

March 1, 2018

Mr. David Eager
Interim Executive Director
Kentucky Retirement Systems
1260 Louisville Road
Frankfort, KY 40601

**Re: BR 1687 HB 406
AA Statement 1 of 1
CERS Non-Hazardous and Hazardous Systems**

Dear Mr. Eager:

We have reviewed and analyzed the summary of changes in the proposed legislation HB 406 (BR 1687). The purpose of this letter is to communicate to the fiscal analysis of this proposed legislation on the retirement and insurance funds maintained by the Kentucky Retirement System (KRS) as it applies to the County Employees Retirement System (CERS).

Principal Provisions of Proposed Legislation

In summary, the proposed legislation defines the employer contribution rates for fiscal years 2018/2019 through 2022/2023 for the CERS Non-Hazardous and Hazardous funds such that the total employer contributions (the sum of pension and insurance contributions) as a dollar amount are not to increase by more than 10% from the prior fiscal year. Given the magnitude of the currently scheduled increase in the contribution rates for the participating employers in CERS from FY 2017/2018 to FY 2018/2019, legislation like this provides those participating employers increased ability to budget for the increased contribution requirements to KRS.

Summary of Cost Impact

Section 1 includes exhibits that show a comparison of the fiscal impact of the proposed legislation to the current plan over the next 35 years. Specifically, these exhibits show the projected impact on the: (1) unfunded actuarial accrued liability, (2) funded ratio, (3) total employer contribution dollars, and (4) projected composite employer contribution rates, for each of the funds (retirement and health insurance). Section 2 provides additional detail regarding each projection under the current plan and Section 3 provides similar information under the proposed legislation.

The actuarial valuation (and these calculations) for CERS includes a 2.00% payroll growth assumption, meaning that over a long time period the covered payroll is expected to increase at the rate of 2.00% per year. Since the System collects employers contributions as a percentage of covered payroll, the dollar amount of the employer contributions is expected to increase by 2.00% per year even if the contribution rate, as a percentage of payroll remains unchanged from the prior year.

Therefore, the maximum increase in contribution rates during the phase-in period will be 8.00% each year (which is equal to the 10% increase in dollar contributions divided by the 2.00% payroll growth assumption).

Note, actuarial assumptions are long-term assumptions, and may not year-to-year variations. As a result, if the actual compensation increases by more (or less) than the 2.00% assumption from the prior year, then the actual employer contributions as a dollar amount will increase by more (or less) than the 10% maximum dollar amount change prescribed under the proposed legislation. However, there is no practical mechanism for KRS to prevent the dollar amount of the contributions exceeding the 10% limit.

Additionally, the phase-in of employer contributions was applied determining the contribution rate applicable to all the participating employers in the system. Annual changes in compensation (and, therefore, changes in contributions as dollar amounts) for individual employers may vary significantly from year to year and this limit does not apply on an individual employer basis.

Basis of Calculations

GRS based the calculations and analysis in this letter on the member and financial data provided by KRS and used to perform the actuarial valuation as of June 30, 2017. Except where noted otherwise, the projections assume no actuarial gains or losses will occur in the future, and that members will terminate, retire, become disabled, or die as predicted by the actuarial assumptions documented in the June 30, 2017 actuarial valuation report. Except where noted in this letter, our calculations are further based on the plan provisions effective for the June 30, 2017 actuarial valuation. In the event that any other legislation with a fiscal impact on the applicable plans is passed in conjunction with this proposed legislation, results could vary significantly.

These projections also do not reflect the actual investment experience of the retirement system after the measurement date of June 30, 2017. The projections assume that the participating employers in each Retirement System will maintain the current workforce in each future year and that as current active members terminate or retire from a covered position in the Retirement System, the employer would replace them with a new employee.

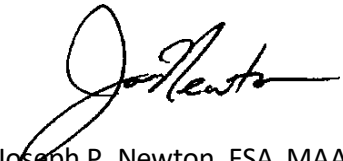
Our calculations are based upon assumptions regarding future events, which may or may not materialize. Depending on actual plan experience, actual results could deviate significantly from our projections.

General Comments

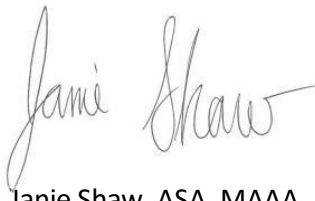
We are not attorneys, and we cannot provide a legal opinion regarding the changes in this proposed legislation. Nothing in this letter should be construed as providing legal, investment or tax advice. It may be prudent to consult with the Retirement System's counsel before enacting any such changes. Finally, no statement in this letter is intended to be interpreted as a recommendation in favor of or in opposition to the changes studied herein.

Mr. White and Mr. Newton are Enrolled Actuaries. All the of the undersigned are also members of the American Academy of Actuaries and we meet all of the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. In addition, all of the undersigned are experienced in performing valuations for large public retirement systems. If you have any questions, or require any additional or clarifying information, please do not hesitate to contact us.

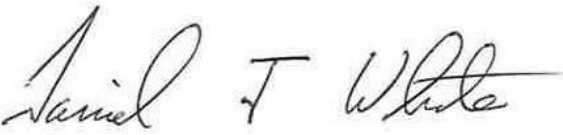
Sincerely,



Joseph P. Newton, FSA, MAAA, EA
Senior Consultant



Janie Shaw, ASA, MAAA
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Daniel J. White, FSA, MAAA, EA
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Enclosures

Section 1. Comparison of Fiscal Impact

Section 2. Projected Cost of the Retirement and Insurance – Current Plan

Section 3. Projected Cost of the Retirement and Insurance – Proposed Legislation

Section 1.
Comparison of Fiscal Impact
Current Plan vs. Proposed Changes

Kentucky Retirement Systems
Exhibit 1-1
CERS Non-Hazardous Retirement Fund
Comparison of Fiscal Impact
(\$ in Millions)

Fiscal Year Beginning July 1,	Unfunded Actuarial Accrued Liability			Funded Ratio			Employer Contribution			Employer Contribution Rate		
	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2017	\$ 6,039	\$ 6,039	\$ -	53%	53%	0%	\$ 355	\$ 355	\$ 0	14.5%	14.5%	0.0%
2018	6,219	6,219	-	53%	53%	0%	546	391	(155)	21.8%	15.6%	-6.2%
2019	6,299	6,459	160	53%	52%	-1%	548	429	(119)	21.5%	16.9%	-4.7%
2020	6,292	6,585	293	54%	52%	-2%	558	471	(87)	21.5%	18.2%	-3.4%
2021	6,165	6,566	401	56%	53%	-3%	563	528	(35)	21.3%	20.0%	-1.4%
2022	6,099	6,562	463	57%	54%	-3%	561	595	34	20.9%	22.1%	1.2%
2023	6,026	6,483	457	58%	55%	-3%	565	599	34	20.6%	21.9%	1.2%
2024	5,941	6,392	451	59%	56%	-3%	570	604	34	20.4%	21.7%	1.2%
2025	5,840	6,284	444	61%	58%	-3%	575	610	35	20.2%	21.5%	1.2%
2026	5,725	6,161	436	62%	59%	-3%	580	615	35	20.0%	21.3%	1.2%
2027	5,595	6,021	426	63%	60%	-3%	585	622	37	19.8%	21.1%	1.3%
2028	5,446	5,861	415	64%	62%	-2%	591	628	37	19.7%	20.9%	1.2%
2029	5,280	5,682	402	66%	63%	-3%	597	635	38	19.5%	20.8%	1.3%
2030	5,094	5,481	387	67%	64%	-3%	604	643	39	19.3%	20.6%	1.2%
2031	4,885	5,257	372	68%	66%	-2%	611	651	40	19.2%	20.4%	1.2%
2032	4,654	5,008	354	70%	68%	-2%	619	660	41	19.0%	20.3%	1.2%
2033	4,397	4,732	335	72%	70%	-2%	627	669	42	18.9%	20.1%	1.3%
2034	4,115	4,428	313	74%	72%	-2%	636	678	42	18.7%	20.0%	1.2%
2035	3,803	4,092	289	76%	74%	-2%	645	688	43	18.6%	19.9%	1.2%
2036	3,462	3,724	262	78%	76%	-2%	655	699	44	18.5%	19.7%	1.2%
2037	3,087	3,321	234	80%	79%	-1%	666	711	45	18.4%	19.6%	1.2%
2038	2,677	2,880	203	83%	81%	-2%	678	723	45	18.3%	19.5%	1.2%
2039	2,230	2,399	169	86%	84%	-2%	690	737	47	18.1%	19.4%	1.2%
2040	1,742	1,873	131	89%	88%	-1%	703	750	47	18.0%	19.3%	1.2%
2041	1,211	1,302	91	92%	92%	0%	715	763	48	17.9%	19.1%	1.2%
2042	634	681	47	96%	96%	0%	730	779	49	17.9%	19.1%	1.2%
2043	-	-	-	100%	100%	0%	78	78	-	1.9%	1.9%	0.0%
2044	-	-	-	100%	100%	0%	79	79	-	1.9%	1.9%	0.0%
2045	-	-	-	100%	100%	0%	80	80	-	1.8%	1.8%	0.0%
2046	-	-	-	100%	100%	0%	82	82	-	1.8%	1.8%	0.0%
2047	-	-	-	100%	100%	0%	83	83	-	1.8%	1.8%	0.0%
2048	-	-	-	100%	100%	0%	84	84	-	1.8%	1.8%	0.0%
2049	-	-	-	100%	100%	0%	86	86	-	1.8%	1.8%	0.0%
2050	-	-	-	100%	100%	0%	88	88	-	1.8%	1.8%	0.0%
2051	-	-	-	100%	100%	0%	89	89	-	1.8%	1.8%	0.0%

Gabriel Roeder Smith & Company

Kentucky Retirement Systems
Exhibit 1-2
CERS Non-Hazardous Insurance Fund
Summary of Fiscal Impact
(\$ in Millions)

Fiscal Year Beginning July 1,	Unfunded Actuarial Accrued Liability			Funded Ratio			Employer Contribution			Employer Contribution Rate		
	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2017	\$ 1,128	\$ 1,128	\$ -	66%	66%	0%	\$ 114	\$ 114	\$ 0	4.7%	4.7%	0.0%
2018	1,171	1,171	-	67%	67%	0%	154	126	(28)	6.2%	5.1%	-1.1%
2019	1,192	1,221	29	67%	67%	0%	153	138	(15)	6.1%	5.5%	-0.6%
2020	1,190	1,236	46	69%	68%	-1%	154	152	(2)	6.0%	5.9%	-0.1%
2021	1,153	1,205	52	71%	70%	-1%	153	157	4	5.8%	6.0%	0.1%
2022	1,140	1,190	50	72%	71%	-1%	150	153	3	5.6%	5.8%	0.1%
2023	1,125	1,175	50	73%	72%	-1%	149	153	4	5.5%	5.6%	0.1%
2024	1,109	1,158	49	74%	73%	-1%	148	152	4	5.4%	5.5%	0.1%
2025	1,089	1,138	49	75%	74%	-1%	147	151	4	5.2%	5.4%	0.1%
2026	1,067	1,115	48	76%	75%	-1%	146	150	4	5.1%	5.2%	0.1%
2027	1,042	1,089	47	77%	76%	-1%	145	149	4	5.0%	5.1%	0.1%
2028	1,013	1,058	45	78%	77%	-1%	144	148	4	4.8%	5.0%	0.1%
2029	982	1,026	44	79%	78%	-1%	144	148	4	4.7%	4.9%	0.1%
2030	947	989	42	80%	79%	-1%	143	147	4	4.6%	4.7%	0.1%
2031	908	949	41	81%	80%	-1%	143	147	4	4.5%	4.6%	0.1%
2032	865	904	39	82%	82%	0%	143	147	4	4.4%	4.6%	0.1%
2033	818	854	36	84%	83%	-1%	144	148	4	4.4%	4.5%	0.1%
2034	766	800	34	85%	84%	-1%	144	149	5	4.3%	4.4%	0.1%
2035	709	740	31	86%	85%	-1%	146	150	4	4.2%	4.4%	0.1%
2036	646	675	29	87%	87%	0%	147	152	5	4.2%	4.3%	0.1%
2037	578	604	26	89%	88%	-1%	150	155	5	4.2%	4.3%	0.1%
2038	503	525	22	90%	90%	0%	151	157	6	4.1%	4.2%	0.1%
2039	421	439	18	92%	92%	0%	155	160	5	4.1%	4.2%	0.1%
2040	330	344	14	94%	93%	-1%	157	162	5	4.1%	4.2%	0.1%
2041	231	241	10	96%	95%	-1%	160	166	6	4.0%	4.2%	0.1%
2042	123	128	5	98%	98%	0%	166	170	4	4.1%	4.2%	0.1%
2043	-	-	-	100%	100%	0%	41	41	-	1.0%	1.0%	0.0%
2044	-	-	-	100%	100%	0%	41	41	-	1.0%	1.0%	0.0%
2045	-	-	-	100%	100%	0%	42	42	-	1.0%	1.0%	0.0%
2046	-	-	-	100%	100%	0%	42	42	-	1.0%	1.0%	0.0%
2047	-	-	-	100%	100%	0%	43	43	-	0.9%	0.9%	0.0%
2048	-	-	-	100%	100%	0%	43	43	-	0.9%	0.9%	0.0%
2049	-	-	-	100%	100%	0%	43	43	-	0.9%	0.9%	0.0%
2050	-	-	-	100%	100%	0%	43	43	-	0.9%	0.9%	0.0%
2051	-	-	-	100%	100%	0%	44	44	-	0.9%	0.9%	0.0%

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Kentucky Retirement Systems
Exhibit 1-3
CERS Hazardous Retirement Fund
Summary of Fiscal Impact
(\$ in Millions)

Fiscal Year Beginning July 1,	Unfunded Actuarial Accrued Liability			Funded Ratio			Employer Contribution			Employer Contribution Rate		
	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2017	\$ 2,411	\$ 2,411	\$ -	48%	48%	0%	\$ 120	\$ 120	\$ 0	22.2%	22.2%	0.0%
2018	2,478	2,478	-	48%	48%	0%	192	128	(64)	35.7%	23.9%	-11.8%
2019	2,504	2,569	65	49%	47%	-2%	193	139	(54)	36.0%	25.8%	-10.1%
2020	2,500	2,625	125	50%	47%	-3%	197	151	(46)	36.4%	27.9%	-8.6%
2021	2,456	2,637	181	52%	48%	-4%	199	169	(30)	36.5%	30.9%	-5.6%
2022	2,433	2,656	223	53%	48%	-5%	199	192	(7)	36.1%	34.8%	-1.3%
2023	2,405	2,650	245	54%	49%	-5%	201	219	18	36.0%	39.2%	3.2%
2024	2,372	2,614	242	55%	50%	-5%	202	221	19	35.8%	39.1%	3.2%
2025	2,333	2,571	238	56%	52%	-4%	204	223	19	35.7%	38.9%	3.3%
2026	2,288	2,521	233	57%	53%	-4%	207	226	19	35.5%	38.8%	3.3%
2027	2,236	2,465	229	59%	54%	-5%	209	229	20	35.3%	38.6%	3.3%
2028	2,178	2,400	222	60%	56%	-4%	212	232	20	35.1%	38.5%	3.3%
2029	2,111	2,327	216	61%	57%	-4%	215	235	20	35.0%	38.3%	3.3%
2030	2,037	2,246	209	63%	59%	-4%	218	239	21	34.8%	38.1%	3.3%
2031	1,954	2,154	200	64%	61%	-3%	222	243	21	34.5%	37.9%	3.3%
2032	1,861	2,052	191	66%	63%	-3%	225	247	22	34.3%	37.7%	3.3%
2033	1,759	1,939	180	68%	65%	-3%	229	252	23	34.1%	37.4%	3.3%
2034	1,646	1,814	168	70%	67%	-3%	233	256	23	33.9%	37.2%	3.3%
2035	1,522	1,677	155	72%	69%	-3%	238	261	23	33.7%	37.0%	3.3%
2036	1,385	1,526	141	75%	72%	-3%	242	266	24	33.6%	36.8%	3.3%
2037	1,235	1,360	125	78%	75%	-3%	247	270	23	33.4%	36.6%	3.2%
2038	1,071	1,180	109	81%	79%	-2%	251	276	25	33.3%	36.5%	3.2%
2039	892	983	91	84%	82%	-2%	256	281	25	33.1%	36.4%	3.2%
2040	697	767	70	87%	86%	-1%	261	286	25	33.0%	36.2%	3.2%
2041	484	533	49	91%	90%	-1%	267	292	25	32.9%	36.1%	3.2%
2042	254	279	25	95%	95%	0%	272	299	27	32.9%	36.1%	3.2%
2043	-	-	-	100%	100%	0%	12	12	-	1.4%	1.4%	0.0%
2044	-	-	-	100%	100%	0%	12	12	-	1.4%	1.4%	0.0%
2045	-	-	-	100%	100%	0%	12	12	-	1.4%	1.4%	0.0%
2046	-	-	-	100%	100%	0%	13	13	-	1.4%	1.4%	0.0%
2047	-	-	-	100%	100%	0%	13	13	-	1.4%	1.4%	0.0%
2048	-	-	-	100%	100%	0%	13	13	-	1.4%	1.4%	0.0%
2049	-	-	-	100%	100%	0%	14	14	-	1.4%	1.4%	0.0%
2050	-	-	-	100%	100%	0%	14	14	-	1.4%	1.4%	0.0%
2051	-	-	-	100%	100%	0%	14	14	-	1.4%	1.4%	0.0%

Kentucky Retirement Systems
Exhibit 1-4
CERS Hazardous Insurance Fund
Summary of Fiscal Impact
(\$ in Millions)

Fiscal Year Beginning July 1,	Unfunded Actuarial Accrued Liability			Funded Ratio			Employer Contribution			Employer Contribution Rate		
	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2017	\$ 591	\$ 591	\$ -	67%	67%	0%	\$ 51	\$ 51	\$ 0	9.4%	9.4%	0.0%
2018	610	610	-	67%	67%	0%	65	54	(11)	12.2%	10.1%	-2.1%
2019	622	633	11	67%	67%	0%	64	58	(6)	12.0%	10.9%	-1.1%
2020	619	637	18	68%	68%	0%	64	63	(1)	11.8%	11.7%	-0.1%
2021	600	620	20	70%	69%	-1%	63	64	1	11.5%	11.8%	0.3%
2022	592	612	20	71%	70%	-1%	61	62	1	11.0%	11.3%	0.3%
2023	583	603	20	72%	71%	-1%	59	61	2	10.7%	10.9%	0.3%
2024	574	594	20	72%	71%	-1%	59	60	1	10.4%	10.6%	0.3%
2025	564	584	20	73%	72%	-1%	58	59	1	10.1%	10.4%	0.3%
2026	552	571	19	73%	73%	0%	58	59	1	9.9%	10.2%	0.3%
2027	540	558	18	74%	73%	-1%	57	59	2	9.7%	10.0%	0.3%
2028	525	543	18	74%	74%	0%	58	59	1	9.6%	9.8%	0.3%
2029	509	526	17	75%	74%	-1%	58	60	2	9.4%	9.7%	0.3%
2030	491	508	17	76%	75%	-1%	59	60	1	9.3%	9.6%	0.3%
2031	471	487	16	76%	75%	-1%	59	61	2	9.2%	9.5%	0.3%
2032	448	464	16	77%	76%	-1%	60	62	2	9.2%	9.4%	0.3%
2033	424	439	15	78%	77%	-1%	61	63	2	9.1%	9.4%	0.3%
2034	397	410	13	79%	78%	-1%	62	64	2	9.0%	9.3%	0.3%
2035	367	380	13	80%	80%	0%	63	65	2	9.0%	9.2%	0.3%
2036	334	346	12	82%	81%	-1%	64	66	2	8.9%	9.2%	0.3%
2037	298	308	10	84%	83%	-1%	66	67	1	8.9%	9.2%	0.3%
2038	259	268	9	86%	85%	-1%	67	69	2	8.9%	9.1%	0.3%
2039	216	223	7	88%	88%	0%	68	70	2	8.8%	9.1%	0.3%
2040	168	174	6	91%	90%	-1%	69	72	3	8.8%	9.1%	0.3%
2041	118	122	4	93%	93%	0%	71	73	2	8.8%	9.0%	0.3%
2042	62	64	2	97%	96%	-1%	72	75	3	8.8%	9.0%	0.3%
2043	-	-	-	100%	100%	0%	10	10	-	1.1%	1.1%	0.0%
2044	-	-	-	100%	100%	0%	10	10	-	1.1%	1.1%	0.0%
2045	-	-	-	100%	100%	0%	10	10	-	1.1%	1.1%	0.0%
2046	-	-	-	100%	100%	0%	10	10	-	1.1%	1.1%	0.0%
2047	-	-	-	100%	100%	0%	10	10	-	1.1%	1.1%	0.0%
2048	-	-	-	100%	100%	0%	10	10	-	1.1%	1.1%	0.0%
2049	-	-	-	100%	100%	0%	10	10	-	1.0%	1.0%	0.0%
2050	-	-	-	100%	100%	0%	10	10	-	1.0%	1.0%	0.0%
2051	-	-	-	100%	100%	0%	10	10	-	1.0%	1.0%	0.0%

Section 2.
Projected Cost of the Retirement and Insurance
Current Plan

Kentucky Retirement Systems
Exhibit 2-1
CERS Non-Hazardous Retirement Fund
Current Plan
(\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution Rate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2017	\$ 12,804	\$ 6,765	\$ 6,039	53%	\$ 355	\$ 123	\$ 2,452	14.48%	14.48%
2018	13,121	6,902	6,219	53%	546	125	2,500	21.84%	21.84%
2019	13,421	7,122	6,299	53%	548	127	2,547	21.50%	21.50%
2020	13,704	7,412	6,292	54%	558	130	2,594	21.53%	21.53%
2021	13,970	7,805	6,165	56%	563	132	2,642	21.33%	21.33%
2022	14,218	8,119	6,099	57%	561	135	2,690	20.86%	20.86%
2023	14,445	8,419	6,026	58%	565	137	2,740	20.64%	20.64%
2024	14,652	8,711	5,941	59%	570	140	2,790	20.43%	20.43%
2025	14,836	8,996	5,840	61%	575	142	2,842	20.22%	20.22%
2026	14,998	9,273	5,725	62%	580	145	2,894	20.03%	20.03%
2027	15,136	9,541	5,595	63%	585	147	2,948	19.84%	19.84%
2028	15,259	9,813	5,446	64%	591	150	3,003	19.67%	19.67%
2029	15,359	10,079	5,280	66%	597	153	3,062	19.50%	19.50%
2030	15,438	10,344	5,094	67%	604	156	3,124	19.34%	19.34%
2031	15,496	10,611	4,885	68%	611	159	3,187	19.18%	19.18%
2032	15,536	10,882	4,654	70%	619	163	3,254	19.03%	19.03%
2033	15,558	11,161	4,397	72%	627	166	3,323	18.88%	18.88%
2034	15,565	11,450	4,115	74%	636	170	3,394	18.74%	18.74%
2035	15,556	11,753	3,803	76%	645	173	3,467	18.61%	18.61%
2036	15,535	12,073	3,462	78%	655	177	3,545	18.49%	18.49%
2037	15,507	12,420	3,087	80%	666	181	3,628	18.37%	18.37%
2038	15,478	12,801	2,677	83%	678	186	3,714	18.25%	18.25%
2039	15,451	13,221	2,230	86%	690	190	3,803	18.14%	18.14%
2040	15,428	13,686	1,742	89%	703	195	3,895	18.04%	18.04%
2041	15,413	14,202	1,211	92%	715	199	3,988	17.94%	17.94%
2042	15,406	14,772	634	96%	730	204	4,083	17.87%	17.87%
2043	15,409	15,409	0	100%	78	209	4,179	1.87%	1.87%
2044	15,423	15,423	0	100%	79	214	4,277	1.85%	1.85%
2045	15,449	15,449	0	100%	80	219	4,377	1.83%	1.83%
2046	15,488	15,488	0	100%	82	224	4,478	1.82%	1.82%
2047	15,540	15,540	0	100%	83	229	4,581	1.81%	1.81%
2048	15,606	15,606	0	100%	84	234	4,686	1.80%	1.80%
2049	15,687	15,687	0	100%	86	240	4,792	1.79%	1.79%
2050	15,783	15,783	0	100%	88	245	4,901	1.79%	1.79%
2051	15,895	15,895	0	100%	89	251	5,012	1.78%	1.78%

Notes and assumptions:

The projection is based on the results of the June 30, 2017 actuarial valuation and assumes constant active membership count in all future years.

The employer actuarially determined contribution rate for a particular year is determined by the prior year's actuarial valuation.

Kentucky Retirement Systems
Exhibit 2-2
CERS Non-Hazardous Insurance Fund
Current Plan
(\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution Rate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2017	\$ 3,355	\$ 2,227	\$ 1,128	66%	\$ 114	\$ 10	\$ 2,429	4.70%	4.70%
2018	3,514	2,343	1,171	67%	154	11	2,477	6.21%	6.21%
2019	3,667	2,475	1,192	67%	153	13	2,524	6.06%	6.06%
2020	3,813	2,623	1,190	69%	154	14	2,572	5.98%	5.98%
2021	3,951	2,798	1,153	71%	153	15	2,619	5.84%	5.84%
2022	4,081	2,941	1,140	72%	150	17	2,668	5.62%	5.62%
2023	4,202	3,077	1,125	73%	149	18	2,718	5.48%	5.48%
2024	4,315	3,206	1,109	74%	148	19	2,768	5.35%	5.35%
2025	4,419	3,330	1,089	75%	147	20	2,820	5.21%	5.21%
2026	4,514	3,447	1,067	76%	146	22	2,873	5.08%	5.08%
2027	4,600	3,558	1,042	77%	145	23	2,926	4.96%	4.96%
2028	4,676	3,663	1,013	78%	144	24	2,982	4.83%	4.83%
2029	4,745	3,763	982	79%	144	26	3,040	4.72%	4.72%
2030	4,807	3,860	947	80%	143	27	3,102	4.60%	4.60%
2031	4,862	3,954	908	81%	143	28	3,166	4.51%	4.51%
2032	4,912	4,047	865	82%	143	29	3,232	4.42%	4.42%
2033	4,958	4,140	818	84%	144	31	3,301	4.35%	4.35%
2034	5,002	4,236	766	85%	144	32	3,372	4.28%	4.28%
2035	5,045	4,336	709	86%	146	33	3,445	4.23%	4.23%
2036	5,089	4,443	646	87%	147	34	3,522	4.18%	4.18%
2037	5,135	4,557	578	89%	150	35	3,605	4.15%	4.15%
2038	5,184	4,681	503	90%	151	36	3,691	4.10%	4.10%
2039	5,235	4,814	421	92%	155	37	3,780	4.09%	4.09%
2040	5,289	4,959	330	94%	157	38	3,872	4.06%	4.06%
2041	5,347	5,116	231	96%	160	39	3,965	4.04%	4.04%
2042	5,409	5,286	123	98%	166	40	4,059	4.08%	4.08%
2043	5,475	5,475	0	100%	41	41	4,156	0.98%	0.98%
2044	5,545	5,545	0	100%	41	42	4,253	0.97%	0.97%
2045	5,619	5,619	0	100%	42	43	4,352	0.97%	0.97%
2046	5,696	5,696	0	100%	42	44	4,453	0.95%	0.95%
2047	5,775	5,775	0	100%	43	46	4,555	0.94%	0.94%
2048	5,855	5,855	0	100%	43	47	4,660	0.92%	0.92%
2049	5,937	5,937	0	100%	43	48	4,766	0.91%	0.91%
2050	6,019	6,019	0	100%	43	49	4,874	0.89%	0.89%
2051	6,102	6,102	0	100%	44	50	4,985	0.88%	0.88%

Notes and assumptions:

The projection is based on the results of the June 30, 2017 actuarial valuation and assumes constant active membership count in all future years.

The employer actuarially determined contribution rate for a particular year is determined by the prior year's actuarial valuation.

Kentucky Retirement Systems
Exhibit 2-3
CERS Hazardous Retirement Fund
Current Plan
(\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution Rate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2017	\$ 4,649	\$ 2,238	\$ 2,411	48%	\$ 120	\$ 43	\$ 542	22.20%	22.20%
2018	4,771	2,293	2,478	48%	192	43	537	35.69%	35.69%
2019	4,880	2,376	2,504	49%	193	43	538	35.95%	35.95%
2020	4,978	2,478	2,500	50%	197	43	542	36.42%	36.42%
2021	5,066	2,610	2,456	52%	199	44	546	36.48%	36.48%
2022	5,145	2,712	2,433	53%	199	44	551	36.06%	36.06%
2023	5,214	2,809	2,405	54%	201	45	558	35.95%	35.95%
2024	5,274	2,902	2,372	55%	202	45	565	35.81%	35.81%
2025	5,325	2,992	2,333	56%	204	46	573	35.66%	35.66%
2026	5,367	3,079	2,288	57%	207	47	582	35.49%	35.49%
2027	5,400	3,164	2,236	59%	209	47	592	35.32%	35.32%
2028	5,426	3,248	2,178	60%	212	48	602	35.14%	35.14%
2029	5,444	3,333	2,111	61%	215	49	614	34.96%	34.96%
2030	5,457	3,420	2,037	63%	218	50	628	34.75%	34.75%
2031	5,466	3,512	1,954	64%	222	51	642	34.54%	34.54%
2032	5,472	3,611	1,861	66%	225	53	657	34.33%	34.33%
2033	5,478	3,719	1,759	68%	229	54	672	34.12%	34.12%
2034	5,483	3,837	1,646	70%	233	55	688	33.92%	33.92%
2035	5,489	3,967	1,522	72%	238	56	705	33.73%	33.73%
2036	5,495	4,110	1,385	75%	242	58	721	33.56%	33.56%
2037	5,502	4,267	1,235	78%	247	59	738	33.40%	33.40%
2038	5,510	4,439	1,071	81%	251	60	755	33.26%	33.26%
2039	5,519	4,627	892	84%	256	62	773	33.13%	33.13%
2040	5,528	4,831	697	87%	261	63	791	33.02%	33.02%
2041	5,540	5,056	484	91%	267	65	809	32.94%	32.94%
2042	5,555	5,301	254	95%	272	66	828	32.89%	32.89%
2043	5,573	5,573	0	100%	12	68	848	1.41%	1.41%
2044	5,595	5,595	0	100%	12	69	867	1.40%	1.40%
2045	5,619	5,619	0	100%	12	71	887	1.40%	1.40%
2046	5,646	5,646	0	100%	13	73	907	1.40%	1.40%
2047	5,674	5,674	0	100%	13	74	927	1.40%	1.40%
2048	5,704	5,704	0	100%	13	76	948	1.40%	1.40%
2049	5,736	5,736	0	100%	14	78	970	1.40%	1.40%
2050	5,769	5,769	0	100%	14	79	992	1.40%	1.40%
2051	5,803	5,803	0	100%	14	81	1,014	1.40%	1.40%

Notes and assumptions:

The projection is based on the results of the June 30, 2017 actuarial valuation and assumes constant active membership count in all future years.

The employer actuarially determined contribution rate for a particular year is determined by the prior year's actuarial valuation.

Kentucky Retirement Systems
Exhibit 2-4
CERS Hazardous Insurance Fund
Current Plan
(\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution Rate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2017	\$ 1,788	\$ 1,197	\$ 591	67%	\$ 51	\$ 2	\$ 541	9.35%	9.35%
2018	1,853	1,243	610	67%	65	2	536	12.17%	12.17%
2019	1,912	1,290	622	67%	64	3	538	11.97%	11.97%
2020	1,962	1,343	619	68%	64	3	541	11.83%	11.83%
2021	2,005	1,405	600	70%	63	3	546	11.52%	11.52%
2022	2,038	1,446	592	71%	61	4	551	11.00%	11.00%
2023	2,061	1,478	583	72%	59	4	558	10.66%	10.66%
2024	2,075	1,501	574	72%	59	4	565	10.37%	10.37%
2025	2,081	1,517	564	73%	58	5	573	10.12%	10.12%
2026	2,078	1,526	552	73%	58	5	582	9.89%	9.89%
2027	2,068	1,528	540	74%	57	5	591	9.71%	9.71%
2028	2,052	1,527	525	74%	58	5	602	9.57%	9.57%
2029	2,031	1,522	509	75%	58	6	614	9.43%	9.43%
2030	2,008	1,517	491	76%	59	6	627	9.33%	9.33%
2031	1,982	1,511	471	76%	59	6	641	9.24%	9.24%
2032	1,954	1,506	448	77%	60	6	656	9.16%	9.16%
2033	1,927	1,503	424	78%	61	7	672	9.09%	9.09%
2034	1,899	1,502	397	79%	62	7	688	9.03%	9.03%
2035	1,873	1,506	367	80%	63	7	704	8.98%	8.98%
2036	1,849	1,515	334	82%	64	7	721	8.93%	8.93%
2037	1,828	1,530	298	84%	66	7	738	8.89%	8.89%
2038	1,811	1,552	259	86%	67	8	755	8.85%	8.85%
2039	1,796	1,580	216	88%	68	8	772	8.82%	8.82%
2040	1,785	1,617	168	91%	69	8	790	8.79%	8.79%
2041	1,779	1,661	118	93%	71	8	809	8.77%	8.77%
2042	1,776	1,714	62	97%	72	8	828	8.75%	8.75%
2043	1,777	1,777	0	100%	10	8	847	1.13%	1.13%
2044	1,782	1,782	0	100%	10	9	866	1.11%	1.11%
2045	1,789	1,789	0	100%	10	9	886	1.10%	1.10%
2046	1,799	1,799	0	100%	10	9	906	1.08%	1.08%
2047	1,811	1,811	0	100%	10	9	926	1.07%	1.07%
2048	1,823	1,823	0	100%	10	9	947	1.06%	1.06%
2049	1,836	1,836	0	100%	10	10	969	1.04%	1.04%
2050	1,847	1,847	0	100%	10	10	991	1.03%	1.03%
2051	1,859	1,859	0	100%	10	10	1,013	1.01%	1.01%

Notes and assumptions:

The projection is based on the results of the June 30, 2017 actuarial valuation and assumes constant active membership count in all future years.
The employer actuarially determined contribution rate for a particular year is determined by the prior year's actuarial valuation.

Section 3.
Projected Cost of the Retirement and Insurance
Proposed Legislation

Kentucky Retirement Systems
Exhibit 3-1
CERS Non-Hazardous Retirement Fund
Proposed Plan
(\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution Rate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2017	\$ 12,804	\$ 6,765	\$ 6,039	53%	\$ 355	\$ 123	\$ 2,452	14.48%	14.48%
2018	13,121	6,902	6,219	53%	391	125	2,500	15.62%	21.84%
2019	13,421	6,962	6,459	52%	429	127	2,547	16.85%	21.93%
2020	13,704	7,119	6,585	52%	471	130	2,594	18.17%	22.30%
2021	13,970	7,404	6,566	53%	528	132	2,642	19.97%	22.39%
2022	14,218	7,656	6,562	54%	595	135	2,690	22.10%	22.10%
2023	14,445	7,962	6,483	55%	599	137	2,740	21.87%	21.87%
2024	14,652	8,260	6,392	56%	604	140	2,790	21.66%	21.66%
2025	14,836	8,552	6,284	58%	610	142	2,842	21.46%	21.46%
2026	14,998	8,837	6,161	59%	615	145	2,894	21.26%	21.26%
2027	15,136	9,115	6,021	60%	622	147	2,948	21.09%	21.09%
2028	15,259	9,398	5,861	62%	628	150	3,003	20.91%	20.91%
2029	15,359	9,677	5,682	63%	635	153	3,062	20.75%	20.75%
2030	15,438	9,957	5,481	64%	643	156	3,124	20.58%	20.58%
2031	15,496	10,239	5,257	66%	651	159	3,187	20.42%	20.42%
2032	15,536	10,528	5,008	68%	660	163	3,254	20.27%	20.27%
2033	15,558	10,826	4,732	70%	669	166	3,323	20.13%	20.13%
2034	15,565	11,137	4,428	72%	678	170	3,394	19.98%	19.98%
2035	15,556	11,464	4,092	74%	688	173	3,467	19.85%	19.85%
2036	15,535	11,811	3,724	76%	699	177	3,545	19.72%	19.72%
2037	15,507	12,186	3,321	79%	711	181	3,628	19.60%	19.60%
2038	15,478	12,598	2,880	81%	723	186	3,714	19.47%	19.47%
2039	15,451	13,052	2,399	84%	737	190	3,803	19.37%	19.37%
2040	15,428	13,555	1,873	88%	750	195	3,895	19.25%	19.25%
2041	15,413	14,111	1,302	92%	763	199	3,988	19.14%	19.14%
2042	15,406	14,725	681	96%	779	204	4,083	19.07%	19.07%
2043	15,409	15,409	0	100%	78	209	4,179	1.87%	1.87%
2044	15,423	15,423	0	100%	79	214	4,277	1.85%	1.85%
2045	15,449	15,449	0	100%	80	219	4,377	1.83%	1.83%
2046	15,488	15,488	0	100%	82	224	4,478	1.82%	1.82%
2047	15,540	15,540	0	100%	83	229	4,581	1.81%	1.81%
2048	15,606	15,606	0	100%	84	234	4,686	1.80%	1.80%
2049	15,687	15,687	0	100%	86	240	4,792	1.79%	1.79%
2050	15,783	15,783	0	100%	88	245	4,901	1.79%	1.79%
2051	15,895	15,895	0	100%	89	251	5,012	1.78%	1.78%

Notes and assumptions:

The projection is based on the results of the June 30, 2017 actuarial valuation and assumes constant active membership count in all future years.

The employer actuarially determined contribution rate for a particular year is determined by the prior year's actuarial valuation.

Kentucky Retirement Systems
Exhibit 3-2
CERS Non-Hazardous Insurance Fund
Proposed Plan
(\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution Rate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2017	\$ 3,355	\$ 2,227	\$ 1,128	66%	\$ 114	\$ 10	\$ 2,429	4.70%	4.70%
2018	3,514	2,343	1,171	67%	126	11	2,477	5.07%	6.21%
2019	3,667	2,446	1,221	67%	138	13	2,524	5.47%	6.14%
2020	3,813	2,577	1,236	68%	152	14	2,572	5.90%	6.11%
2021	3,951	2,746	1,205	70%	157	15	2,619	5.98%	5.98%
2022	4,081	2,891	1,190	71%	153	17	2,668	5.75%	5.75%
2023	4,202	3,027	1,175	72%	153	18	2,718	5.62%	5.62%
2024	4,315	3,157	1,158	73%	152	19	2,768	5.49%	5.49%
2025	4,419	3,281	1,138	74%	151	20	2,820	5.35%	5.35%
2026	4,514	3,399	1,115	75%	150	22	2,873	5.22%	5.22%
2027	4,600	3,511	1,089	76%	149	23	2,926	5.10%	5.10%
2028	4,676	3,618	1,058	77%	148	24	2,982	4.97%	4.97%
2029	4,745	3,719	1,026	78%	148	26	3,040	4.86%	4.86%
2030	4,807	3,818	989	79%	147	27	3,102	4.73%	4.73%
2031	4,862	3,913	949	80%	147	28	3,166	4.64%	4.64%
2032	4,912	4,008	904	82%	147	29	3,232	4.56%	4.56%
2033	4,958	4,104	854	83%	148	31	3,301	4.49%	4.49%
2034	5,002	4,202	800	84%	149	32	3,372	4.42%	4.42%
2035	5,045	4,305	740	85%	150	33	3,445	4.36%	4.36%
2036	5,089	4,414	675	87%	152	34	3,522	4.31%	4.31%
2037	5,135	4,531	604	88%	155	35	3,605	4.29%	4.29%
2038	5,184	4,659	525	90%	157	36	3,691	4.24%	4.24%
2039	5,235	4,796	439	92%	160	37	3,780	4.22%	4.22%
2040	5,289	4,945	344	93%	162	38	3,872	4.19%	4.19%
2041	5,347	5,106	241	95%	166	39	3,965	4.18%	4.18%
2042	5,409	5,281	128	98%	170	40	4,059	4.20%	4.20%
2043	5,475	5,475	0	100%	41	41	4,156	0.98%	0.98%
2044	5,545	5,545	0	100%	41	42	4,253	0.97%	0.97%
2045	5,619	5,619	0	100%	42	43	4,352	0.97%	0.97%
2046	5,696	5,696	0	100%	42	44	4,453	0.95%	0.95%
2047	5,775	5,775	0	100%	43	46	4,555	0.94%	0.94%
2048	5,855	5,855	0	100%	43	47	4,660	0.92%	0.92%
2049	5,937	5,937	0	100%	43	48	4,766	0.91%	0.91%
2050	6,019	6,019	0	100%	43	49	4,874	0.89%	0.89%
2051	6,102	6,102	0	100%	44	50	4,985	0.88%	0.88%

Notes and assumptions:

The projection is based on the results of the June 30, 2017 actuarial valuation and assumes constant active membership count in all future years.

The employer actuarially determined contribution rate for a particular year is determined by the prior year's actuarial valuation.

Kentucky Retirement Systems
Exhibit 3-3
CERS Hazardous Retirement Fund
Proposed Plan
(\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution Rate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2017	\$ 4,649	\$ 2,238	\$ 2,411	48%	\$ 120	\$ 43	\$ 542	22.20%	22.20%
2018	4,771	2,293	2,478	48%	128	43	537	23.94%	35.69%
2019	4,880	2,311	2,569	47%	139	43	538	25.82%	36.76%
2020	4,978	2,353	2,625	47%	151	43	542	27.85%	38.00%
2021	5,066	2,429	2,637	48%	169	44	546	30.90%	38.78%
2022	5,145	2,489	2,656	48%	192	44	551	34.77%	38.96%
2023	5,214	2,564	2,650	49%	219	45	558	39.18%	39.18%
2024	5,274	2,660	2,614	50%	221	45	565	39.05%	39.05%
2025	5,325	2,754	2,571	52%	223	46	573	38.93%	38.93%
2026	5,367	2,846	2,521	53%	226	47	582	38.78%	38.78%
2027	5,400	2,935	2,465	54%	229	47	592	38.62%	38.62%
2028	5,426	3,026	2,400	56%	232	48	602	38.46%	38.46%
2029	5,444	3,117	2,327	57%	235	49	614	38.28%	38.28%
2030	5,457	3,211	2,246	59%	239	50	628	38.08%	38.08%
2031	5,466	3,312	2,154	61%	243	51	642	37.86%	37.86%
2032	5,472	3,420	2,052	63%	247	53	657	37.65%	37.65%
2033	5,478	3,539	1,939	65%	252	54	672	37.43%	37.43%
2034	5,483	3,669	1,814	67%	256	55	688	37.21%	37.21%
2035	5,489	3,812	1,677	69%	261	56	705	37.00%	37.00%
2036	5,495	3,969	1,526	72%	266	58	721	36.82%	36.82%
2037	5,502	4,142	1,360	75%	270	59	738	36.64%	36.64%
2038	5,510	4,330	1,180	79%	276	60	755	36.49%	36.49%
2039	5,519	4,536	983	82%	281	62	773	36.35%	36.35%
2040	5,528	4,761	767	86%	286	63	791	36.22%	36.22%
2041	5,540	5,007	533	90%	292	65	809	36.12%	36.12%
2042	5,555	5,276	279	95%	299	66	828	36.05%	36.05%
2043	5,573	5,573	0	100%	12	68	848	1.41%	1.41%
2044	5,595	5,595	0	100%	12	69	867	1.40%	1.40%
2045	5,619	5,619	0	100%	12	71	887	1.40%	1.40%
2046	5,646	5,646	0	100%	13	73	907	1.40%	1.40%
2047	5,674	5,674	0	100%	13	74	927	1.40%	1.40%
2048	5,704	5,704	0	100%	13	76	948	1.40%	1.40%
2049	5,736	5,736	0	100%	14	78	970	1.40%	1.40%
2050	5,769	5,769	0	100%	14	79	992	1.40%	1.40%
2051	5,803	5,803	0	100%	14	81	1,014	1.40%	1.40%

Notes and assumptions:

The projection is based on the results of the June 30, 2017 actuarial valuation and assumes constant active membership count in all future years.

The employer actuarially determined contribution rate for a particular year is determined by the prior year's actuarial valuation.

Kentucky Retirement Systems
Exhibit 3-4
CERS Hazardous Insurance Fund
Proposed Plan
(\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution Rate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2017	\$ 1,788	\$ 1,197	\$ 591	67%	\$ 51	\$ 2	\$ 541	9.35%	9.35%
2018	1,853	1,243	610	67%	54	2	536	10.08%	12.17%
2019	1,912	1,279	633	67%	58	3	538	10.87%	12.11%
2020	1,962	1,325	637	68%	63	3	541	11.72%	12.06%
2021	2,005	1,385	620	69%	64	3	546	11.77%	11.77%
2022	2,038	1,426	612	70%	62	4	551	11.25%	11.25%
2023	2,061	1,458	603	71%	61	4	558	10.92%	10.92%
2024	2,075	1,481	594	71%	60	4	565	10.63%	10.63%
2025	2,081	1,497	584	72%	59	5	573	10.38%	10.38%
2026	2,078	1,507	571	73%	59	5	582	10.16%	10.16%
2027	2,068	1,510	558	73%	59	5	591	9.98%	9.98%
2028	2,052	1,509	543	74%	59	5	602	9.84%	9.84%
2029	2,031	1,505	526	74%	60	6	614	9.70%	9.70%
2030	2,008	1,500	508	75%	60	6	627	9.60%	9.60%
2031	1,982	1,495	487	75%	61	6	641	9.51%	9.51%
2032	1,954	1,490	464	76%	62	6	656	9.43%	9.43%
2033	1,927	1,488	439	77%	63	7	672	9.36%	9.36%
2034	1,899	1,489	410	78%	64	7	688	9.30%	9.30%
2035	1,873	1,493	380	80%	65	7	704	9.24%	9.24%
2036	1,849	1,503	346	81%	66	7	721	9.19%	9.19%
2037	1,828	1,520	308	83%	67	7	738	9.15%	9.15%
2038	1,811	1,543	268	85%	69	8	755	9.11%	9.11%
2039	1,796	1,573	223	88%	70	8	772	9.08%	9.08%
2040	1,785	1,611	174	90%	72	8	790	9.05%	9.05%
2041	1,779	1,657	122	93%	73	8	809	9.03%	9.03%
2042	1,776	1,712	64	96%	75	8	828	9.01%	9.01%
2043	1,777	1,777	0	100%	10	8	847	1.13%	1.13%
2044	1,782	1,782	0	100%	10	9	866	1.11%	1.11%
2045	1,789	1,789	0	100%	10	9	886	1.10%	1.10%
2046	1,799	1,799	0	100%	10	9	906	1.08%	1.08%
2047	1,811	1,811	0	100%	10	9	926	1.07%	1.07%
2048	1,823	1,823	0	100%	10	9	947	1.06%	1.06%
2049	1,836	1,836	0	100%	10	10	969	1.04%	1.04%
2050	1,847	1,847	0	100%	10	10	991	1.03%	1.03%
2051	1,859	1,859	0	100%	10	10	1,013	1.01%	1.01%

Notes and assumptions:

The projection is based on the results of the June 30, 2017 actuarial valuation and assumes constant active membership count in all future years.

The employer actuarially determined contribution rate for a particular year is determined by the prior year's actuarial valuation.