



# KPPA

Kentucky Public Pensions Authority

# Public Pension Oversight Board

December 12, 2025

## **Actuarial Valuation Updates**

Ryan Barrow, Executive Director

Erin Surratt, Deputy Executive Director



- The Annual Actuary Cycle
- Statutory Amortization (2049)
- Observations
  - Active Membership Payroll & Count
  - Retired Members & Distributions
  - CERS & KRS Employer Contributions
- Outline of Key Topics



Period	Action
May – June	Boards approve assumptions
July – November	Actuary prepares the valuations <ul style="list-style-type: none"><li>• Sensitivity Analyses</li><li>• 30-year Projections</li></ul>
<i>November</i>	<i>Valuations provided to the Boards, LRC &amp; PPOB</i>
December	Boards approve the employer contribution rates <ul style="list-style-type: none"><li>• CERS every year</li><li>• KRS concurrent with the biennial budget</li></ul>
July 1	New contribution rates go into effect



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## Statutory Amortization

### Long-Term Commitment

Unfunded liabilities are amortized over a 30-year closed period, 2019 to 2049 per statute.

# 2049

24 years remain in the amortization schedule before fully funded.



## Improved Funding Ratios:

PENSION: All five funds have improved in funded status

INSURANCE: Three of the five insurance funds are fully funded

- Funding ratios in the insurance fund are more volatile than the pension fund
- 2026 premiums significantly higher than anticipated
- CERS Hazardous fell below 100% (100.5% to 90.9%)

## Supplemental State Appropriations to Kentucky Retirements Systems are directly impactful:

Over the Biennium: \$650 million

KERS NonHazardous: \$300 million (FY25 and FY26)

SPRS: \$25 million each year (FY25 and FY26)



**Investments Outperformed:**

- Actuarial Assumed Rates of Return
- Their respective Total Fund Benchmarks for Fiscal Year 2025

**FY 2025 Actuary Investment Experience (Recognized):**

CERS: 11.1% to 11.6% Return on Market Value (varies by fund)

Assumed Rate: 6.50%

KRS: 10.9% to 11.8% Return on Market Value (varies by fund)

Assumed Rates: 5.25% KERS Nonhazardous, SPRS

6.25% KERS Hazardous

6.50% Insurance



FY 24 to FY 25	Change in Active Membership Payroll			Change in Active Membership Headcount	
	CERS Nonhazardous:	6.3%	▲	1.8%	▲
	CERS Hazardous:	8.5%	▲	2.6%	▲
	KERS Nonhazardous:	8.7%	▲	2.8%	▲
	KERS Hazardous:	2.6%	▲	1.8%	▲
	SPRS:	1.5%	▲	(1.0%)	▼

### Fund Liability Increases:

Pension
CERS: \$221M loss for both pension funds combined- Liability within 1.5% of expected
KRS: \$209M loss for all retirement funds combined- Liability within 1% of expected

Insurance
CERS: \$545M loss for both insurance funds combined- 2026 premiums and legislation
KRS: \$371M loss for all insurance funds combined- 2026 premiums



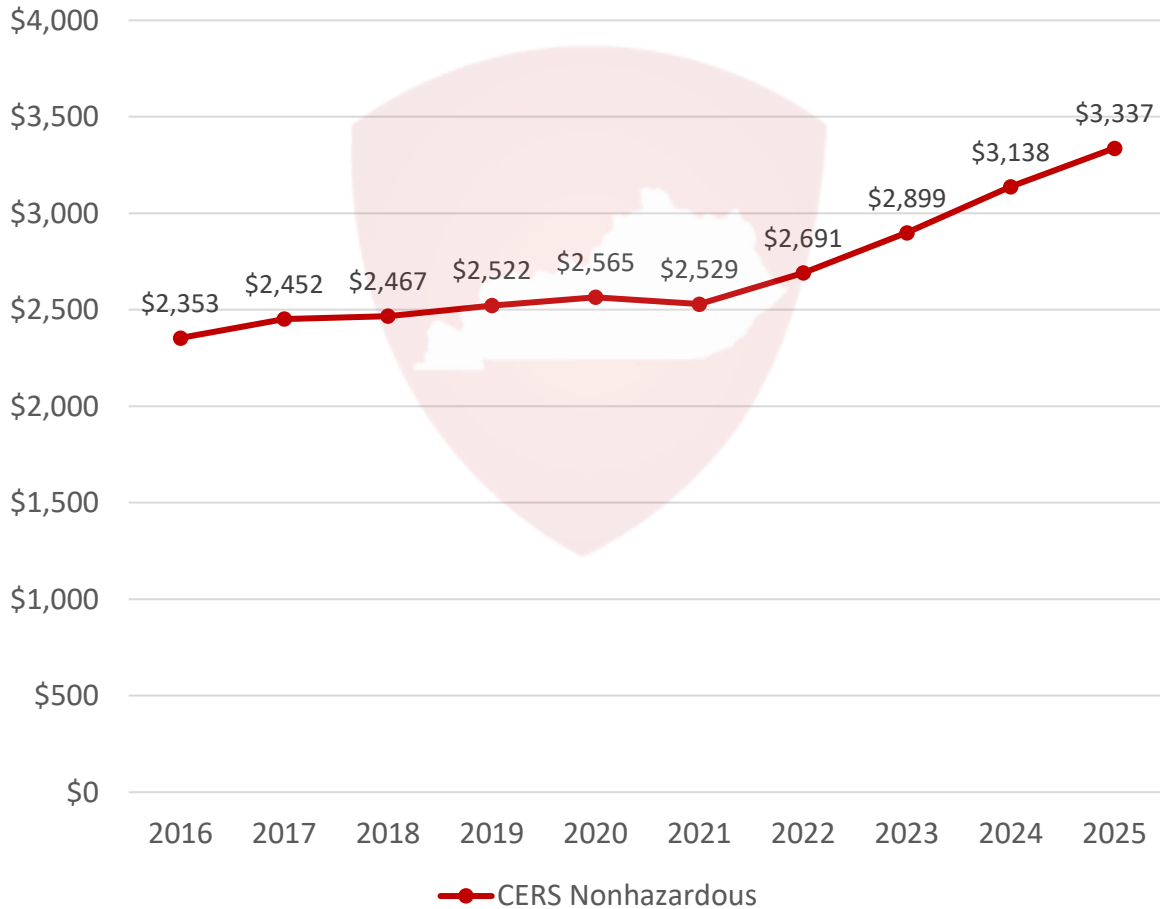
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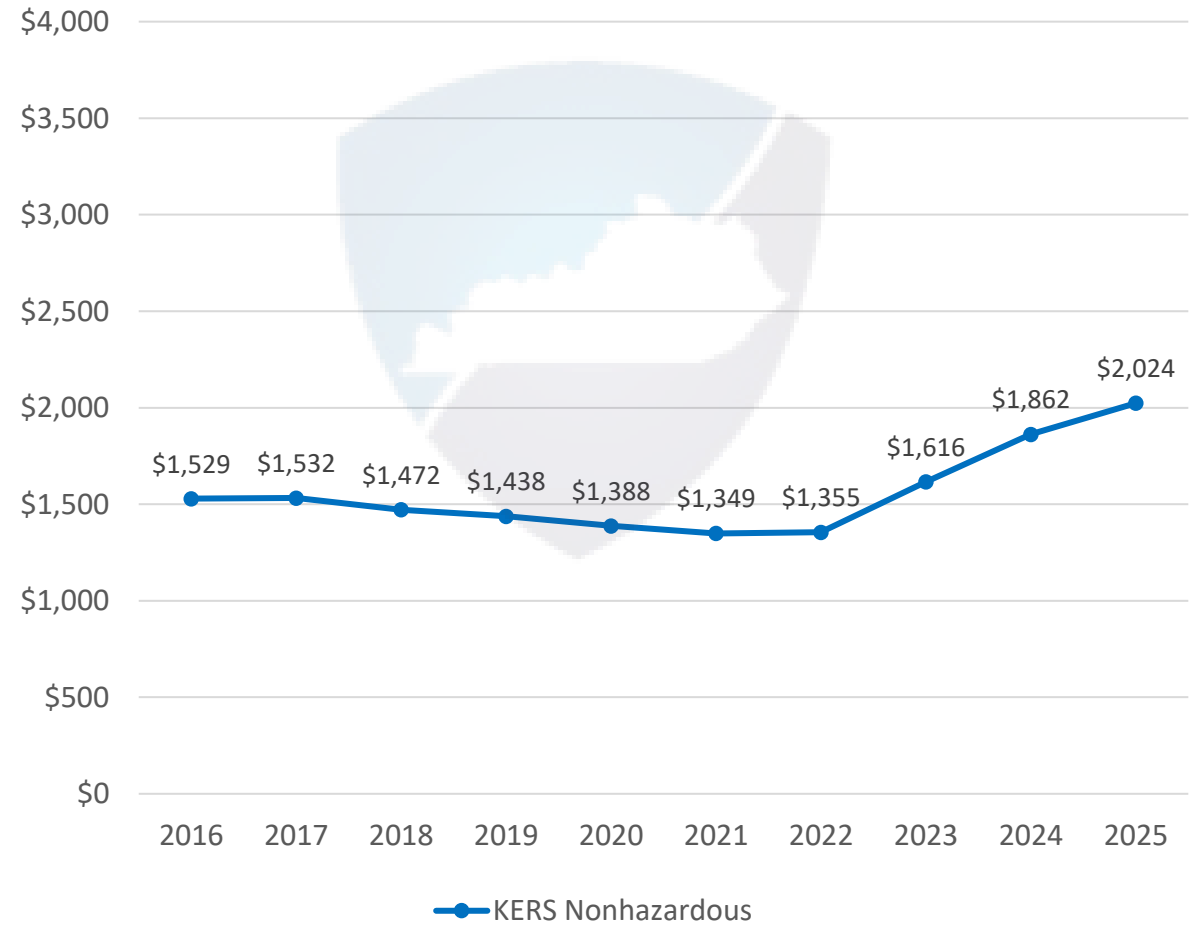
## Membership Payroll (\$ in Millions)

As of June 30, 2025

### CERS Nonhazardous



### KERS Nonhazardous





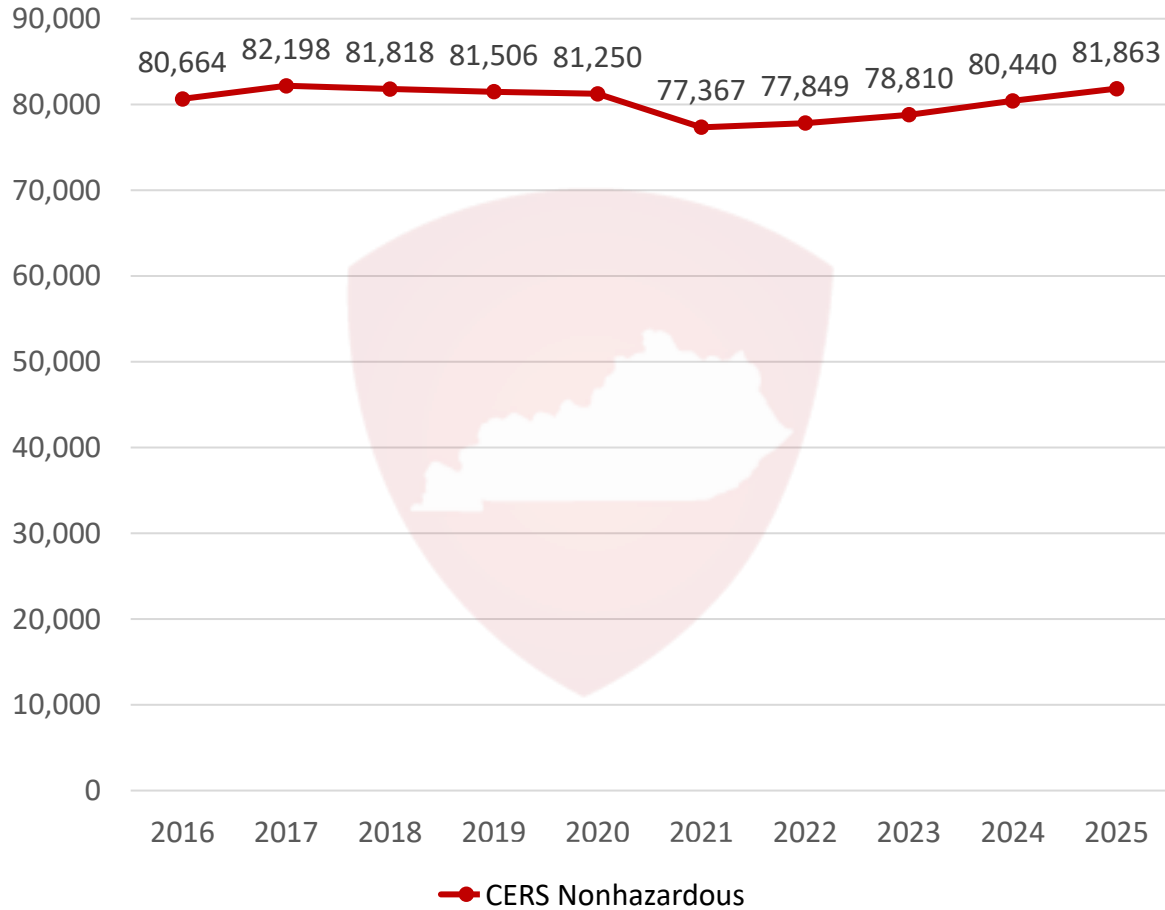
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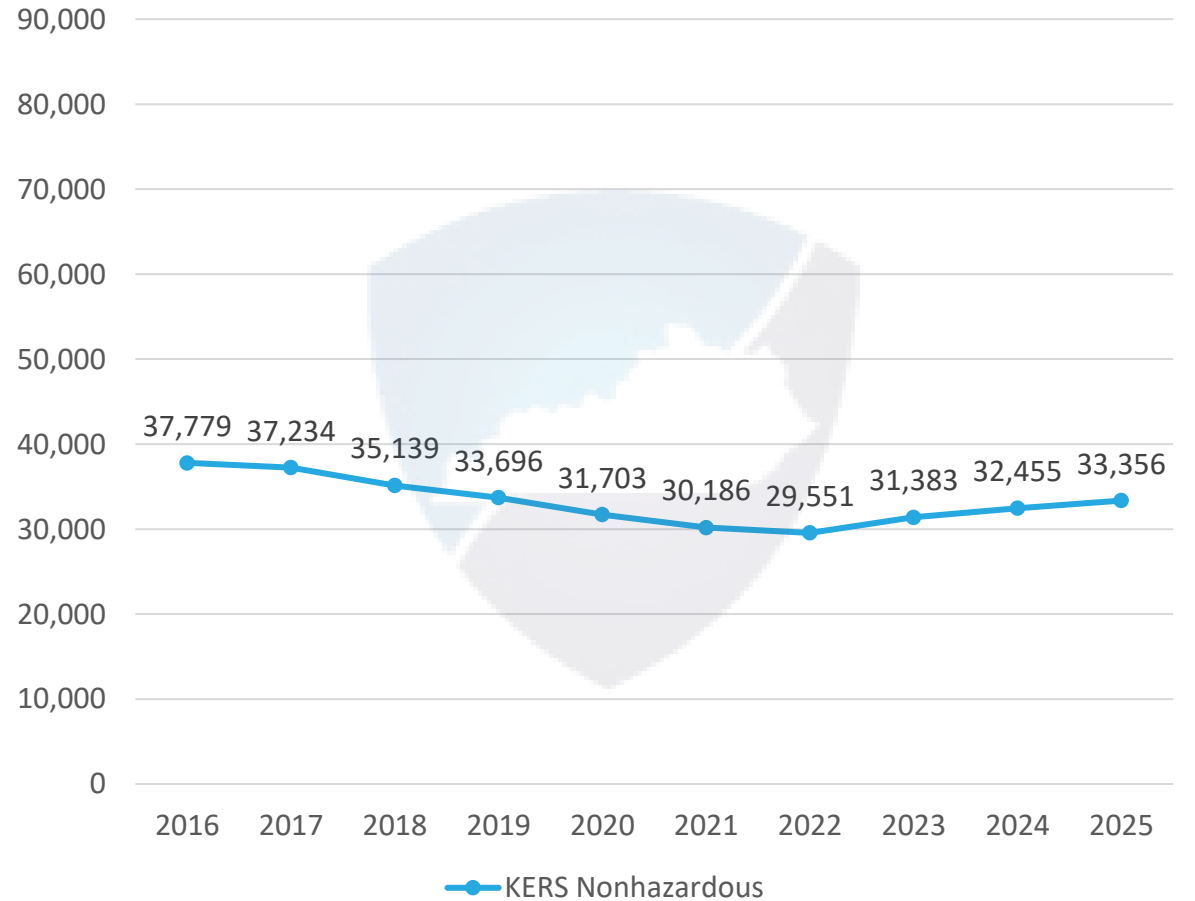
## Active Membership Count

As of June 30, 2025

### CERS Nonhazardous



### KERS Nonhazardous





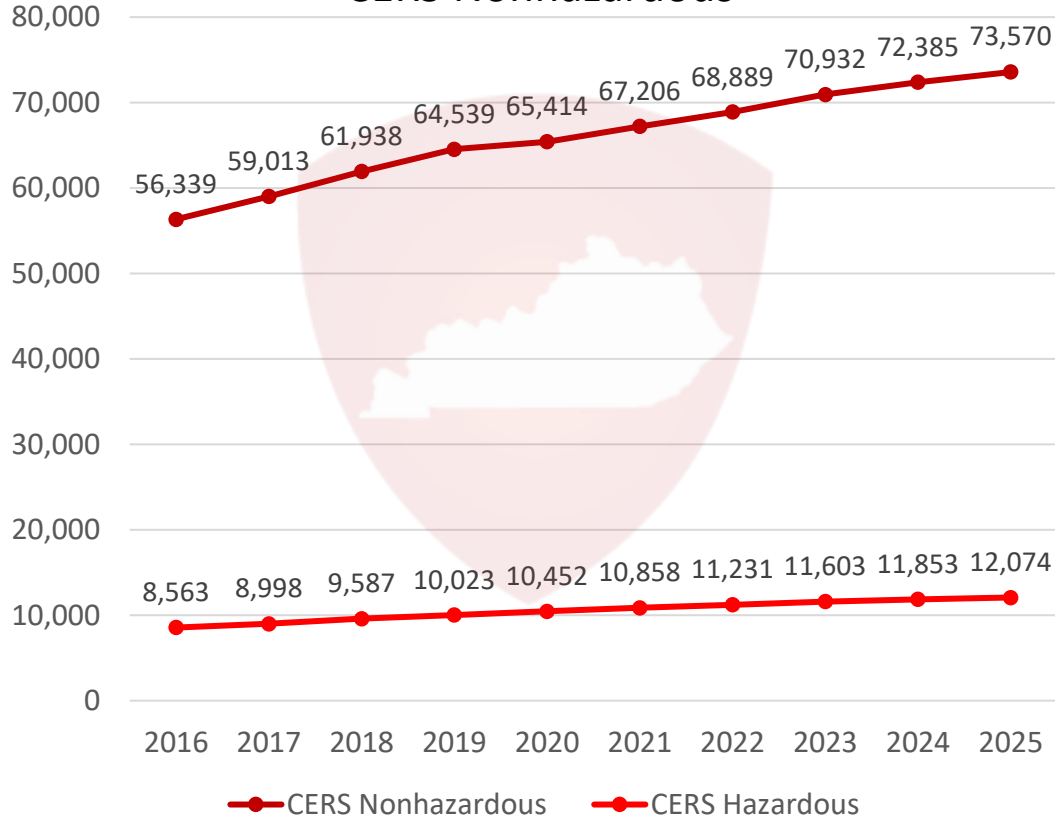
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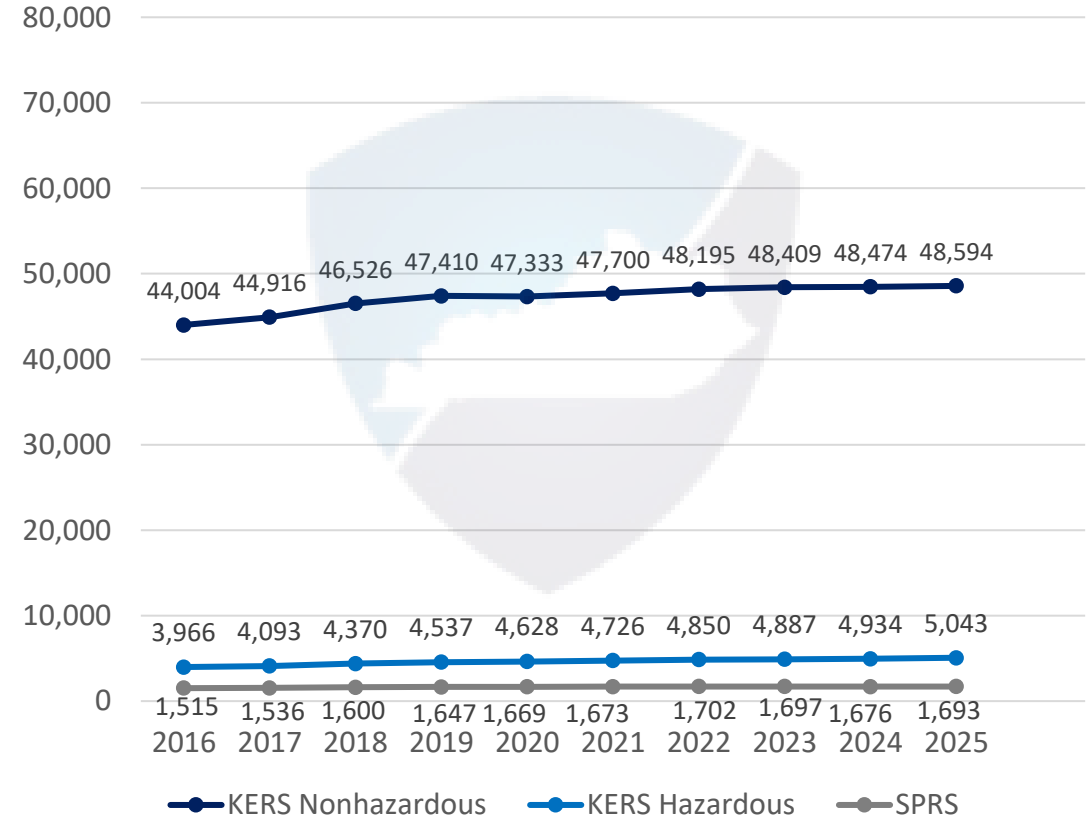
## Retired Membership Count

As of June 30, 2025

### CERS Nonhazardous



### KERS Nonhazardous



% Change from FY24 to FY25	CERS NH	CERS HAZ
	1.64%	1.87%

% Change from FY24 to FY25	KERS NH	KERS HAZ	SPRS
	0.25%	2.21%	1.01%



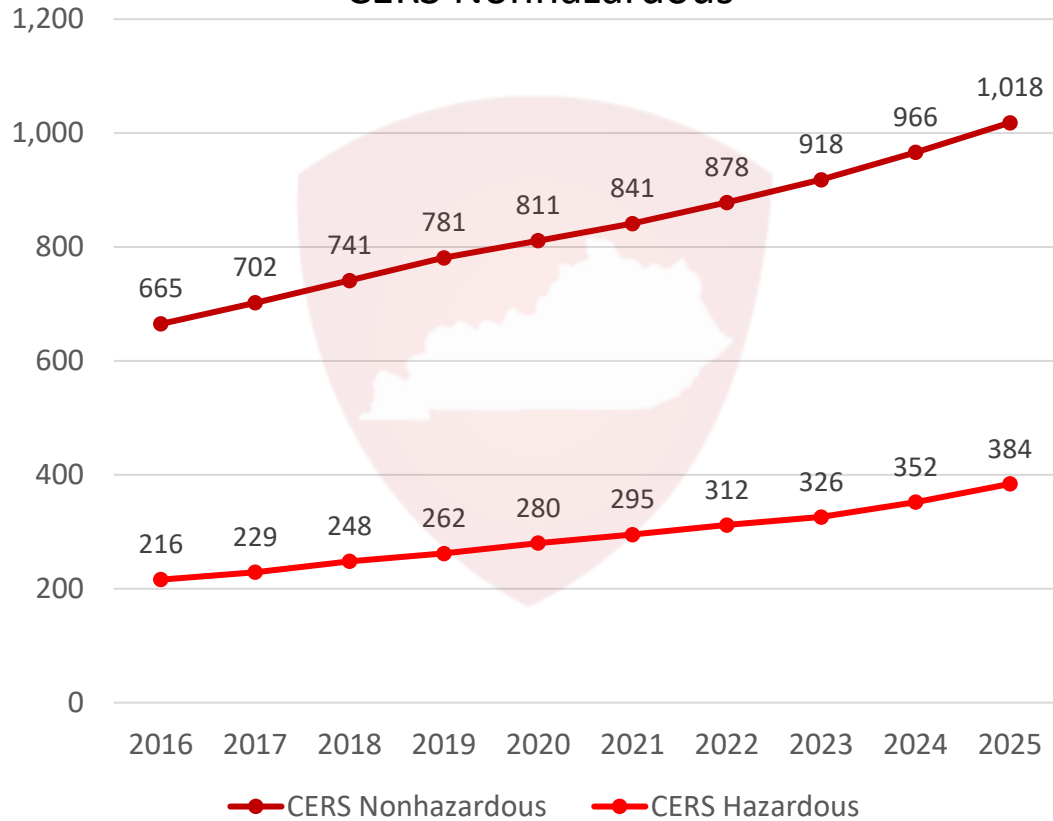
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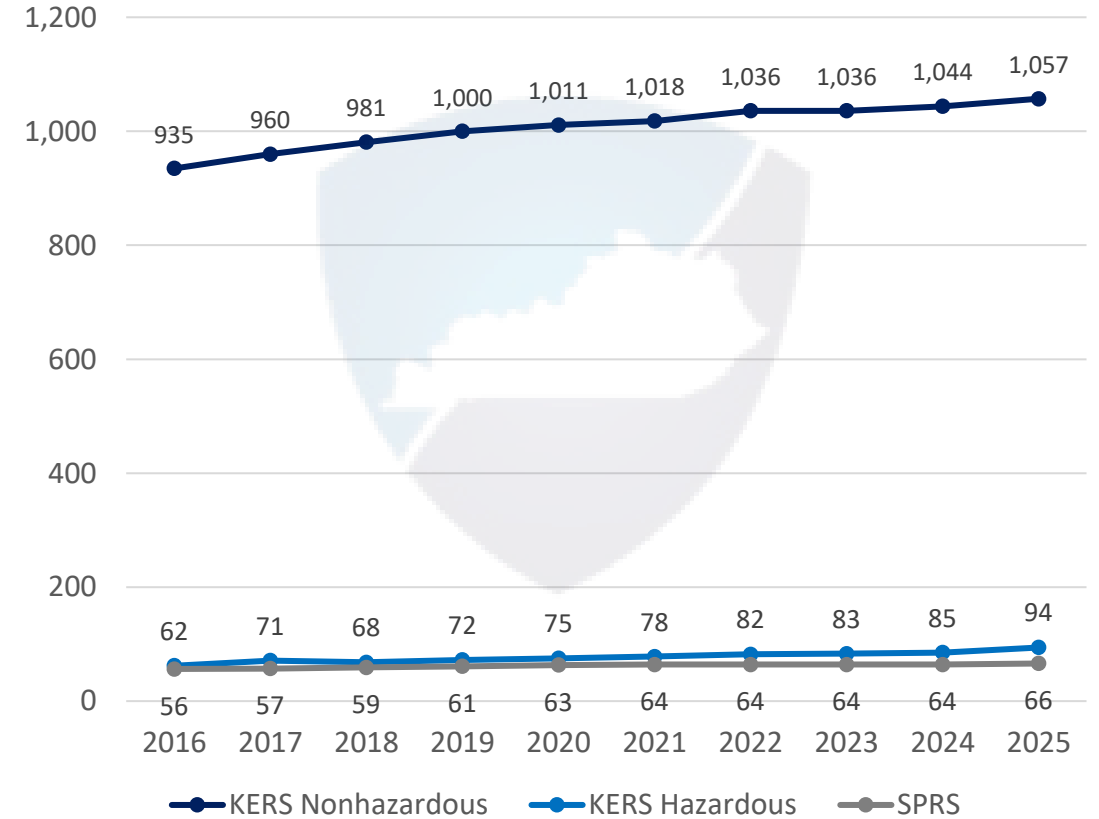
## Pension Benefit Distribution (\$ in Millions)

As of June 30, 2025

### CERS Nonhazardous



### KERS Nonhazardous



% Change from FY24 to FY25	CERS NH	CERS HAZ
	5.38%	9.09%

% Change from FY24 to FY25	KERS NH	KERS HAZ	SPRS
	1.25%	10.59%	3.13%



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## CERS & KRS Employer Contribution Rates

	CERS Nonhazardous		KERS Nonhazardous	
	2024	2025	2024	2025
(1)	(2)	(3)	(4)	(5)
Pension Fund	18.62%	17.14%	6.85%	6.65%
Insurance Fund	<u>0.00%</u>	<u>0.29%</u>	<u>1.14%</u>	<u>1.11%</u>
<b>Actuarially Determined Contribution</b> Payable as a percentage of payroll	<b>18.62%</b>	<b>17.43%</b>	<b>7.99%</b>	<b>7.76%</b>
<b>Difference</b>		<b>-1.19%</b>		<b>-0.23%</b>
Amortization Cost – Pension	NA	NA	\$854M	\$831M
Amortization Cost – Ins	<u>NA</u>	<u>NA</u>	<u>12M</u>	<u>37M</u>
<b>Amortization Cost – Total</b>	<b>NA</b>	<b>NA</b>	<b>\$866M</b>	<b>\$868M</b>
<b>Difference</b>		<b>NA</b>		<b>\$2</b>



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## CERS & KRS Employer Contribution in Millions

	CERS Nonhazardous		KERS Nonhazardous	
	2024	2025	2024	2025
(1)	(2)	(3)	(4)	(5)
Pension Fund	\$596	\$583	\$981	\$965
Insurance Fund	<u>0</u>	<u>10</u>	<u>34</u>	<u>60</u>
<b>Total Actuarially Determined Employer Contribution</b>	<b>\$596</b>	<b>\$593</b>	<b>\$1,015</b>	<b>\$1,025</b>
<b>Change in Actuarially Determined Employer Contribution</b>		<b>(\$3)</b>		<b>\$10</b>



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## Outline of Key Topics

<b>Content</b>	<b>Reference</b>	<b>Section</b>
Funding Levels	Slides 16-18	Appendix
Contribution Rates- All Funds	Slides 19-22	Appendix
Unfunded Liability by System/Fund	Slide 23	Appendix
Historical/Projected Employer Contribution Rates	Slide 24	Appendix
Projections Beyond the Budget Cycle	Slides 25-26	Appendix

# Appendix



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## CERS Funding Results

As of June 30, 2025



# CERS

County Employees Retirement System

	Nonhazardous				Hazardous			
	Pension		Insurance		Pension		Insurance	
	2024	2025	2024	2025	2024	2025	2024	2025
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total Normal Cost Rate (%)	9.37	9.26	2.15	2.41	17.17	16.90	3.40	4.18
<u>Member Rate</u>	<u>(5.00)</u>	<u>(5.00)</u>	<u>(0.67)</u>	<u>(0.84)</u>	<u>(8.00)</u>	<u>(8.00)</u>	<u>(0.69)</u>	<u>(1.86)</u>
Employer Normal Cost Rate	4.37	4.26	1.48	1.57	9.17	8.90	2.71	2.32
<u>Administrative Expenses</u>	<u>0.85</u>	<u>0.77</u>	<u>0.03</u>	<u>0.03</u>	<u>0.31</u>	<u>0.28</u>	<u>0.07</u>	<u>0.07</u>
<u>Amortization Cost</u>	<u>13.40</u>	<u>12.11</u>	<u>(2.37)</u>	<u>(1.31)</u>	<u>24.52</u>	<u>22.34</u>	<u>(1.05)</u>	<u>0.81</u>
<b>Total Actuarially Determined Rate</b>	<b>18.62%</b>	<b>17.14%</b>	<b>0.00%</b>	<b>0.29%</b>	<b>34.00%</b>	<b>31.52%</b>	<b>1.73%</b>	<b>3.20%</b>
Actuarial Accrued Liability (AAL)	\$15,776	\$16,174	\$2,901	\$3,563	\$6,070	\$6,302	\$1,668	\$1,940
Actuarial Value of Assets	\$9,212	\$9,934	\$3,549	\$3,794	\$3,280	\$3,593	\$1,676	\$1,764
Unfunded AAL	\$6,565	\$6,240	(\$648)	(\$231)	\$2,971	\$2,709	(\$8)	\$176
<b>Funded Ratio</b>	<b>58.4%</b>	<b>61.4%</b>	<b>122.3%</b>	<b>106.5%</b>	<b>54.0%</b>	<b>57.0%</b>	<b>100.5%</b>	<b>90.9%</b>



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## KERS Funding Results

As of June 30, 2025



# KERS

Kentucky Employees Retirement System

	Nonhazardous				Hazardous			
	Pension		Insurance		Pension		Insurance	
	2024	2025	2024	2025	2024	2025	2024	2025
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total Normal Cost Rate (%)	11.09	10.95	1.68	1.69	14.96	14.87	2.29	2.32
<u>Member Rate</u>	<u>(5.00)</u>	<u>(5.00)</u>	<u>(0.58)</u>	<u>(0.61)</u>	<u>(8.00)</u>	<u>(8.00)</u>	<u>(0.79)</u>	<u>(0.81)</u>
Employer Normal Cost Rate	6.09	5.95	1.10	1.08	6.96	6.87	1.50	1.51
<u>Administrative Expenses</u>	<u>0.76</u>	<u>0.70</u>	<u>0.04</u>	<u>0.03</u>	<u>0.61</u>	<u>0.61</u>	<u>0.05</u>	<u>0.04</u>
<u>Amortization Cost</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>13.11</u>	<u>11.35</u>	<u>(10.07)</u>	<u>(10.32)</u>
<b>Total Actuarially Determined Rate</b>	<b>6.85%</b>	<b>6.65%</b>	<b>1.14%</b>	<b>1.11%</b>	<b>20.68%</b>	<b>18.83%</b>	<b>0.00%</b>	<b>0.00%</b>
Amortization Cost to be Allocated	\$854M	\$831M	\$12M	\$37M	NA	NA	NA	NA
Actuarial Accrued Liability (AAL)	\$16,648	\$16,839	\$2,095	\$2,475	\$1,443	\$1,488	\$380	\$420
<u>Actuarial Value of Assets</u>	<u>\$4,122</u>	<u>\$4,810</u>	<u>\$1,712</u>	<u>\$1,818</u>	<u>\$985</u>	<u>\$1,076</u>	<u>\$652</u>	<u>\$700</u>
<b>Unfunded AAL</b>	<b>\$12,526</b>	<b>\$12,029</b>	<b>\$383</b>	<b>\$657</b>	<b>\$458</b>	<b>\$412</b>	<b>(\$273)</b>	<b>(\$279)</b>
<b>Funded Ratio</b>	<b>24.8%</b>	<b>28.6%</b>	<b>81.7%</b>	<b>73.4%</b>	<b>68.3%</b>	<b>72.3%</b>	<b>171.9%</b>	<b>166.4%</b>




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## SPRS Funding Results

As of June 30, 2025

	Hazardous			
	Pension		Insurance	
	2024	2025	2024	2025
(1)	(2)	(3)	(4)	(5)
Total Normal Cost Rate (%)	27.33	27.19	4.96	5.03
<u>Member Rate</u>	<u>(8.00)</u>	<u>(8.00)</u>	<u>(0.60)</u>	<u>(0.64)</u>
Employer Normal Cost Rate	19.33	19.19	4.36	4.39
<u>Administrative Expenses</u>	<u>0.43</u>	<u>0.41</u>	<u>0.10</u>	<u>0.10</u>
<u>Amortization Cost</u>	<u>38.15</u>	<u>32.24</u>	<u>(3.00)</u>	<u>(2.00)</u>
<b>Total Actuarially Determined Rate</b>	<b>57.91%</b>	<b>51.84%</b>	<b>1.46%</b>	<b>2.49%</b>
Actuarial Accrued Liability (AAL)	\$1,112	\$1,130	\$251	\$273
<u>Actuarial Value of Assets</u>	<u>\$631</u>	<u>\$700</u>	<u>\$263</u>	<u>\$277</u>
<b>Unfunded AAL</b>	<b>\$481</b>	<b>\$431</b>	<b>(\$12)</b>	<b>(\$3)</b>
<b>Funded Ratio</b>	<b>56.7%</b>	<b>61.9%</b>	<b>104.9%</b>	<b>101.2%</b>



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## CERS Employer Contribution Rates



# CERS

County Employees Retirement System

	Nonhazardous		Hazardous	
	2024	2025	2024	2025
(1)	(2)	(3)	(4)	(5)
Pension Fund	18.62%	17.14%	34.00%	31.52%
Insurance Fund	<u>0.00%</u>	<u>0.29%</u>	<u>1.73%</u>	<u>3.20%</u>
<b>Actuarially Determined Contribution Rate</b> Payable as a percentage of payroll	<b>18.62%</b>	<b>17.43%</b>	<b>35.73%</b>	<b>34.72%</b>
<b>Difference</b>		<b>-1.19%</b>		<b>-1.01%</b>

Note: 2024 Valuation set the contribution rates for FY2026.  
 2025 Valuation will be used to set the contribution rates for FY2027.



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## CERS Employer Contribution in Millions



# CERS

County Employees Retirement System

	Nonhazardous		Hazardous	
	2024	2025	2024	2025
(1)	(2)	(3)	(4)	(5)
Pension Fund	\$596	\$583	\$258	\$259
Insurance Fund	<u>0</u>	<u>10</u>	<u>13</u>	<u>26</u>
<b>Total Actuarially Determined Employer Contribution</b>	<b>\$596</b>	<b>\$593</b>	<b>\$271</b>	<b>\$285</b>
<b>Change in Actuarially Determined Employer Contribution</b>		<b>(\$3)</b>		<b>\$14</b>



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## KRS Employer Contribution Rates



### KRS

Kentucky Retirement Systems

	Nonhazardous		Hazardous		SPRS	
	2024	2025	2024	2025	2024	2025
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pension Fund	6.85%	6.65%	20.68%	18.83%	57.91%	51.84%
Insurance Fund	<u>1.14%</u>	<u>1.11%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>1.46%</u>	<u>2.49%</u>
<b>Actuarially Determined Contribution</b> Payable as a percentage of payroll	<b>7.99%</b>	<b>7.76%</b>	<b>20.68%</b>	<b>18.83%</b>	<b>59.37%</b>	<b>54.33%</b>
<b>Difference</b>		<b>-0.23%</b>		<b>-1.85%</b>		<b>-5.04%</b>

Note: The 2025 Valuation will be used to set the contribution requirement for FY2027 and FY2028.

Amortization Cost – Pension	\$854M	\$831M				
Amortization Cost – Ins	<u>12M</u>	<u>37M</u>				
<b>Amortization Cost – Total</b>	<b>\$866M</b>	<b>\$868M</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>Difference</b>		<b>\$2</b>				



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## KRS Employer Contributions in Millions



# KRS

Kentucky Retirement Systems

	Nonhazardous		Hazardous		SPRS	
	2024	2025	2024	2025	2024	2025
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pension Fund	\$981	\$965	\$54	\$50	\$42	\$39
Insurance Fund	<u>34</u>	<u>60</u>	<u>0</u>	<u>0</u>	<u>1</u>	2
<b>Total Actuarially Determined Employer Contribution</b>	<b>\$1,015</b>	<b>\$1,025</b>	<b>\$54</b>	<b>\$50</b>	<b>\$43</b>	<b>\$41</b>
Note: The 2025 valuation establishes the contribution requirement for FY2027 and FY2028.						
<b>Change in Actuarially Determined Employer Contribution</b>		<b>\$10</b>		<b>(\$4)</b>		<b>(\$2)</b>



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## Historical Actuarial Information

		Pension					Retiree Health				
		2021	2022	2023	2024	2025	2021	2022	2023	2024	2025
<b>CERS Nonhaz</b>	UL \$ B	\$7.179	\$7.525	\$6.711	\$6.565	\$6.240	\$0.503	(\$0.768)	(\$0.806)	(\$0.648)	(\$0.231)
	<b>Funding %</b>	<b>51.8</b>	<b>52.0</b>	<b>56.1</b>	<b>58.4</b>	<b>61.4</b>	<b>85.4</b>	<b>132.1</b>	<b>131.5</b>	<b>122.3</b>	<b>106.5</b>
<b>CERS Haz</b>	UL \$ B	\$3.001	\$3.073	\$2.842	\$2.791	\$2.709	\$0.276	(\$0.016)	(\$0.011)	(\$0.008)	\$0.176
	<b>Funding %</b>	<b>46.7</b>	<b>47.6</b>	<b>51.4</b>	<b>54.0</b>	<b>57.0</b>	<b>84.3</b>	<b>101.0</b>	<b>100.7</b>	<b>100.5</b>	<b>90.9</b>
<b>KERS Nonhaz</b>	UL \$ B	\$13.585	\$13.511	\$12.752	\$12.526	\$12.029	\$1.283	\$0.373	\$0.344	\$0.383	\$0.657
	<b>Funding %</b>	<b>16.8</b>	<b>18.5</b>	<b>21.8</b>	<b>24.8</b>	<b>28.6</b>	<b>50.2</b>	<b>79.1</b>	<b>81.7</b>	<b>81.7</b>	<b>73.4</b>
<b>KERS Haz</b>	UL \$ B	\$0.513	\$0.484	\$0.472	\$0.458	\$0.412	(\$0.151)	(\$0.251)	(\$0.256)	(\$0.273)	(\$0.279)
	<b>Funding %</b>	<b>60.4</b>	<b>63.2</b>	<b>65.4</b>	<b>68.3</b>	<b>72.3%</b>	<b>135.5</b>	<b>172.2</b>	<b>170.4</b>	<b>171.9</b>	<b>166.4</b>
<b>SPRS</b>	UL \$ B	\$0.730	\$0.507	\$0.502	\$0.481	\$0.431	\$0.049	(\$0.001)	(\$0.001)	(\$0.012)	(\$0.003)
	<b>Funding %</b>	<b>30.7</b>	<b>52.5</b>	<b>54.0</b>	<b>56.7</b>	<b>61.9</b>	<b>82.0</b>	<b>100.6</b>	<b>100.5</b>	<b>104.9</b>	<b>101.2</b>



# Historical Employer Contribution Rates and Cost

*NOTE: These tables have been updated to reflect actual costs in historical years.*

		2021	2022	2023	2024	2025	Projected 2026	Projected 2027	Projected 2028
<b>CERS Nonhaz</b>	Rate %	24.06	26.95	26.79	23.34	19.71	18.62	17.43	NA
	Cost \$ M	\$472	\$607	\$698	\$765	\$677	\$621	\$582	NA
<b>CERS Haz</b>	Rate %	39.58	44.33	49.59	43.69	38.61	35.73	34.72	NA
	Cost \$ M	\$172	\$222	\$308	\$321	\$306	\$288	\$280	NA

<b>KERS Nonhaz</b>	Rate %	84.43	10.10	9.97	9.97	8.44	8.44	7.76	7.76
	Cost \$ M	\$959	\$141	\$136	\$156	\$154	\$171	\$157	\$157
	AALC	-	\$1,014	\$986	\$987	\$866	\$857	\$868	\$868
	GF Appropriation	-	-	\$240	\$240	\$300	\$300		
<b>KERS Haz</b>	Rate %	36.00	33.43	31.82	31.82	23.74	23.74	18.83	18.83
	Cost \$ M	\$62	\$59	\$73	\$90	\$71	\$63	\$50	\$50

<b>SPRS</b>	Rate %	143.48	146.06	99.43	99.43	68.10	68.10	54.33	54.33
	Cost \$ M	\$59	\$62	\$58	\$62	\$53	\$51	\$40	\$40
	GF Appropriation	-	\$215	-	-	\$25	\$25		

\*Projected cost are calculated using salaries and approved rates for KERS and SPRS for FY2026, 2027, and 2028 and GRS recommended rates for FY2027 and 2028 for CERS.



	2025 Year 1	2029 Year 5	2034 Year 10	2044 Year 20	2054 Year 30
<b>CERS Nonhazardous</b>					
Employer Contribution <sup>1</sup>	18.62%	15.46%	14.88%	18.81%	4.08%
Unfunded Liability - Pension Only	\$6,240	\$5,385	\$5,025	\$2,965	\$0
Funded Ratio- Pension Only	61%	58%	73%	86%	100%

<sup>1</sup> Employer Contribution shown includes required contributions for both the retirement and insurance funds and include both the normal cost and amortization cost components of the contribution requirement.



	2025 Year 1	2029 Year 5	2034 Year 10	2044 Year 20	2054 Year 30
<b>KERS Nonhazardous</b>					
Employer Contribution <sup>1</sup>	\$1,027	\$995	\$952	\$1,139	\$103
Unfunded Liability - Pension Only	\$12,029	\$10,391	\$8,819	\$4,034	\$0
Funded Ratio- Pension Only	29%	38%	46%	73%	100%

<sup>1</sup> Employer Contribution shown includes required contributions for both the retirement and insurance funds and include both the normal cost and amortization cost components of the contribution requirement.