

State of Delaware

Postretirement Health Plan Actuarial Valuation Report as of July 1, 2017

**Produced by Cheiron
March 2018**

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Letter of Transmittal

March 5, 2018

Mr. David Craik
Pension Administrator
Delaware Public Employees Retirement System
860 Silver Lake Boulevard, Suite 1
Dover, Delaware 19904

Dear Dave:

As requested, we have performed an analysis of the Postretirement Health Plan provided by the State of Delaware as of July 1, 2017. The following report contains our findings and disclosures required by The Governmental Accounting Standards Board (GASB) standard.

The purpose of this report is to present the annual Post-Employment Benefits (OPEB) actuarial valuation of the State of Delaware. This report is for the use of the State of Delaware and its auditors in preparing financial reports in accordance with applicable law and accounting requirements.

In preparing our report, we relied on information (some oral and some written) supplied by the State of Delaware. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Appendix A describes the participant data, assumptions, and methods used in calculating the figures throughout the report. Appendix B contains a summary of the substantive plan provisions based on documentation provided by and discussions with your office.

The results of this report are based on future experience conforming to the actuarial assumptions used. The results will change to the extent that future experience differs from the assumptions. Actuarial computations are calculated based on our understanding of GASB 74 and 75 and are for purposes of fulfilling employer financial accounting requirements. Determinations for purposes other than meeting employer financial accounting requirements may be significantly different from the results in this report.

This report does not reflect future changes in benefits, penalties or taxes, or administrative costs that may be required as a result of the Patient Protection and Affordable Care Act of 2010, related legislation, or regulations. The report reflects an estimated cost for the temporary Transitional Reinsurance contribution.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the

David Craik
March 5, 2018
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Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

This actuarial report was prepared for the State of Delaware for the purposes described herein and for the use by the Plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Please do not hesitate to call should you have any questions.

Sincerely,
Cheiron



Margaret A. Tempkin, FSA, MAAA
Principal Consulting Actuary



Michael W. Schionning, FSA, MAAA
Principal Consulting Actuary

cc: Stephanie Scola
Kris Knight
Dawn Haw-Young

**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

SECTION I – SUMMARY

The State of Delaware has engaged Cheiron to provide an analysis of the Postretirement Health Benefit Plan’s liabilities as of July 1, 2017. The primary purposes of performing this actuarial valuation are to:

- Determine the net other postemployment benefit (OPEB) obligation (NOO) of the retiree health benefit under GASB Statements 43 and 45 and the current funding strategy;
- Provide disclosures for financial statements; and
- Provide projections for Net OPEB Liability (NOL) and actuarial liabilities.

We have determined costs, liabilities and trends for the substantive plan using actuarial assumptions and methods that we consider reasonable.

GASB’s OPEB Requirements

GASB’s Statement 74 refers to the financial reporting for postemployment benefit plans other than pension plans, and Statement 75 refers to the employer accounting for these plans. Statement 74 is generally applicable where an entity has a separate trust or fund for OPEB benefits. The GASB No. 74 and 75 Statements will be effective for the plan year ending June 30, 2017, and June 30, 2018, respectively. A GASB 74 and 75 valuation report was provided in a separate document.

Funding Policy

The State of Delaware currently pays for its post-employment health benefits on a pay-as-you-go (PAYGo) basis. We further understand that there are some assets set aside in a dedicated Trust to cover this liability.

STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017

SECTION I – SUMMARY

Valuation Results

The table below presents the key results of the 2016 and 2017 valuations.

Table I-1		
Summary of Key Valuation Results		
(\$ In Millions)		
	July 1, 2016	July 1, 2017
Actuarial Liability (AL)	\$ 8,039.1	\$ 8,610.9
Assets	<u>310.0</u>	<u>355.2</u>
Unfunded Actuarial Liability (UAL)	\$ 7,729.2	\$ 8,255.6
	June 30, 2017	June 30, 2018
Fiscal Year Ending		
Annual Required Contribution (ARC)	\$ 542.4	\$ 595.6
Actual / <i>Expected</i> Contribution	237.4	218.9
Actual / <i>Expected</i> Net Benefit Payments	236.3	218.9
Net OPEB Obligation	2,699.7	N/A

The figures provided in this report are highly sensitive to the assumptions used.

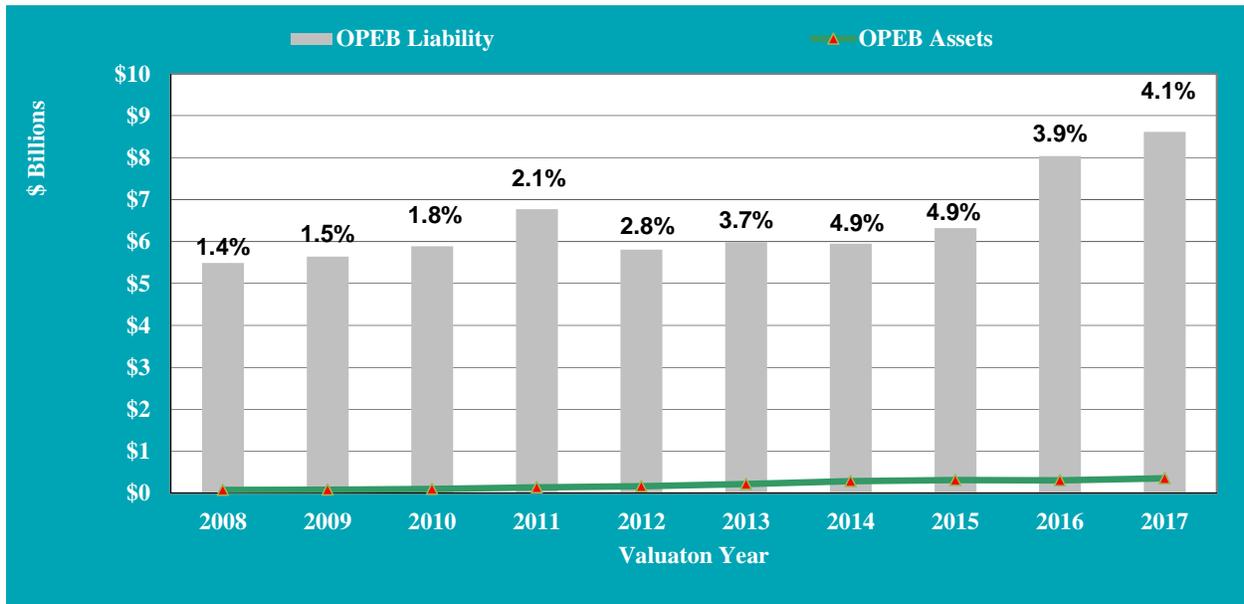
The change in experience during the year resulted in an increase in the AL of approximately \$572 million. More detail on the effects of these changes can be found in the valuation results section of this report.

STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017

SECTION I – SUMMARY

Historical Trends

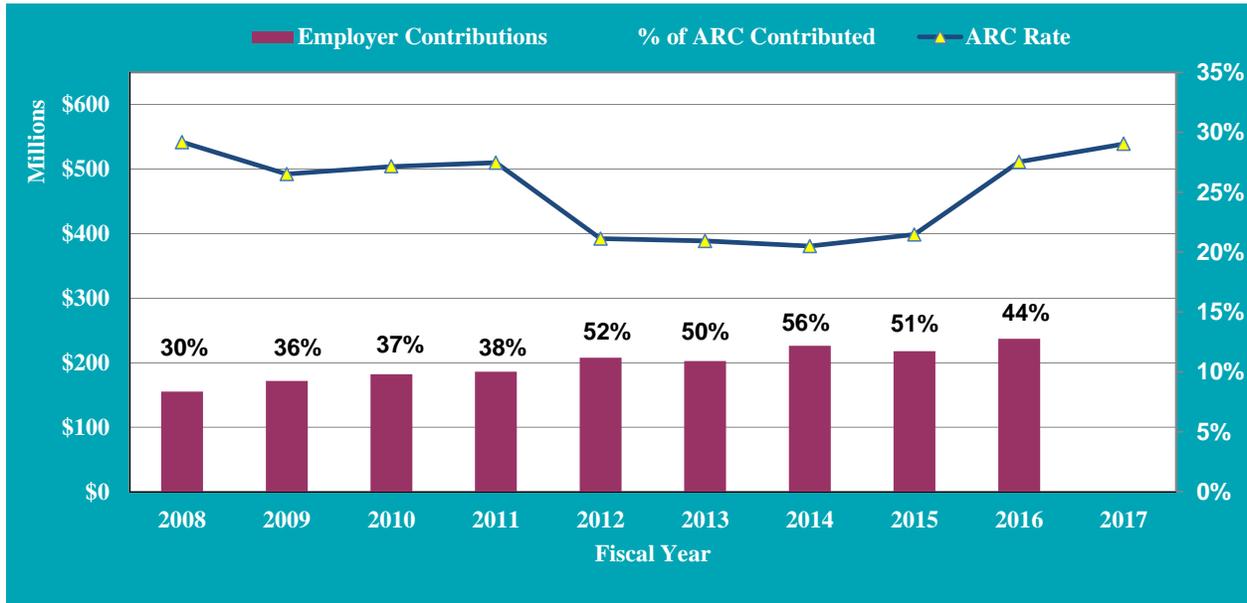
This chart shows the historical trend of assets and the actuarial liability for the State of Delaware’s Postretirement Health Plan. The first valuation complying with GASB 43 and 45 was performed in 2006. The reduction in actuarial liability in 2012 was primarily due to the Plan changes. The increase in actuarial liability in 2016 was due to the demographic decrement changes from the 2015 experience study adopted in 2016 as well as the change in discount rate from 4.0% to 3.75%. The increase in actuarial liability in 2017 was due to the change in discount rate from 3.75% to 3.58%. The percentages above the grey bars represent the ratio of the market value of assets over the actuarial liability.



**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

SECTION I – SUMMARY

This chart shows the historical trend of employer contributions and the annual required contribution for the State of Delaware’s Postretirement Health Plan. The percentages above the burgundy bars represent the ratio of the actual contributions to the annual required contribution (ARC).

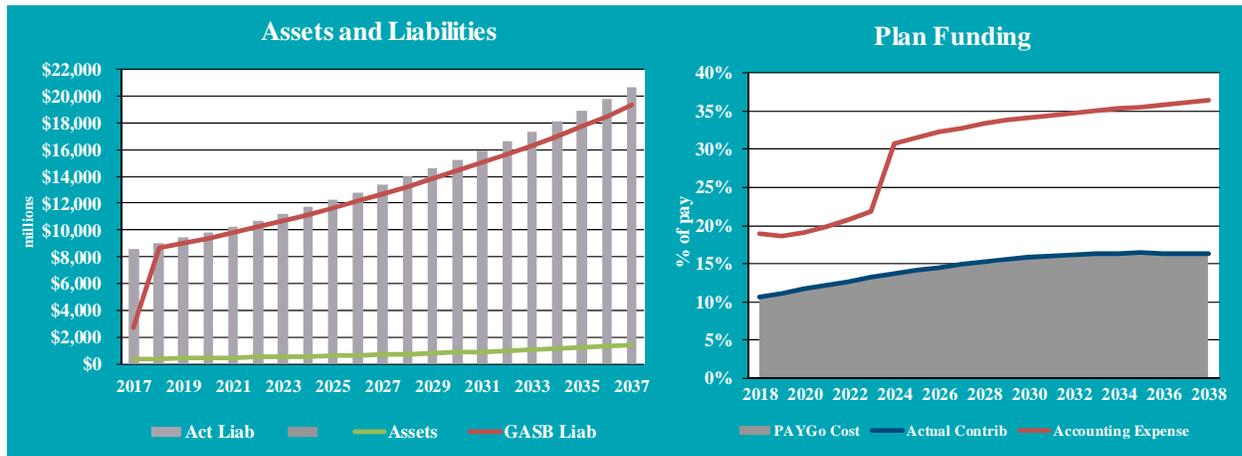


**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

SECTION I – SUMMARY

Projected Trends

Looking beyond 2017, the expense and liability on the financial statements increase under the PAYGo funding method, because the Plan is not funded. The charts below project the assets and liabilities and the funding costs for the next 20 years.



As the above chart on the left shows, the actuarial liability increases from \$8.6 billion to \$20.7 billion during the next 20 years. The red line on the same chart shows the liability appearing on the State’s financial statements, which is projected to increase from \$2.7 billion to \$8.6 billion as of July 1, 2018. In July 1, 2018 and later the liability appearing on the State’s financial statements changes, per GASB No. 74 and No. 75, to the unfunded liability, which increases to \$8.6 billion in 2018 to over \$19.3 billion by the end of the 20-year period. The green line shows the assets increasing from \$355 million to \$1,375 million assuming a 7.0% return on assets.

The chart on the right shows the projected annual costs. Benefit payments, net of retiree contributions, are shown by the grey area and increase from 10.7% of pay or \$219 million to 16.3% of pay or \$634 million. The blue line represents the State’s assumed contributions. Under PAYGo funding they match the net benefit payments; the accounting expense, shown by the red line, increases from 19.0% of pay or \$389 million in FY 2018 to 36.4% of pay or \$1.42 billion in FYE 2038. The first four years (2018- 2022) are projected to be lower than the remaining years due to the recognition of the 2017 experience and asset gains/losses. The expense is expected to jump up to the change in the unfunded liability if all assumptions are met. The actual expense will be very volatile due to the nature of a pay-as-you-go plan.

**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

SECTION II – ASSETS

The Plan's last valuation of liabilities was performed as of July 1, 2016. Table II-1 below shows the reconciliation of assets for the fiscal year. This section reconciles to the assets of July 1, 2017 that were used to develop the FYE 2018 ARC.

Table II-1 Reconciliation of Assets (\$ in millions)	
Valuation Assets as of July 1, 2016	\$ 310.0
Contributions for Fiscal Year *	
State Contributions	\$ 237.2
Transfer from outside the system	0.2
Retiree Contributions	12.0
Total Contributions	\$ 249.4
Benefit Payments *	236.3
Expenses	0.1
Investment Earnings	32.3
Valuation Assets as of July 1, 2017	\$ 355.2

* Contributions for benefits and expenses were routed through the Trust

**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

SECTION III – VALUATION RESULTS

This section of the report calculates the current and expected future contribution requirements under the State’s funding policy of pay as you go. This valuation calculates contributions for FYE 2018 based on our interpretation of GASB 45’s annual required contribution (ARC). Information about the actuarial liabilities of the Plan as of July 1, 2017 is shown in Table III-1 below.

Table III-1 Actuarial Liability Pay-As-You-Go Funding (3.58% assumed discount) (\$ in millions)					
	State Employees	Judges	Closed State Police	Open State Police	Total
Actives	\$ 4,252.7	\$ 4.6	\$ -	\$ 164.9	\$ 4,422.2
<u>Retirees</u>	<u>4,021.4</u>	<u>5.5</u>	<u>78.8</u>	<u>83.0</u>	<u>4,188.7</u>
Total	\$ 8,274.1	\$ 10.1	\$ 78.8	\$ 247.9	\$ 8,610.9
Assets*	342.2	-	3.0	10.0	355.2
UAL	\$ 7,931.9	\$ 10.1	\$ 75.8	\$ 237.9	\$ 8,255.7

*Assets allocated in proportion to liabilities

The Annual Required Contribution (ARC) consists of two parts: (1) the *normal cost*, which represents the annual cost attributable to service earned in a given year, and (2) the 30-year amortization of the unfunded actuarial liability (UAL). The rolling amortization method will never pay off the unfunded liability. For that reason, we do not believe that the ARC, as defined in GASB Statement No. 45, would constitute an actuarially sound funding policy. This report shows both the ARC and projections of the State’s actual contributions, using the State’s funding policy of pay as you go. Under the current funding method of PAYGo, the State pays for the benefits currently provided to existing retirees.

In Table III-2 below, we show the computed FY 2017-18 annual required contribution (ARC) under the State’s funding policy and a 3.58% assumed discount rate.

Table III-2 Annual Required Contributions – FY2018 Pay-As-You-Go Funding (3.58% assumed discount) (\$ in millions)					
	State Employees	Judges	Closed State Police	Open State Police	Total
Normal Cost	\$ 296.2	\$ 0.3	\$ -	\$ 10.1	\$ 306.6
<u>UAL Amortization</u>	<u>277.8</u>	<u>0.3</u>	<u>2.6</u>	<u>8.3</u>	<u>289.0</u>
Total	\$ 574.0	\$ 0.6	\$ 2.6	\$ 18.4	\$ 595.6

**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

SECTION III – VALUATION RESULTS

Table III-3 shows the employer contributions, benefit payments, assets and NOL that we anticipate for the next 15 years under PAYGo Funding. In calculating the liabilities, we project these figures for the life of each existing participant.

Table III-3				
Expected Contributions, Expected Net Benefit Payments, Assets and NOL under PAYGo Funding				
(\$ in millions)				
Fiscal Year	Expected Net			
Ending June 30,	Expected Contributions	Benefit Payments	Expected Assets	Expected NOL
2018	\$ 218.9	\$ 218.9	\$ 355.2	\$ 8,628.3
2019	236.4	236.4	380.1	9,008.0
2020	255.1	255.1	406.7	9,397.5
2021	276.3	276.3	435.2	9,801.1
2022	296.3	296.3	465.6	10,225.2
2023	318.2	318.2	498.2	10,671.0
2024	340.4	340.4	533.1	11,139.6
2025	362.5	362.5	570.4	11,631.3
2026	384.8	384.8	610.3	12,145.0
2027	408.0	408.0	653.0	12,679.1
2028	431.4	431.4	698.8	13,232.9
2029	453.6	453.6	747.7	13,807.4
2030	477.4	477.4	800.0	14,401.6
2031	499.9	499.9	856.0	15,017.4
2032	521.8	521.8	915.9	15,656.9

STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017

SECTION III – VALUATION RESULTS

Reconciliation

Table III-4 provides an estimate of the major factors contributing to the change in liability since the last actuarial valuation report (AVR).

Table III-4			
Reconciliation of Actuarial Liability			
(\$ in millions)			
	Actuarial Accrued Liability July 1, 2017	Normal Cost June 30, 2018	Annual Required Contribution June 30, 2018
Expected Values for July 1, 2017 based on the 7/1/2016 AVR	\$ 8,399.4	\$ 275.5	\$ 565.5
<u>Changes due to:</u>			
Asset (Gain) / Loss	N/A	N/A	(1.2)
Demographic (Gain) / Loss	164.4	-	5.8
Health Cost Assumptions (Gain) / Loss	(190.4)	-	(6.7)
Other Assumptions (Gain) / Loss	237.5	31.1	32.2
Total Changes	\$ 211.5	\$ 31.1	\$ 30.1
July 1, 2017 valuation results based on the 7/1/2017 AVR	\$ 8,610.9	\$ 306.6	\$ 595.6

Below is a brief description of each of the above components:

- *Expected Values* refer to the change that would have occurred had experience matched all the assumptions between July 1, 2016 and July 1, 2017.
- *Asset* changes refer the change in the expected market value to actual market value.
- *Demographic* changes refer to the change in actual current and potential future beneficiary data and elections from July 1, 2016 to July 1, 2017. There were more retirees than assumed electing medical coverage. The increase in liability due to the retirees was dampened by the active liability decrease.
- *Change in Health Cost Assumptions* refers to the change in actual claim curves compared to the expected claims based on the prior year claims. The pre-Medicare premiums did not have an increase, so we applied a zero trend to the pre-Medicare curves. The Medicare premiums increased 7.68%, so we trended our curves with this increase.
- *Other Assumptions* changes refer to the changes in demographic assumptions as well as changes in economic assumptions other than those relating to health costs. The increase in the liability is due to the reduction of the discount rate from 3.75% to 3.58%.

STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017

SECTION IV – SENSITIVITY

The liabilities and ARC produced in this report are sensitive to the assumptions used. The tables below show the impact of a 1% increase or decrease in the health care trend rates on the actuarial liability, the ARC, and the net expected benefit payments, using the 3.58% discount rate, to provide some measure of sensitivity.

Table IV-1			
Actuarial Liability			
As of July 1, 2017			
Pay-As-You-Go Funding			
(3.58% assumed discount)			
(\$ in millions)			
Health Care Trend Rate	-1%	Base	1%
Actuarial Liability			
Actives	\$ 3,732.0	\$ 4,422.2	\$ 5,238.7
Retirees	<u>3,717.9</u>	<u>4,188.7</u>	<u>4,762.1</u>
Total	\$ 7,449.9	\$ 8,610.9	\$ 10,000.8
Assets	<u>355.2</u>	<u>355.2</u>	<u>355.2</u>
UAL	\$ 7,094.7	\$ 8,255.7	\$ 9,645.6

Table IV-2			
Annual Required Contributions – FY2018			
Pay-As-You-Go Funding			
(3.58% assumed discount)			
(\$ in millions)			
Health Care Trend Rate	-1%	Base	1%
Normal Cost	\$ 212.4	\$ 306.6	\$ 447.4
UAL Amortization	<u>248.5</u>	<u>289.0</u>	<u>337.8</u>
Total	\$ 460.9	\$ 595.6	\$ 785.2

STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017

SECTION IV – SENSITIVITY

The liabilities and ARC produced in this report are sensitive to the assumptions used. The tables below show the impact of a 1% increase or decrease in the discount rate on the actuarial liability, the ARC, and the net expected benefit payments, using the base case healthcare trends, to provide some measure of sensitivity.

Table IV-3			
Actuarial Liability			
As of July 1, 2017			
Pay-As-You-Go Funding			
(\$ in millions)			
Discount Rate	2.58%	3.58%	4.58%
Actuarial Liability			
Actives	\$ 5,426.2	\$ 4,422.2	\$ 3,648.1
Retirees	<u>4,803.2</u>	<u>4,188.7</u>	<u>3,696.0</u>
Total	\$ 10,229.4	\$ 8,610.9	\$ 7,344.1
Assets	<u>355.2</u>	<u>355.2</u>	<u>355.2</u>
UAL	\$ 9,874.2	\$ 8,255.7	\$ 6,988.9

Table IV-4			
Annual Required Contributions – FY2018			
Pay-As-You-Go Funding			
(\$ in millions)			
Discount Rate	2.58%	3.58%	4.58%
Normal Cost	\$ 407.8	\$ 306.6	\$ 233.3
UAL Amortization	<u>297.2</u>	<u>289.0</u>	<u>282.4</u>
Total	\$ 705.0	\$ 595.6	\$ 515.7

**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

SECTION V – ACTUARIAL FUNDING

To have a system where the assets will eventually accumulate to the actuarial liability, meaning that the entire liability is funded, the State of Delaware may wish to begin funding this program on an actuarial basis by contributing the ARC. If the State were to establish a funding policy of contributing the ARC, the discount rate could be increased. Using a discount rate of 7.0% (matching the pension assumption) produces an unfunded liability of \$4.9 billion, rather than \$7.7 billion.

In addition to the change in overall liability, the ARC will also decrease. Thus, in order to fund on an actuarial basis, the State needs to contribute \$395.7 million, or \$199.9 million below the ARC under PAYGo. The \$395.7 million is \$176.8 higher than the expected PAYGo cost of \$218.9 million for FYE 2018.

If the State increases its contribution, but it is still less than the actuarially funded scenario, the discount rate will increase above the 3.58% discount rate, and the resulting liabilities and ARC payments will likely fall between the two discount rate scenarios presented in this report.

Table V-1 Actuarial Liability Actuarial Funding (7.0% assumed discount) (\$ in millions)					
	State Employees	Judges	Closed State Police	Open State Police	Total
Actives	\$ 2,306.7	\$ 2.6	\$ -	\$ 86.7	\$ 2,396.0
Retirees	2,728.7	3.8	56.1	53.7	2,842.3
Total	\$ 5,035.4	\$ 6.4	\$ 56.1	\$ 140.4	\$ 5,238.3
Assets*	341.2	-	4.0	10.0	355.2
UAL	\$ 4,694.2	\$ 6.4	\$ 52.1	\$ 130.4	\$ 4,883.1

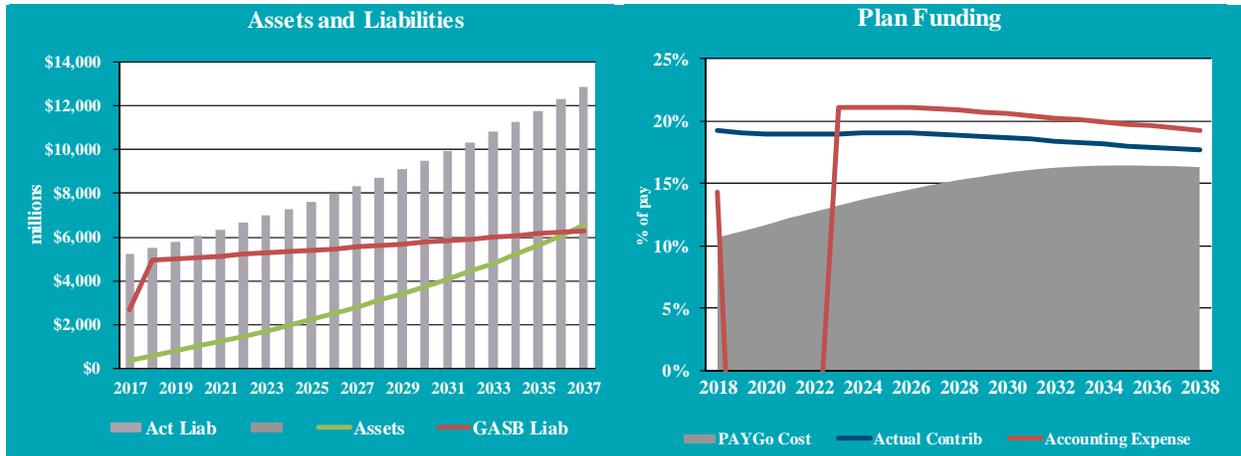
* Assets allocated in proportion to liabilities

Table V-2 Annual Required Contributions – FY2018 Actuarial Funding (7.0% assumed discount) (\$ in millions)					
	State Employees	Judges	Closed State Police	Open State Police	Total
Normal Cost	\$ 121.4	\$ 0.2	\$ -	\$ 4.1	\$ 125.7
UAL Amortization	259.6	0.3	2.8	7.2	270.0
Total	\$ 381.0	\$ 0.5	\$ 2.8	\$ 11.3	\$ 395.7

**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

SECTION V – ACTUARIAL FUNDING

Looking beyond 2017, the charts below project the assets and liabilities and the funding costs for the next 20 years assuming the State amortizes the liability over an open 30-year period.



As the above chart on the left shows, the actuarial liability increases from \$5.2 billion to \$12.9 billion during the next 20 years. The red line on the same chart shows the liability appearing on the State’s financial statements, which is projected to increase slowly over the period to \$6.3 billion. The green line shows the assets increasing from \$355 million to about \$6.6 billion.

The chart on the right shows the annual costs. Benefit payments, net of retiree contributions, are shown by the grey area and increase from 10.7% of pay or \$219 million to 16.3% of pay or \$634 million, the same as in the pay-as-you-go scenario. The blue line represents the State’s contribution. The red line represents the expense, which drops to negative \$521 million as assumption gains are recognized. The expense then jumps back up to above the assumed contributions as the assumption and experience gains and losses are depleted. Under actuarial funding (paying the full ARC and a 7.0% discount rate) the GASB expense on the State’s financial statements decreases as a percentage of pay. The expense will remain fairly level as the assumed assumptions are met.

**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

SECTION V – ACTUARIAL FUNDING

Below are the employer contributions, benefit payments, assets and NOO/NOL that we anticipate for the next 15 years under Actuarial Funding.

Table V-3 Expected Contributions, Expected Net Benefit Payments, Assets and NOL under Actuarial Funding (\$ in millions)				
Fiscal Year Ending June 30,	Expected Contributions	Expected Net Benefit Payments	Expected Assets	Expected NOL
2018	\$ 395.7	\$ 218.9	\$ 355.2	\$ 4,945.9
2019	404.2	236.4	562.9	5,009.3
2020	414.3	255.1	776.0	5,073.6
2021	426.9	276.3	994.9	5,138.6
2022	441.6	296.3	1,220.4	5,204.5
2023	457.3	318.2	1,456.1	5,271.3
2024	473.4	340.4	1,701.9	5,338.9
2025	489.2	362.5	1,958.6	5,407.3
2026	504.5	384.8	2,226.8	5,476.7
2027	519.3	408.0	2,506.4	5,546.9
2028	533.6	431.4	2,797.0	5,618.0
2029	547.7	453.6	3,098.5	5,690.1
2030	561.7	477.4	3,412.7	5,763.1
2031	576.0	499.9	3,738.9	5,837.0
2032	590.5	521.8	4,079.3	5,911.8

**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

SECTION VI – ACCOUNTING DISCLOSURES

Statement No. 43 and 45 of the Governmental Accounting Standards Board (GASB) establishes standards for disclosure of other postemployment benefit information by governmental employers and plans in notes to financial statements and supplementary information.

In accordance with those statements, we have prepared the following disclosures:

Schedule of Funding Progress

The schedule of funding progress, Table VI-1, compares the assets used for funding purposes to the comparable liabilities to determine how well the Plan is funded and how this status has changed over the past several years. The actuarial liability is compared to the actuarial value of assets to determine the funding ratio. The Actuarial Accrued Liability under GASB is determined assuming that the Plan is ongoing and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions.

Table VI-1 Schedule of Funding Progress (\$ millions)						
Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liabilities (b)	Unfunded Actuarial Accrued Liabilities (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/c]
7/1/2017	\$ 355	\$ 8,611	\$ 8,256	4.13%	\$ 2,119	390%
7/1/2016	310	8,039	7,729	3.86%	2,035	380%
7/1/2015	312	6,321	6,009	4.94%	2,048	293%
7/1/2014	290	5,946	5,656	4.90%	2,038	277%
7/1/2013	222	5,988	5,766	3.72%	1,944	297%
7/1/2012	163	5,805	5,641	2.80%	1,885	299%
7/1/2011	144	6,769	6,625	2.10%	1,787	371%
7/1/2010	104	5,884	5,780	1.80%	1,798	321%
7/1/2009	83	5,636	5,553	1.50%	1,811	307%
7/1/2008	79	5,489	5,410	1.40%	1,770	306%

**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

SECTION VI – ACCOUNTING DISCLOSURES

Schedule of Employer Contributions

The schedule of employer contributions, Table VI-2, shows whether the employer has made contributions that are consistent with an actuarially sound method of funding the benefits to be provided.

Table VI-2				
Schedule of Employer Contributions				
(\$ in millions)				
Fiscal Year Ended		Annual Required	Percentage of	Net OPEB
June 30		Contribution (ARC)	ARC Contributed	Obligation
2018	\$	595.6	<i>To be determined</i>	<i>N/A</i>
2017		542.4	44%	\$ 2,699.7
2016		425.6	51%	2,390.8
2015		404.4	56%	2,174.4
2014		406.7	50%	1,988.5
2013		397.8	52%	1,777.5
2012		490.5	38%	1,588.9
2011		488.1	37%	1,279.4
2010		480.0	36%	963.9
2009		516.2	31%	648.9

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POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017

SECTION VI – ACCOUNTING DISCLOSURES

Table VI-3 below shows the development of the Net OPEB Obligation.

Table VI-3 Development of Net OPEB Obligation Pay-As-You-Go Funding (\$ in millions)		June 30, 2017
Discount Rate		3.75%
1. Net OPEB Obligation/(Asset) at beginning of fiscal year	\$	2,390.8
2. Annual Required Contribution for FYE	\$	542.4
3. Interest on Net OPEB Obligation/(Asset)		89.7
4. Adjustment to Annual Required Contribution		<u>85.8</u>
5. Annual OPEB Cost (2.) + (3.) – (4.)	\$	546.3
6. Employer Contributions (Actual/Estimated)	\$	(237.4)
7. Net OPEB Obligation/(Asset) at end of fiscal year (1.) + (5.) + (6.)	\$	2,699.7

Table VI-4 below shows the development of the Statement of Net Position and the OPEB Expense.

Table VI-4 Development of Net OPEB Liability (3.58% assumed discount) (\$ In Millions)		Measurement Date June 30, 2017
Total OPEB Liability	\$	8,611
Plan Fiduciary Net Position		<u>355</u>
Net OPEB Liability	\$	8,256
Deferred Outflows		0
Deferred Inflows		<u>980</u>
Net Impact on Statement of Net Position	\$	9,236
OPEB Expense (\$ Amount)		389
OPEB Expense (% of Payroll)		18.95%

STATE OF DELAWARE
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SECTION VI – ACCOUNTING DISCLOSURES

We have also provided a *Note to Required Supplementary Information* for the financial statements in Table VI-4.

Table VI-4	
Note to Required Supplementary Information	
The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.	
Valuation Date	July 1, 2017
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent Open
Remaining Amortization Period	30 years
Asset Valuation Method	Market Value
Actuarial Assumptions:	
Investment Rate of Return	3.58%
Rate of Salary Increases	3.25% (plus merit scale)
Ultimate Rate of Medical Inflation	4.00%

**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

Participant Data as of July 1, 2017

Census as of July 1, 2017					
	State Employees	Judges	Closed State Police	Open State Police	Total
Eligible Active Employees	37,124	57	0	705	37,886
Actives with coverage	29,932	55	0	645	30,632
Eligible Terminated Vesteds	3,470	1	0	9	3,480
Eligible LTDs	573	0	0	0	573
Retirees and Disableds with coverage	19,266	26	335	160	19,787
Beneficiaries with coverage	2,121	12	92	6	2,231
Total Inactives with coverage	21,387	38	427	166	22,018
Spouses with coverage	8,238	20	254	119	8,631
Total Inactives and Spouses with coverage	29,625	58	681	285	30,649
Total with coverage	59,557	113	681	930	61,281

Eligible Active Employees					
Age	State Employees	Judges	Closed State Police	Open State Police	Total
Under 25	1,017	0	0	20	1,037
25 to 30	3,270	0	0	89	3,359
30 to 35	3,976	0	0	112	4,088
35 to 40	4,383	3	0	114	4,500
40 to 45	4,418	0	0	127	4,545
45 to 50	5,305	7	0	147	5,459
50 to 55	5,368	14	0	95	5,477
55 to 60	4,787	11	0	1	4,799
60 to 65	3,169	8	0	0	3,177
Over 65	1,431	14	0	0	1,445
Total	37,124	57	0	705	37,886

Retirees, Disables and Beneficiaries with Coverage					
Age	State Employees	Judges	Closed State Police	Open State Police	Total
Under 50	119	0	0	14	133
50 to 55	403	0	0	30	433
55 to 60	1,168	0	3	79	1,250
60 to 65	2,706	0	39	39	2,784
65 to 70	4,512	8	88	4	4,612
70 to 75	4,565	9	131	0	4,705
75 to 80	3,143	8	87	0	3,238
80 to 85	2,239	8	40	0	2,287
85 to 90	1,517	4	25	0	1,546
Over 90	1,015	1	14	0	1,030
Total	21,387	38	427	166	22,018

**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

New Entrant Population Statistics			
	State Employees	Judges	State Police
Average Age	37	55	26
Average Salary	\$31,433	\$136,732	\$46,280
% Blue PPO	19%	40%	52%
% Blue HMO/CDH	26%	20%	9%
% Aetna HMO/CDH	8%	0%	0%
% Nonelect	47%	0%	39%

Economic Assumptions

1. *Discount Rate:* 3.58% per year
2. *Salary Growth (for Normal Cost):* 3.25% per year
3. *Aggregate Payroll Growth for Amortization:* 3.25% per year
4. *Per Person Cost Trends:*

Date To Year Beginning July 1	Annual Increase		
	Pre-65 Medical	Post-65 Medical	Pharmacy
2018	6.80%	4.00%	9.60%
2019	6.60	4.00	9.20
2020	6.40	4.00	8.80
2021	6.20	4.00	8.40
2022	6.00	4.00	8.00
2023	5.80	4.00	7.60
2024	5.60	4.00	7.20
2025	5.40	4.00	6.80
2026	5.20	4.00	6.40
2027	5.00	4.00	6.00
2028	4.80	4.00	5.60
2029	4.60	4.00	5.20
2030	4.40	4.00	4.80
2031	4.20	4.00	4.40
2032 +	4.00	4.00	4.00

Deductibles, Co-payments, Out-of-Pocket Maximums, and Annual Maximum are assumed to increase at the above trend rates.

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APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

Demographic Assumptions

1. Rates of Retirement:

State Employees:

Non-HB207 Employees (including General Assembly):

Retirement Rates*		
Service	Early**	Normal
5-14	0.00%	15.00%
15	7.50%	20.00%
16	5.00%	17.50%
17	5.00%	15.00%
18	5.00%	12.50%
19	5.00%	15.00%
20	7.50%	30.00%
21	7.50%	27.50%
22-23	7.50%	20.00%
24	7.50%	17.50%
25	10.00%	27.50%
26	5.00%	20.00%
27-28	5.00%	25.00%
29	12.50%	25.00%
30	N/A	25.00%
>=31	N/A	20.00%

* Rates only applicable if member meets eligibility.

** Early retirement is increased by 5% for correctional officers classified as hazardous duty level A-1 where their early retirement is unreduced.

Judges:

Normal Retirement: 25% for all years the member is retirement eligible upon attaining the earliest of:

- i. age 62 with 12 years of credited service
- ii. 24 years of credited service

100% probability of retirement once reaching age 75. Rates only applicable if member meets eligibility.

Closed State Police:

None

**STATE OF DELAWARE
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APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

Open State Police:

Normal Retirement	
Service	Rate
<10	0%
10-19	5
20	10
21-25	5
26-29	20
30-34	50
35+	100

Rates only applied once eligibility for retirement is reached.

2. Rate of Withdrawal:

State Employees:

Rates of Termination*	
Service	Rates
0	16.5%
1	15.5
2	11.0
3	9.0
4	7.5
5	6.5
6	5.0
7	4.5
8	4.0
9	3.5
10-11	3.0
12-13	2.5
14-15	2.0
16-18	1.5
19-24	1.0
>25	0.0

* Termination rates zero once member has reached early or normal retirement eligibility regardless of service.

Judges:

None

**STATE OF DELAWARE
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APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

Closed State Police:

None

Open State Police:

Service-based table applies until eligibility for retirement is reached.

Termination	
Service	Rate
0	5.00%
1	4.00
2-9	1.50
Ultimate	0.50

3. Rate of Disability:

State Employees:

Rates of Active Disability	
Age	Rates
20	0.0522%
25	0.0522
30	0.1831
35	0.2694
40	0.3821
45	0.4643
50	0.6214
55	0.8579
60	1.0699

Rates of Active Disability for those who opted into the Disability Insurance Program*	
Age	Rates
65	1.3018%
70	1.3464
75	1.7914
80	1.0234

* For those who remained in the Pension Plan for disability purposes, the assumption stops at age 64.

STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017

APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

Judges:

45% of 1946 Railroad Retirement Board Disability Rates

Rates of Active Disability	
Age	Current
20	0.0877%
25	0.1008
30	0.1080
35	0.1148
40	0.1323
45	0.1777
50	0.3208
55	0.6129
60	1.2420

Closed State Police:

None

Open State Police:

Rates of Active Disability	
Age	Current
20	0.0522%
25	0.0522
30	0.1831
35	0.2694
40	0.3821
45	0.4643
50	0.6214
55	0.8579
60	1.0699

No disabilities are assumed with 20 or more years of service.

1/3 of disabilities are assumed partial disability and 2/3s are assumed total disability.

1/3 of disabilities are assumed duty-related and 2/3s are assumed non-duty related.

**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

4. Rate of Mortality:

State Employees:

a. Rates of Mortality

Mortality rates are based on the sex-distinct employee, healthy annuitant, and disabled annuitant mortality tables described below, including adjustment factors applied to the published tables for each group. Future mortality improvements are reflected by applying a custom projection scale on a generational basis to adjusted base tables from the base year shown below.

i. Sample Rates of Mortality for Active Healthy Lives at Selected Ages (number of deaths per 10,000 members):

(2017 Values Shown)		
Age	Male	Female
25	5	2
30	5	2
35	5	3
40	7	4
45	10	6
50	18	11
55	30	17
60	50	25
65	89	37
70	151	63
75	258	109
80	436	188

Rates are based on 110% and 100% of the RP-2014 Total Dataset Employee Mortality Table, respectively, for males and females, using the RP-2014 Total Dataset Healthy Annuitant Mortality Table rates after the end of the Employee Mortality Table, both projected from the 2006 base rates using the RPEC-2015 model, with an ultimate rate of 0.85% for ages 20-85, grading down to an ultimate rate of 0% for ages 115-120, and convergence to the ultimate rate in the year 2020. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

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APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

**ii. Sample Rates of Mortality for Healthy Annuitant Lives at Selected Ages
(number of deaths per 10,000 members):**

(2017 Values Shown)		
Age	Male	Female
50	43	27
55	62	36
60	83	52
65	118	80
70	183	129
75	299	211
80	503	357
85	877	633
90	1,545	1,131
95	2,439	1,862
100	3,491	2,789

Rates are based on 110% and 100% of the RP-2014 Total Dataset Healthy Annuitant Mortality Table, respectively, for males and females, using the RP-2014 Total Dataset Employee Mortality Table for ages prior to start of the Healthy Annuitant Mortality Table, both projected from the 2006 base rates using the RPEC-2015 model, with an ultimate rate of 0.85% for ages 20-85, grading down to an ultimate rate of 0% for ages 115-120, and convergence to the ultimate rate in the year 2020. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

**STATE OF DELAWARE
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APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

**iii. Sample Rates of Mortality for Disabled Annuitant Lives at Selected Ages
(number of deaths per 10,000 members):**

(2017 Values Shown)		
Age	Male	Female
25	92	27
30	88	35
35	104	48
40	125	67
45	194	104
50	237	137
55	273	173
60	311	205
65	372	249
70	481	339
75	659	497
80	940	750
85	1,399	1,135
90	2,145	1,681
95	3,009	2,445
100	3,963	3,437

Rates are based on 120% of the RP-2014 Total Dataset Disabled Annuitant Mortality Table, projected from the 2006 base rates using the RPEC-2015 model, with an ultimate rate of 0.85% for ages 20-85, grading down to an ultimate rate of 0% for ages 115-120, and convergence to the ultimate rate in the year 2020. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017

APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

Judges:

b. Rates of Mortality

Mortality rates are based on the sex-distinct employee, healthy annuitant, and disabled annuitant mortality tables described below, including adjustment factors applied to the published tables for each group. Future mortality improvements are reflected by applying a custom projection scale on a generational basis to adjusted base tables from the base year shown below.

i. Sample Rates of Mortality for Active Healthy Lives at Selected Ages (number of deaths per 10,000 members):

(2017 Values Shown)		
Age	Male	Female
25	5	2
30	5	2
35	5	3
40	7	4
45	10	6
50	18	11
55	30	17
60	50	25
65	89	37
70	151	63
75	258	109
80	436	188

Rates are based on 110% and 100% of the RP-2014 Total Dataset Employee Mortality Table, respectively, for males and females, using the RP-2014 Total Dataset Healthy Annuitant Mortality Table rates after the end of the Employee Mortality Table, both projected from the 2006 base rates using the RPEC-2015 model, with an ultimate rate of 0.85% for ages 20-85, grading down to an ultimate rate of 0% for ages 115-120, and convergence to the ultimate rate in the year 2020. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

STATE OF DELAWARE
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APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

**ii. Sample Rates of Mortality for Healthy Annuitant Lives at Selected Ages
(number of deaths per 10,000 members):**

(2017 Values Shown)		
Age	Male	Female
50	43	27
55	62	36
60	83	52
65	118	80
70	183	129
75	299	211
80	503	357
85	877	633
90	1,545	1,131
95	2,439	1,862
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Rates are based on 110% and 100% of the RP-2014 Total Dataset Healthy Annuitant Mortality Table, respectively, for males and females, using the RP-2014 Total Dataset Employee Mortality Table for ages prior to start of the Healthy Annuitant Mortality Table, both projected from the 2006 base rates using the RPEC-2015 model, with an ultimate rate of 0.85% for ages 20-85, grading down to an ultimate rate of 0% for ages 115-120, and convergence to the ultimate rate in the year 2020. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

**STATE OF DELAWARE
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**iii. Sample Rates of Mortality for Disabled Annuitant Lives at Selected Ages
(number of deaths per 10,000 members):**

(2017 Values Shown)		
Age	Male	Female
25	92	27
30	88	35
35	104	48
40	125	67
45	194	104
50	237	137
55	273	173
60	311	205
65	372	249
70	481	339
75	659	497
80	940	750
85	1,399	1,135
90	2,145	1,681
95	3,009	2,445
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Rates are based on 120% of the RP-2014 Total Dataset Disabled Annuitant Mortality Table, projected from the 2006 base rates using the RPEC-2015 model, with an ultimate rate of 0.85% for ages 20-85, grading down to an ultimate rate of 0% for ages 115-120, and convergence to the ultimate rate in the year 2020. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

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Closed State Police and Open State Police:

c. Rates of Mortality

Mortality rates are based on the sex-distinct employee, healthy annuitant, and disabled annuitant mortality tables described below, including adjustment factors applied to the published tables for each group. Future mortality improvements are reflected by applying a custom projection scale on a generational basis to adjusted base tables from the base year shown below.

i. Sample Rates of Mortality for Active Healthy Lives at Selected Ages (number of deaths per 10,000 members):

(2017 Values Shown)		
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50	18	11
55	30	17
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80	436	188

Rates are based on 110% and 100% of the RP-2014 Total Dataset Employee Mortality Table, respectively, for males and females, using the RP-2014 Total Dataset Healthy Annuitant Mortality Table rates after the end of the Employee Mortality Table, both projected from the 2006 base rates using the RPEC-2015 model, with an ultimate rate of 0.85% for ages 20-85, grading down to an ultimate rate of 0% for ages 115-120, and convergence to the ultimate rate in the year 2020. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

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**ii. Sample Rates of Mortality for Healthy Annuitant Lives at Selected Ages
(number of deaths per 10,000 members):**

(2017 Values Shown)		
Age	Male	Female
50	43	27
55	62	36
60	83	52
65	118	80
70	183	129
75	299	211
80	503	357
85	877	633
90	1,545	1,131
95	2,439	1,862
100	3,491	2,789

Rates are based on 110% and 100% of the RP-2014 Total Dataset Healthy Annuitant Mortality Table, respectively, for males and females, using the RP-2014 Total Dataset Employee Mortality Table for ages prior to start of the Healthy Annuitant Mortality Table, both projected from the 2006 base rates using the RPEC-2015 model, with an ultimate rate of 0.85% for ages 20-85, grading down to an ultimate rate of 0% for ages 115-120, and convergence to the ultimate rate in the year 2020. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

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iii. Sample Rates of Mortality for Disabled Annuitant Lives at Selected Ages (number of deaths per 10,000 members):

(2017 Values Shown)		
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30	88	35
35	104	48
40	125	67
45	194	104
50	237	137
55	273	173
60	311	205
65	372	249
70	481	339
75	659	497
80	940	750
85	1,399	1,135
90	2,145	1,681
95	3,009	2,445
100	3,963	3,437

Rates are based on 120% of the RP-2014 Total Dataset Disabled Annuitant Mortality Table, projected from the 2006 base rates using the RPEC-2015 model, with an ultimate rate of 0.85% for ages 20-85, grading down to an ultimate rate of 0% for ages 115-120, and convergence to the ultimate rate in the year 2020. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

5. Percent of Retirees Electing Coverage: For employees who currently have medical coverage, 95% of employees are assumed to elect coverage at retirement if they have 20 or more years of service and 80% if they have less than 20 years of service. These employees are assumed to remain in their current plan.

For employees who do not currently have medical coverage, 50% of employees are assumed to elect medical coverage in the comprehensive plan prior to retirement, and then will follow the election percentages above.

40% of current and future terminated vested employees are assumed to elect coverage.

100% of LTD participants are assumed to elect coverage.

6. Family Composition: 50% of employees will elect spouse coverage at retirement.

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APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

7. **Dependent Age:** For current active employees, males are assumed to be 3-years older than female spouses. For current retirees, actual spouse date of birth was used.
8. **Rationale for Assumptions:** The assumptions were adopted by the Board of Trustees upon the recommendations of the actuary, based on an experience study performed in 2016 and covering the period July 1, 2010 through June 30, 2015.

Claim and Expense Assumptions

1. **Average Monthly Claims and Expense Assumptions:** The following claim and expense assumptions are applicable to the 12-month period beginning July 1, 2016. Subsequent years' costs are based on the trended first year cost adjusted with trends listed above.

Due to the small enrollment on the BCBS CDH Gold Plan, claims experience was blended with the Bluecare HMO and the combined claims curve was used for both plans. Similarly, the experience of the Aetna CDH Gold Plan was combined with the Aetna HMO, and the combined claims curve was used for both plans. The claim curves for this valuation, July 1, 2017 – June 30, 2018 are based on the below curves adjusted by 0.0% for pre-Medicare and 7.68% for Medicare.

Healthy Retirees & All Dependents

Age	Blue PPO		Bluecare HMO/CDH		Aetna HMO/CDH		Pharmacy	
	Male	Female	Male	Female	Male	Female	Male	Female
40	\$ 329	\$ 617	\$ 349	\$ 654	\$ 313	\$ 588	\$ 84	\$ 124
45	402	628	426	665	383	598	113	152
50	524	719	555	761	499	684	157	200
55	684	832	725	881	651	792	209	258
60	893	984	946	1,043	850	938	269	314
64	1,120	1,153	1,187	1,222	1,067	1,098	313	342
65	133	141	133	141	133	141	180	192
70	163	162	163	162	163	162	206	207
75	195	182	195	182	195	182	219	217
80	217	194	217	194	217	194	224	219
85	226	196	226	196	226	196	222	213

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APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

Disabled Retirees

Age	Blue PPO		Bluecare HMO/CDH		Aetna HMO/CDH		Pharmacy	
	Male	Female	Male	Female	Male	Female	Male	Female
40	\$ 220	\$ 427	\$ 230	\$ 445	\$ 212	\$ 411	\$ 90	\$ 132
45	273	440	285	459	263	424	121	162
50	361	498	377	520	348	480	167	213
55	471	559	492	584	455	538	223	274
60	612	671	640	701	591	647	287	335
64	756	785	790	821	729	757	333	364
65	199	212	199	212	199	212	270	289
70	244	243	244	243	244	243	308	311
75	292	273	292	273	292	273	329	326
80	325	291	325	291	325	291	337	328
85	339	294	339	294	339	294	333	320

2. **Medicare Part D Subsidy:** Effective January 1, 2013 the subsidy is no longer applicable as the State is enrolled in an EGWP.
3. **Medicare Part B Premiums:** Assumed that Medicare eligible retirees pay the Medicare Part B premiums.
4. **Medicare Eligibility:**
 - Future retirees: Age 65+ = 100.00%.
 - Current retirees: Under 65 = those known to be eligible for Medicare will remain eligible, Age 65+ = 100.00%.
5. **Annual Limits:** Assumed to increase at the same rate as trend.
6. **Lifetime Maximums:** Are assumed to have no financial impact.
7. **Geography:** Implicitly assumed to remain the same as current retirees.

Methodology

The Entry Age Actuarial Cost Method was used to value the Plan’s actuarial liabilities and to set the normal cost. Under this method, the normal cost rate is the percentage of pay contribution which would be sufficient to fund the Plan benefits if it were paid from each member’s entry into the System until termination or retirement. A rolling 30-year amortization period was used under the pay-as-you-go funding scenario. This amortization method will never pay off the unfunded liability.

**STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017**

APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS AND METHODS

A normal cost rate is determined for a typical new entrant. This rate is determined by taking the value, as of age at entry into a plan in the Program, of the member's projected future benefits, reducing it by the value of future member contributions, and dividing it by the value, also as of the member's entry age, of the member's expected future salary.

The claims costs were developed using projected claims for FY 2014-2015 and FY 2015-2016 retiree experience paid through March 31, 2016. Claims were trended from FYE 2015 to FYE 2016 at 6.5% for non-Medicare medical, 5.5% for Medicare medical, and 6.0% for pharmacy and from FYE 2016 to FYE 2017 at 6.5%, 5.5%, and 6.0% respectively. From this data, we developed per person per month (PPPM) costs and then adjusted those using age curves. Claims costs include a 5.2% load for expenses, based on the State health care actuary's projected expenses. The claim curves were trended to July 1, 2017 using a 0.0% Pre-Medicare trend and a 7.68% Medicare trend.

Changes Since Last Valuation

None

STATE OF DELAWARE
POSTRETIREMENT HEALTH VALUATION AS OF JULY 1, 2017

APPENDIX B – SUBSTANTIVE PLAN PROVISIONS

Eligibility:

State Employees:

Normal Retirement:

Eligibility: Non-GA Pre - 2012 hires: (i) age 62 with five years of credited service, or (ii) age 60 with 15 years of credited service, or (iii) any age with 30 years of credited service.

Non-GA Post - 2011 hires: (i) age 65 with 10 years of credited service, or (ii) age 60 with 20 years of credited service, or (iii) any age with 30 years of credited service.

GA Pre - 2012 hires: (i) age 60 with five years of credited service or (ii) age 55 with 10 years of credited service.

GA Post - 2011 hires: (i) age 65 with 10 years of credited service, or (ii) age 60 with 20 years of credited service, or (iii) any age with 30 years of credited service.

Early Retirement:

Eligibility: (i) age 55 with 15 years of credited service; or (ii) any age with 25 years of credited service.

Judges:

Normal Retirement:

Judges appointed before July 1, 1980:

Eligibility: (i) age 65 with 12 years of service as a judge; or (ii) any age with 24 years of service; or (iii) involuntarily retired after 22 years of service as a judge.

Judges appointed after June 30, 1980:

Eligibility: (i) age 62 with 12 years of service as a judge; or (ii) any age with 24 years of service; or (iii) involuntarily retired after 22 years of service as a judge.

Closed State Police:

Normal Retirement:

Age 55 or 20 years of credited service.

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Open State Police:

Normal Retirement:

Eligibility: (i) Must be employed at 55 with ten years of credited service; or (ii) any age with 20 years of credited service; or (iii) 10 years of credited service when age plus service equals 75.

All vested participants in the groups above are eligible to pick up coverage at commencement of their vested pension benefit.

Spouse coverage is available under any of the Plan options with the State paying the same percentage as the retiree. Surviving spouses are eligible to coverage after the retiree's death.

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Benefits:

Delaware NME Plans		
Provider Network:	First State Basic	Comprehensive PPO
<u>In-Network (INN) Benefits</u>		
Copays (Do not apply to DC ¹ or OOP max)		
Office Visit (OV)-Primary Care(PCP)	Deductible + Coinsurance	\$20
OV - Specialist Care Provider (SCP)	Deductible + Coinsurance	\$30
Urgent Care (UC)	\$25	\$20
Hospital Emergency Room (ER)	Deductible + Coinsurance	\$150
Outpatient Surgery	Deductible + Coinsurance	\$50 / visit at ambulatory surgical centers
Hospital Inpatient	Deductible + Coinsurance	\$100 per day; max \$200 per visit
Deductible (Individual / Family)	\$500 / \$1,000	\$0
Coinsurance	10%	10%
Coinsurance Limit - Excl. Deductible (Individual / Family)	\$1,500 / \$3,000	None
<u>Benefits Out-of-Network (OON)</u>		
Deductible (Individual / Family)	\$1,000 / \$2,000	\$300 / \$600
Coinsurance	30%	20%
Out-of-Pocket (OOP) Max (Individual / Family)	\$3,000 / \$6,000	\$7,200 / \$14,400
Lifetime Max (INN/OON)	None	None
<u>Prescription Drug</u>		
30 Day Supply - Tier 1/Tier II/Tier III Copay	\$8 / \$28 / \$50	\$8 / \$28 / \$50
90 Day Supply - Tier 1/Tier II/Tier III Copay	\$16 / \$56 / \$100	\$16 / \$56 / \$100
<u>Detail Benefits</u>		
Mental Health (MH) / Substance Abuse (SA):		
-Per Visit	Deductible + Coinsurance	\$20
-Inpatient	Deductible + Coinsurance	\$100 copay / day; max \$200
-Per Year Outpatient \$ Maximum	None	None
-Per Lifetime Maximum	None	None
Rehabilitation (i.e., speech, occup. physical):	Deductible + Coinsurance; visit limit determined by medical necessity	15% coinsurance; No charges for applied behavioral analysis (ABA.) ABA limited to \$36,000 per person per plan year
Chiropractors:	Deductible + Coinsurance; 30 visit max per year	Deductible + Coinsurance; 30 visit max per year
Transplants:	Covered at OON cost share when member does not use Blue Distinction Center	Covered at OON cost share when member does not use Blue Distinction Center
Laboratory:	Deductible + Coinsurance	\$10 for labs; \$20 / \$35 for imaging services; \$20 / diagnostic services
Durable Medical Equipment	Deductible + Coinsurance	No Charge
Preventive Care:	Covered at 100%	No Charge

Blue Cross Blue Shield First State Basic – This Plan provides the freedom of choice you experience with a Preferred Provider Organization (PPO) that allows you to receive both in- and out-of-network benefits.

In-network services are subject to plan year deductibles of \$500 per employee and \$1000 per family. The Plan will then pay at 90% of Highmark Delaware’s allowable charge. The in-network plan year total maximum out-of-pocket (TMOOP) is \$2,000 per employee and \$4,000 per family. Deductibles, coinsurance and copays accrue toward the TMOOP. Preventive services are covered in-network at 100% of the allowable charge and are not subject to any deductibles, coinsurance or copays.



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Out-of-network services are subject to plan year deductibles of \$1,000 per employee and \$2,000 per family, and then the Plan will pay at 70% of the allowable charge. The out-of-network plan year total maximum out-of-pocket (TMOOP) is \$4,000 per employee and \$8,000 per family. Deductibles, coinsurance and copays accrue toward the TMOOP.

The First State Basic PPO Plan includes coverage for services such as inpatient care, prenatal and postnatal care; emergency services, mental health and substance abuse treatment, and many outpatient services, including, but not limited to: labs, x-rays and other imaging services, vision care, chiropractic and other therapy benefits.

Highmark Blue Cross Blue Shield Blue Delaware – Highmark Delaware’s managed care IPA/HMO Plan requires each member to select a primary care physician (PCP) to coordinate his/her health care needs. Members can also seek care, and some services without referral from a PCP, from any specialist in the Highmark Delaware Participating Provider Network.

In addition to all inpatient care, certain outpatient services require Highmark Delaware’s prior authorization. A list of these services is available to all providers (primary and specialist) in the Highmark Delaware network.

The IPA/HMO Plan includes Highmark Delaware network coverage for services such as inpatient care, prenatal and postnatal care; emergency services, mental health and substance abuse treatment, and many outpatient services, including, but not limited to: labs, x-rays and other imaging services, vision care, chiropractic and other therapy benefits. You’ll also have access to the Blue Cross Blue Shield nationwide network for urgent and emergency care while away from home.

The plan year total maximum out-of-pocket (TMOOP) is \$4,500 per employee and \$9,000 per family. TMOOP includes coinsurance and copays. Once met, the Plan pays 100% of covered services for the rest of the benefit period. Preventive services are covered at 100% of the allowable charge and are not subject to copays or coinsurance.

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Delaware NME Plans		
Provider Network:	Aetna HMO	Aetna CDH
<u>In-Network (INN)Benefits</u>		
Copays (Do not apply to DC ¹ or OOP max)		
Office Visit (OV)-Primary Care(PCP)	\$15	Deductible + Coinsurance
OV - Specialist Care Provider (SCP)	\$25	Deductible + Coinsurance
Urgent Care (UC)	\$15	Deductible + Coinsurance
Hospital Emergency Room (ER)	\$150	Deductible + Coinsurance
Outpatient Surgery	\$100 / visit; \$50 / visit at ambulatory surgical centers	Deductible + Coinsurance
Hospital Inpatient	\$100 per day; max \$200 per visit	Deductible + Coinsurance
Deductible (Individual / Family)	\$0	\$1,500 / \$3,000
Coinsurance	0%	10%
Coinsurance Limit - Excl. Deductible (Individual / Family)	None	\$3,000 / \$6,000
<u>Benefits Out-of-Network (OON)</u>		
Deductible (Individual / Family)	Emergency Services Only	\$1,500 / \$3,000
Coinsurance	N/A	30%
Out-of-Pocket (OOP) Max (Individual / Family)	\$4,500 / \$9,000	\$4,500 / \$9,000
<u>Lifetime Max (INN/OON)</u>	None	None
<u>Prescription Drug</u>		
30 Day Supply - Tier 1/Tier II/Tier III Copay	\$8 / \$28 / \$50	\$8 / \$28 / \$50
90 Day Supply - Tier 1/Tier II/Tier III Copay	\$16 / \$56 / \$100	\$16 / \$56 / \$100
<u>Detail Benefits</u>		
Mental Health (MH) / Substance Abuse (SA):		
-Per Visit	\$25	Deductible + Coinsurance
-Inpatient	\$100 copay / day; max \$200	Deductible + Coinsurance
-Per Year Outpatient \$ Maximum	None	None
-Per Lifetime Maximum	None	None
Rehabilitation (i.e., speech, occup. physical):	20% coinsurance; PT & OT limit of 45 visits per condition; ST 45 days per incidence	Deductible + Coinsurance; visit limit determined by medical necessity
Chiropractors:	\$15 / visit (benefit limited to 80% of allowable charge)	Deductible + Coinsurance; 30 visit max per year
Transplants:	Higher member cost share when member does not use Blue Distinction Center	Covered at OON cost share when member does not use Blue Distinction Center
Laboratory:	\$10 for labs; \$20 / \$35 for imaging services; \$20 / diagnostic services	Deductible + Coinsurance
Durable Medical Equipment	20% coinsurance	Deductible + Coinsurance
Preventive Care:	No Charge	Covered at 100%

Aetna – Access and Choice. Aetna’s HMO offers all the advantages of a national health plan and local customer service. Members choose any primary care physician (PCP) from a broad network. Aetna’s HMO plan offers direct access for emergency and urgent care, routine OB/GYN care, and a host of health, wellness and educational programs. This Plan covers only emergency services out-of-network.

Aetna – Aetna’s CDH Gold Plan offers many of the features of a Preferred Provider Organization (PPO) plan with the added advantage of a State-funded Health Reimbursement Account (HRA).

The Plan includes a \$1,500 deductible for employee only (Individual) coverage and \$3,000 for Family coverage. The HRA pays the first \$1,250 in deductible expenses for Individuals and \$2,500 for Families. The member is financially responsible for the remaining in-network deductible (\$250 for Individuals and \$500 for Families). When the deductible is satisfied, in-



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network healthcare services are paid at 90%, with an in-network coinsurance maximum of \$3,000 for Individuals and \$6,000 for Families. There is a separate out-of-network deductible of \$1,500 for Employee only (Individual) coverage and \$3,000 for Family coverage. When the deductible is satisfied, out-of-network healthcare services are paid at 70%, with an out-of-network coinsurance maximum of \$6,000 for Individuals and \$12,000 for Families.

In addition, preventive care services are covered at 100% and are not subject to a deductible or coinsurance. Prescriptions are provided through the prescription benefits manager, Express Scripts, and prescription copays are not applicable to the medical deductible or out-of-pocket maximum.

Special Medicfill Medicare Supplement (Administered by Blue Cross Blue Shield of Delaware) - This Plan supplements Medicare. Unless otherwise indicated on the Benefits Highlights pages in the Open Enrollment booklet, benefits will be paid as noted only after Medicare pays its full amount. **Note:** Delaware Law mandates that the member, spouse and eligible dependents, elect Medicare Parts A & B when eligible.

Express Scripts Prescription Coverage – When you enroll in a healthcare plan you will automatically be enrolled in the prescription drug plan managed by Express Scripts. The only exception is the Special Medicfill plan without prescription coverage for those pensioners who have chosen to enroll in Medicare Part D for their prescription coverage. The Coordination of Benefits (COB) policy also applies to prescription coverage. If your spouse or dependents have other health coverage that is primary (pays first), the prescription coverage provided through the State’s plan for the spouse or dependents will become secondary.

2017 Prescription Copay Rates			
State of Delaware Prescription Coverage	Tier 1 Generic	Tier 2 Preferred	Tier 3 Non-Preferred
30-DAY Supply	\$ 8.00	\$28.00	\$50.00
90-DAY Supply	\$16.00	\$56.00	\$100.00

“Preferred” = Formulary

State Share of Premium:

House Bill number 81 established a fixed cost share effective July 1, 2012 for the different health insurance plans offered by the State for regular officers or employees of the State and their dependents, and a fixed cost share for pensioners and their dependents who are not eligible for federal Medicare. The State share is listed below:

Medical Plan Type	State Share Percent of Premium Paid by State	Medical Plan Type	State Share Percent of Premium Paid by State
Basic	96.00%	HMO	93.50%
Consumer-Directed	95.00%	Comprehensive PPO	86.75%

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Current Retiree Contributions:

If hired prior to 07/01/1991 or are on disability retirement, no contributions are required. If hired on or after 07/01/1991 (and not retired on disability), contributions depend on years of service, as shown in the table below:

Years of Service	Percent of State Share Paid by State
Less than 10	0%
10-14	50%
15-19	75%
20 or more	100%

Future Retiree Contributions:

If hired prior to 07/01/1991 or are on disability retirement, no contributions are required. If hired on or after 07/01/1991 (and not retired on disability) and before January 1, 2007, contributions depend on years of service, as shown in the table below:

Years of Service	Percent of State Share Paid by State
Less than 10	0%
10-14	50%
15-19	75%
20 or more	100%

If hired on or after January 1, 2007 (and not retired on disability), contributions depend on years of service, as shown in the table below:

Years of Service	Percent of State Share Paid by State
Less than 15	0%
15-17.5	50%
17.5-19	75%
20 or more	100%

Pensioners who retire after July 1, 2012 and who become eligible for Medicare will pay in addition to their percentage above, an additional 5% of the Medicare supplement offered by the State.

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State Monthly Premiums:

State of Delaware Group Health Insurance Program Rates Effective July 1, 2017			
	Total Monthly Rate	State Pays	Pensioner Contributions
Highmark Delaware First State Basic PPO Plan			
Employee	\$695.36	\$667.52	\$27.84
Employee & Spouse	\$1,438.68	\$1,381.16	\$57.52
Employee & Child(ren)	\$1,057.02	\$1,014.76	\$42.26
Family	\$1,798.42	\$1,726.50	\$71.92
Aetna CDH Gold Plan			
Employee	\$719.68	\$683.70	\$35.98
Employee & Spouse	\$1,492.22	\$1,417.64	\$74.58
Employee & Child(ren)	\$1,099.56	\$1,044.60	\$54.96
Family	\$1,895.74	\$1,800.96	\$94.78
Aetna HMO Plan			
Employee	\$725.94	\$678.78	\$47.16
Employee & Spouse	\$1,530.58	\$1,431.08	\$99.50
Employee & Child(ren)	\$1,110.52	\$1,038.34	\$72.18
Family	\$1,909.82	\$1,785.70	\$124.12
Highmark Delaware Comprehensive PPO Plan			
Employee	\$793.86	\$688.68	\$105.18
Employee & Spouse	\$1,647.34	\$1,429.08	\$218.26
Employee & Child(ren)	\$1,223.46	\$1,061.38	\$162.08
Family	\$2,059.40	\$1,786.54	\$272.86
Highmark Delaware Medicare Supplement for Pensioners Retired On or Prior to July 1, 2012			
Special Medicfill with Prescription	\$459.38	\$459.38	\$0
Special Medicfill without Prescription*	\$260.44	\$260.44	\$0
Highmark Delaware Medicare Supplement for Pensioners Retired After July 1, 2012			
Special Medicfill with Prescription	\$459.38	\$436.42	\$22.96
Special Medicfill without Prescription*	\$260.44	\$247.44	\$13.00

APPENDIX C – GLOSSARY OF TERMS

1. Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, and retirement; changes in compensation; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the actuarial value of assets; and other relevant items.

2. Actuarial Cost Method

A procedure for determining the actuarial present value of pension plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a normal cost and an actuarial liability.

3. Actuarial Gain (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

4. Actuarial Liability

The portion of the actuarial present value of projected benefits which will not be paid by future normal costs; it represents the value of the past normal costs with interest to the valuation date.

5. Actuarial Present Value (Present Value)

The value as of a given date of a future amount or series of payments; the actuarial present value discounts the payments to the given date at the assumed investment return and includes the probability of the payment being made. As a simple example: assume you owe \$100 to a friend one year from now. Also, assume there is a 1% probability of your friend dying over the next year, in which case you won't be obligated to pay him. If the assumed investment return is 10%, the actuarial present value is:

$$\frac{\text{Amount}}{\$100} \times \frac{\text{Probability of Payment}}{(1 - .01)} \times \frac{1/}{(1+\text{Discount Rate})} = \frac{\text{Present Value}}{\$90}$$

6. Actuarial Valuation

The determination, as of a specified date, of the normal cost, actuarial liability, actuarial value of assets, and related actuarial present values for a pension plan.

7. Actuarial Value of Assets

The value of cash, investments and other property belonging to a pension plan as used by the actuary for the purpose of an actuarial valuation. The purpose of an actuarial value of assets is to smooth out fluctuations in market values. This way long-term costs are not distorted by short-term fluctuations in the market.

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APPENDIX C – GLOSSARY OF TERMS

8. Amortization Payment

The portion of the pension plan contribution which is designed to pay interest and principal on the unfunded actuarial liability in order to pay for that liability in a given number of years.

9. Entry Age Normal Actuarial Cost Method

A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages.

10. Normal Cost

That portion of the actuarial present value of pension plan benefits and expenses which is allocated to a valuation year by the actuarial cost method.

11. Unfunded Actuarial Liability

The excess of the actuarial liability over the actuarial value of assets.

12. Funded Percentage

The ratio of the actuarial value of assets to the actuarial liabilities..

13. Mortality Table

A set of percentages which estimate the probability of death at a particular point in time. Typically, the rates are annual and based on age and sex.

14. Discount Rate

The assumed interest rate used for converting projecting dollar related values to a present value as of the valuation date.

15. Medical Trend

The assumed increase in dollar related values in the future due to the increase in the cost of health care.

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APPENDIX D – ABBREVIATION LIST

Actuarial Liability (AL)
Actuarial Valuation Report (AVR)
Annual Required Contribution (ARC)
Coordination of Benefits (COB)
Deductible and Coinsurance (DC)
Durable Medical Equipment (DME)
Employee Assistance Program (EAP)
Employee Benefits Division (EBD)
Fiscal Year Ending (FYE)
Governmental Accounting Standards Board (GASB)
Hospital Emergency Room (ER)
In-Network (INN)
Inpatient (IP)
Medicare Eligible (ME)
Net Other Postemployment Benefit (NOO)
Non-Medicare Eligible (NME)
Not Applicable (NA)
Office Visit (OV)
Other Postemployment Benefit (OPEB)
Out-of-Network (OON)
Out-of-Pocket (OOP)
Outpatient (OP)
Pay-as-you-go (PAYGo)
Per Person Per Month (PPPM)
Pharmacy (Rx)
Preferred Provider Organization (PPO)
Primary Care Physician (PCP)
Specialist Care Provider (SCP)
Summary Plan Description (SPD)
Unfunded Actuarial Accrued Liability (UAAL)
Unfunded Actuarial Liability (UAL)
Urgent Care (UC)