herein) are authorized or required by law or executive order to remain closed. "Due for Payment" means (a) when referring to the principal of a Bond, payable on the stated maturity date thereof or the date on which the same shall have been duly called for mandatory sinking fund redemption and does not refer to any earlier date on which payment is due by reason of call for redemption (other than by mandatory sinking fund redemption), acceleration or other advancement of maturity (unless BAM shall elect, in its sole discretion, to pay such principal due upon such acceleration together with any accrued interest to the date of acceleration) and (b) when referring to interest on a Bond, payable on the stated date for payment of interest. "Nonpayment" means, in respect of a Bond, the failure of the Issuer to have provided sufficient funds to the Trustee or, if there is no Trustee, to the Paying Agent for payment in full of all principal and interest that is Due for Payment on such Bond. "Nonpayment" shall also include, in respect of a Bond, any payment made to an Owner by or on behalf of the Issuer of principal or interest that is Due for Payment, which payment has been recovered from such Owner pursuant to the United States Bankruptcy Code in accordance with a final, nonappealable order of a court having competent jurisdiction. "Notice" means delivery to BAM of a notice of claim and certificate, by certified mail, email or telecopy as set forth on the attached Schedule or other acceptable electronic delivery, in a form satisfactory to BAM, from and signed by an Owner, the Trustee or the Paying Agent, which notice shall specify (a) the person or entity making the claim, (b) the Policy Number, (c) the claimed amount, (d) payment instructions and (e) the date such claimed amount becomes or became Due for Payment. "Owner" means, in respect of a Bond, the person or entity who, at the time of Nonpayment, is entitled under the terms of such Bond to payment thereof, except that "Owner" shall not include the Issuer, the Member or any other person or entity whose direct or indirect obligation constitutes the underlying security for the Bonds.

BAM may appoint a fiscal agent (the "Insurer's Fiscal Agent") for purposes of this Policy by giving written notice to the Trustee, the Paying Agent, the Member and the Issuer specifying the name and notice address of the Insurer's Fiscal Agent. From and after the date of receipt of such notice by the Trustee, the Paying Agent, the Member or the Issuer (a) copies of all notices required to be delivered to BAM pursuant to this Policy shall be simultaneously delivered to the Insurer's Fiscal Agent and to BAM and shall not be deemed received until received by both and (b) all payments required to be made by BAM under this Policy may be made directly by BAM or by the Insurer's Fiscal Agent on behalf of BAM. The Insurer's Fiscal Agent is the agent of BAM only, and the Insurer's Fiscal Agent shall in no event be liable to the Trustee, Paying Agent or any Owner for any act of the Insurer's Fiscal Agent or any failure of BAM to deposit or cause to be deposited sufficient funds to make payments due under this Policy.

To the fullest extent permitted by applicable law, BAM agrees not to assert, and hereby waives, only for the benefit of each Owner, all rights (whether by counterclaim, setoff or otherwise) and defenses (including, without limitation, the defense of fraud), whether acquired by subrogation, assignment or otherwise, to the extent that such rights and defenses may be available to BAM to avoid payment of its obligations under this Policy in accordance with the express provisions of this Policy. This Policy may not be canceled or revoked.

This Policy sets forth in full the undertaking of BAM and shall not be modified, altered or affected by any other agreement or instrument, including any modification or amendment thereto. Except to the extent expressly modified by an endorsement hereto, any premium paid in respect of this Policy is nonrefundable for any reason whatsoever, including payment, or provision being made for payment, of the Bonds prior to maturity. THIS POLICY IS NOT COVERED BY THE PROPERTY/CASUALTY INSURANCE SECURITY FUND SPECIFIED IN ARTICLE 76 OF THE NEW YORK INSURANCE LAW. THIS POLICY IS ISSUED WITHOUT CONTINGENT MUTUAL LIABILITY FOR ASSESSMENT.

In witness whereof, BUILD AMERICA MUTUAL ASSURANCE COMPANY has caused this Policy to be executed on its behalf by its Authorized Officer.

BUILD AMERICA MUTUAL ASSURANCE COMPANY

By: ______________________________

Authorized Officer

Notices (Unless Otherwise Specified by BAM)

Email:
claims@buildamerica.com
Address:
200 Liberty Street, 27th floor
New York, New York 10281
Telecopy:
212-962-1524 (attention: Claims)

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State System of Higher Education
Commonwealth of Pennsylvania
Established July 1, 1983

Bloomsburg University

CAL U

CLARION UNIVERSITY

ESU
EAST STROUDSBURG UNIVERSITY

EU 1857
EDINBORO UNIVERSITY

IUP

KUTZTOWN UNIVERSITY

LOCK HAVEN UNIVERSITY OF PENNSYLVANIA

MANSFIELD UNIVERSITY

Millersville University

SHIPPENSBURG UNIVERSITY

SlipperyRock University

WCU
WEST CHESTER UNIVERSITY