



KENTUCKY RETIREMENT SYSTEMS

David L. Eager, Executive Director

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January 14, 2021

Ms. Katie Carney
Office of Fiscal Statement Review
Legislative Research Commission
Capitol Annex, Room 104
Frankfort, KY 40601

RE: House Bill 121 (2021 RS BR 279)
AA Statement Required by KRS 6.350
AA Statement 1 of 3

Dear Ms. Carney:

House Bill 121 (2021 RS BR 279) creates a new section of KRS Chapter 21.345 to 21.580 to close the Legislators' Retirement Plan (LRP) and Judicial Retirement Plan (JRP) to new members effective July 1, 2021, and provides that new legislators and judges shall participate in the Kentucky Employees Retirement System (KERS) for the duration of their legislative or judicial service; clarifies that legislators who are also teachers contributing to the Teachers' Retirement System (TRS) may continue to participate in TRS while serving as a member of the General Assembly; provides that LRP and JRP members who entered the plans on or after 1/1/2014 and who are participating in the cash balance plan shall have their account balance transferred to the KERS hybrid cash balance plan and shall prospectively participate in KERS for the duration of their legislative or judicial service; repeals, reenacts, and amends KRS 6.505, 21.360, and 21.480 to provide that legislative changes that are enacted on or after July 1, 2021, for LRP and JRP shall not be part of the "inviolable contract" and to make conforming amendments; repeals, reenacts, and amends KRS 6.520 to provide that the LRP benefit factor for the traditional defined benefit plan shall be lowered from 2.75% to 1.97% for service accrued on or after July 1, 2021; repeals, reenacts, and amends KRS 6.525 to provide that non-legislative compensation earned in another state-administered retirement system or plan on or after July 1, 2021, shall not be used to calculate benefits in the Legislators' Retirement Plan; amends KRS 21.525 to provide that the Judicial Form Retirement System shall not request nor receive any funding for the Legislators' Retirement Plan (LRP), except for administrative expenses, until such time the LRP plan has an actuarial funding level equal to or less than the KERS nonhazardous pension fund; amends KRS 61.510 to provide that for any service to the General Assembly that is credited to the Kentucky Employees Retirement System, no compensation earned for other covered public employment shall be used to determine the portion of their benefit related to their service to the General Assembly; amends KRS 6.500 and repeals, reenacts, and amends KRS 21.402 and 61.680 to conform and to restore/remove language due to a recent court ruling.

Kentucky Retirement Systems staff members have examined House Bill 121 (2021 RS BR 279). Our analysis only pertains to KERS. We have determined that the bill will not increase or decrease benefits in the KERS Nonhazardous system. The bill would increase the participation in benefits in KERS to the extent that legislators, judges, and justices beginning service effective July 1, 2021 would join the

system: the number of future legislators, judges, and justices who join KERS is not known at this time, but it is not expected to be actuarially significant.

In accordance with KRS 6.350 (2)(c), Kentucky Retirement Systems certifies the following:

1. The estimated number of individuals affected as of June 30, 2020 are 31,190 active; 48,583 inactive; and 43,592 retired members in the Kentucky Employees Retirement System;
2. There is no estimated change in benefit payments;
3. There is no estimated change to employer costs; and
4. There is no estimated change to administrative expenses.

We have not requested any further actuarial analysis of House Bill 121 (2021 RS BR 279) by the Systems' independent actuary.

Please let me know if you have any questions regarding our analysis of House Bill 121 (2021 RS BR 279).

Sincerely,



David L. Eager
Executive Director
Kentucky Retirement Systems

Actuarial Analysis Summary – 2021 HB 121/BR 279

AA Statement 2 and 3 of 3

BR or Bill Ref.	<u>2021 HB 121</u>	Actuarial Analysis Conducted For:
Date:	<u>1/22/2021</u>	<input type="checkbox"/> KERS NH <input type="checkbox"/> KERS Haz <input type="checkbox"/> SPRS <input type="checkbox"/> TRS
Actuary:	<u>Findley, A Division of USI</u>	<input type="checkbox"/> CERS NH <input type="checkbox"/> CERS Haz <input checked="" type="checkbox"/> LRP <input checked="" type="checkbox"/> JRP

Section I: Executive Summary

In the opinion of the actuary, this bill would make the affected state-administered retirement system(s) actuarially:

MORE SOUND **LESS SOUND** **NO IMPACT**

If actuarially **MORE SOUND OR LESS SOUND**, please summarize the factors leading to the actuary's opinion:

The bill contains provisions that make the plan both more and less actuarially sound.

The provisions that reduce the plan liabilities (reducing the LRP benefit multiplier and stopping the inclusion of non-legislative compensation) and transferring out hybrid liabilities make the plans more actuarially sound.

However, eliminating contributions to LRP until the plan has an actuarial funded level equal to or lower than the KERS nonhazardous pension fund makes the plan less actuarially sound. Even though the forecast is showing healthy funded percentages, keep in mind that this is based on assumptions that are applied consistently throughout the projection period. Shocks in actual experience could quickly change the funded position and therefore require cash contributions or else risk a compounding/growing unfunded liability. For example, when there is another large drop in the market, the funded position could decrease rapidly and, if cash contributions are not made, this could lead to even larger future contributions. Maintaining actuarial soundness would require making actuarial required contributions as they are developed to insure benefits are being funded as they are being accrued and to prevent the possibility of uncontrolled growth in any unfunded liability.

Does this bill increase or decrease employer costs? **INCREASE** **DECREASE** **NO IMPACT**

Does this bill increase or decrease benefits? **INCREASE** **DECREASE** **NO IMPACT**

Does this bill increase or decrease benefit participation? **INCREASE** **DECREASE** **NO IMPACT**

If the bill impacts employer costs, benefits, or benefit participation, please explain and estimate the impact in Sections II and VI.

Section II: Financial Projections

	Combined Pension and Retiree Health Plan			
	JRP		LRP	
	Current	Proposed	Current	Proposed
Projected Employer Cost*				
30-Yr Nominal \$	\$ 94,300,000	\$ 46,360,000	\$ 12,400,000	\$ -
30-Yr Net Present Value \$	\$ 54,490,000	\$ 30,970,000	\$ 6,650,000	\$ -
Proj. Normal Cost for New Hire	3.33% of pay	n/a	4.48% of pay	n/a

*Projected costs are for all employers and all fund sources for entire 30 year period. Proj. normal cost is the normal cost for new hires after taking into account employee contributions.

	Pension Plan			
	JRP		LRP	
	Current	Proposed	Current	Proposed
Projected UAL (\$)				
Baseline (Year 1)	\$ 28,830,000	\$ 28,970,000	\$ (4,730,000)	\$ (11,890,000)
5 Years	\$ 12,300,000	\$ 12,220,000	\$ (8,140,000)	\$ (17,180,000)
10 Years	\$ 9,550,000	\$ 9,490,000	\$ (10,820,000)	\$ (23,330,000)
20 Years	\$ 6,020,000	\$ 6,540,000	\$ (20,060,000)	\$ (43,620,000)
30 Years	\$ 3,220,000	\$ 4,950,000	\$ (37,780,000)	\$ (81,930,000)
Projected Funding Ratio (%)				
Baseline (Year 1)	92%	92%	107%	119%
5 Years	96%	96%	113%	132%
10 Years	97%	97%	120%	154%
20 Years	97%	96%	156%	289%
30 Years	98%	92%	247%	957%

	Retiree Health Plan			
	JRP		LRP	
	Current	Proposed	Current	Proposed
Projected UAL (\$)				
Baseline (Year 1)	\$ (50,820,000)	\$ (50,750,000)	\$ (33,170,000)	\$ (33,270,000)
5 Years	\$ (66,420,000)	\$ (66,210,000)	\$ (43,710,000)	\$ (43,900,000)
10 Years	\$ (89,520,000)	\$ (89,030,000)	\$ (59,580,000)	\$ (59,800,000)
20 Years	\$(167,770,000)	\$(166,080,000)	\$(111,650,000)	\$(111,850,000)
30 Years	\$(316,560,000)	\$(311,590,000)	\$(209,800,000)	\$(209,890,000)
Projected Funding Ratio (%)				
Baseline (Year 1)	202%	203%	265%	268%
5 Years	225%	227%	312%	325%
10 Years	267%	275%	386%	427%
20 Years	461%	533%	637%	929%
30 Years	977%	1521%	1108%	2876%

* if necessary or plan administers more than one plan/system.

Section III: Brief Summary of Bill

It is our understanding that 2021 HB 121 makes the following changes to LRP and JRP:

1. LRP and JRP shall be closed to new members effective July 1, 2021. New legislators and judges shall participate in the Kentucky Employees Retirement System (KERS).
2. Members who entered LRP and JRP on or after January 1, 2014 (members who are participating in the Hybrid Tier) shall have their account balance transferred to the KERS hybrid cash balance plan and shall prospectively participate in KERS.
3. Legislative changes that become effective on or after July 1, 2021 shall not be part of the “inviolable contract”.
4. For participants who entered LRP after July 1, 1982 but prior to January 1, 2014, the benefit multiplier for service accrued on or after July 1, 2021 shall be lowered from 2.75% to 1.97%.
5. Only non-legislative salary earned prior to July 1, 2021 will be recognized in determining final compensation for inclusion in the benefit formula for an LRP member who elected to participate in LRP on or after June 20, 2005 and before January 1, 2014.
6. The Judicial Form Retirement System shall not request nor receive any funding for LRP, except for administrative expenses, until such time that LRP has an actuarial funded ratio equal to or less than the KERS nonhazardous pension fund.

Section IV: Statement of Assumptions and Methods

Did the analysis rely solely upon the same assumptions & methods previously established and utilized by the actuary in the retirement system’s most recent actuarial valuation?

YES NO

If NO, please describe each new assumption or method utilized, the basis for selecting the revised assumption or method, and whether each new assumption or method increased or decreased projected employer costs:

Aside from the following, this analysis relied solely upon the same assumptions & methods previously established and utilizes in the most recent actuarial valuation.

1. Current valuation assumptions for LRP apply a 40% loading factor to capture the potential impact of non-legislative pay. This factor is applied to active liability, active normal cost, and terminated vested liability. Effective July 1, 2021, HB 121 would remove the need for this loading factor. Terminated members with non-legislative pay will need to have their benefits adjusted to reflect non-legislative pay earned through July 1, 2021, if applicable. However, we do not currently have information as to current terminated members who might require an adjustment, and for purposes of our study we have assumed there is no one to which this applies or if it does apply the aggregate impact would be minimal. It is assumed future non-legislative pay for active members will have no material impact (since it would have to be earned prior to July 1, 2021).

Section V: Comment from Actuary

Adopting the changes put forth under 2021 HB 121 will:

1. Close LRP and JRP to new entrants and move all current LRP and JRP Hybrid Tier participants to KERS. Based upon this, LRP and JRP will have no future liability for the Hybrid Tier. Because the LRP and JRP Hybrid Tier pension and OPEB plans are not fully funded as of July 1, 2020, KERS would presumably be responsible for any unfunded liability at the time of transfer. Future liabilities for the current Hybrid plan populations will accrue under the KERS Hybrid plan. To understand an apples to apples comparison of the legislation, we recommend that KERS actuaries analyze the impact to the KERS Hybrid plan of adding this population of employees.
2. Reduce the pension Accrued Liability for LRP by approximately \$7.0M as of July 1, 2021 and increase the projected pension funded ratio at the end of the 30 year forecast from 398% to 957%.
3. Reduce future pension benefit accruals under LRP.
4. Eliminate future LRP employer contributions. Because the LRP traditional pension plan only had minimal projected contributions, this change does not have a large effect on the results. The funded ratio would decrease slightly in future years based upon eliminating these contributions; however, the reduction in liability from only recognizing non-legislative pay prior to July 1, 2021, as well as the reduction in future benefit accruals due to the drop in benefit rate, has a much greater effect on the projected funded ratio.
5. The LRP traditional OPEB plan is not projected to require future contributions before considering 2021 HB 121. Therefore, this bill has no projected effect on this plan.
6. It is our understanding that assets designated for the each pension benefit plan cannot be used to pay for OPEB benefits and vice versa. Therefore, the combined pension/OPEB funded percentages shown can be a little misleading and greater detail is shown in the attached tables.

Section VI: Detailed Actuarial Analysis and Projections *(May be attached as Appendix)*

Attached as an Appendix in a file named "Section VI - Detailed Actuarial Analysis and Projections.pdf"

MEMORANDUM REPORT

ACTUARY: Findley, A Division of USI
DATE: January 22, 2021
RE: Actuarial Analysis of 2021 HB 121

Additional Comments

- 1) It is assumed that all members in the Traditional Defined Benefit plan of LRP and JRP will remain in that plan. Members in the LRP and JRP Hybrid Tier will move to the KERS hybrid cash balance plan and will be due no further benefit from LRP and JRP. New legislators and judges will participate in the KERS hybrid cash balance plan and will not receive any benefit from LRP and JRP.
- 2) This change only affects the benefit multiplier in the Traditional Defined Benefit plan of LRP for service after July 1, 2021 and has no effect on benefits accrued prior to that date.
- 3) Benefit amounts for retirees that have had benefits increased due to non-legislative pay will not be impacted by this change.
- 4) Because both the LRP Traditional Defined Benefit plan and the Traditional OPEB plan are both projected to be over 100% funded for the projected 30 year period, no further contributions are assumed to be made in either of these plans, as they are expected to maintain a higher funded ratio than the KERS nonhazardous pension fund.
- 5) We have not included contributions for expenses in our projections, nor have we included expenses as being paid out of the assets. Our assumption was that expenses would be paid as they arise and would, therefore, have no effect on the funded status of the plan. The contribution amounts shown in the projections reflect the amount actuarially determined to fund current and future benefits, to the extent specified by the proposed legislation (i.e. no contributions in LRP in the proposed results).

Additional Assumption Notes

Future results will vary from projections to the extent future experience varies from the assumptions used in the projections. The longer the period of the forecast, the more variation is likely to occur and the less likely future results will match projections.

1. Except as mentioned herein, all data, assets and assumptions are consistent with the assumptions and methods used for the July 1, 2019 valuation report.
2. Future experience assumptions are consistent with the July 1, 2019 valuation assumptions.
3. The LRP and JRP Traditional Defined Benefit plans are closed to new entrants.
4. Since the changes under 2021 HB 121 are effective July 1, 2021, the first year impacted by a valuation recognizing the changes is July 1, 2021.
5. It is assumed that 100% of the recommended contribution will be made for each year in the current columns of the forecast. In the proposed columns for LRP, no future contributions are assumed to be made.
6. In accordance with KRS 21.405, this study does not recognize cost of living increases effective after the most recent valuation date.

7. Certain changes under 2021 HB 121, may or may not be allowed under state law. Whether or not all changes under 2021 HB 121 are permissible is a legal issue, and we provide no opinion in this regard. For purposes of the attached projections, we have assumed such changes are allowable.
8. This report provides actuarial advice and does not constitute legal advice.
9. Based on the recent experience study we completed, certain assumption changes were adopted to go in effect starting with the July 1, 2021 valuation. These assumption changes were not reflected in these projections and the results would be different, to some degree, based on these changes.

Additional Comments on Actuarially Soundness

A plan that has adopted a reasonable funding method, uses reasonable assumptions and contributes at a rate at or above the recommended contribution rate (based on these reasonable methods and assumptions), could be considered to be actuarially sound. Whether or not the changes reflected in this study are or are not adopted, will not necessarily impact the “actuarial soundness” of LRP and JRP.

In order to ensure LRP and JRP is funded in an “actuarially sound manner”, we would recommend:

1. Revise the actuarial funding method to amortize all past unfunded as well as new liabilities over a period not more than 30 years (in accordance with currently applicable Governmental Accounting Standards 67 and 68) and amortize future gains and losses over a period not more than 15 years.
2. Contributing at least the minimum recommended contribution each year.

Deviations from these recommendations could result in an “actuarially unsound” approach to funding LRP and JRP and may eventually result in LRP and JRP becoming insolvent – that is, exhausting assets at which time all future benefits would be made on a pay as you go basis.

Although the Actuarial Standards of Practice 4 “Measuring Pension Obligations” allows for plan liabilities to be calculated under a legally prescribed method, the statement goes on to say,

“If, in the actuary’s professional judgment, such an actuarial cost method or amortization method is significantly inconsistent with the plan accumulating adequate assets to make benefit payments when due, assuming that all actuarial assumptions will be realized and that the plan sponsor or other contributing entity will make contributions when due, the actuary should disclose this.”

It is our professional actuarial opinion that the current legally prescribed method which requires contributions of normal cost plus interest on the unfunded liability plus 1% of the unfunded liability (per KRS 21.525 as currently written) is inconsistent with the plan accumulating adequate assets to make benefit payments when due, assuming all actuarial assumptions are realized.

ASOP 51 Risk

Risk Factor	Initial Risk Assessment Language
Investment	Due to the plan's substantial equity exposure, investment returns will likely be much more volatile than the measurements of plan liabilities. Therefore, there is a risk that the funded status of the plan, as well as required plan contributions, could be volatile.
Assumed Rate of Return	Due to the plan's estimated duration of 8 to 11 for the Traditional tier plans and 12 to 18 for the Hybrid tier plans, a 1% decrease in the assumed rate of investment return would increase the measurement of the liability by 8% to 11% for the Traditional tier plans and 12% to 18% for the Hybrid tier plans.
Longevity	<p>For the Traditional tier plans, since nearly all benefits are paid as annuities, the plan is sensitive to changes in overall population longevity. As a result, the liabilities will fluctuate with changes in longevity. The ratio of retired life liability to total liability is 67-68%, suggesting there is less sensitivity to long-term changes in overall mortality improvement than a less mature plan.</p> <p>For the Hybrid tier plans, since nearly all benefits are expected to be paid as lump sums, there is little exposure to longevity risk. If a higher percentage of participants elect to receive an annuity than expected, the exposure to this risk would be higher.</p>
Other demographic factors	For the Traditional tier plans only, due to the eligibility for unreduced and subsidized retirement benefits, employees continuing in service for longer than expected will accrue additional benefits which may or may not result in larger liabilities. Conversely, employees retiring sooner than anticipated will accrue smaller benefits which may or may not result in smaller liabilities.
Lump sums	For the Hybrid tier plans only, since lump sum benefits are equal to the cash balance account value, lump sum payments have a comparable effect on both assets and liabilities.
Inflation	Inflation is a component of future interest rates and investment returns over a long period. As a result, changes to inflation can affect funded percentages.
Non-Legislative Salaries	For the Legislators Traditional Defined Benefit plan only, pension benefits can be increased by future non-legislative salaries and the liability for active and deferred vested participants has been increased by 40% to reflect his possibility. The effect of non-legislative salaries may have a larger or smaller impact than is reflected by the 40% load factor. Additionally, future legislation may eliminate or reduce the effect of this provision.
Other Factors	Due to recent and ongoing attempts to pass pension reform legislation at a state level, the plan could be modified in the future. Future legislation may affect benefit levels or future contribution levels and could result in increases or decreases in the plan liabilities or funding status.

Findley can perform more detailed assessments of these risks as desired by the plan sponsor to provide a better understanding of the risks.

Definition

Accrued Liability – based on the methods and assumptions used, the amount of assets that would be needed to satisfy future projected benefit payments based on service as of the valuation date.

Normal Cost – cost of benefits earned in the year following the valuation for current active members

Actuarial Asset Value – A smoothed asset value which smoothes in asset gains and losses over a 5 year period (for purposes of this study). For projection years 5 or more years in the future, the actuarial and market value would be the same (assuming assets earn the 6.5% rate of return for Traditional tier plans or 4.0% for Hybrid tier plans, which is assumed). As the Plan has experienced consistent gains over the past few years, the current Actuarial Asset Value is smaller than the market value since all prior gains have not yet been recognized.

Current – projections reflecting current rules and regulations, without regard to 2021 HB 121

Proposed – projections reflecting 2021 HB 121

Professional Qualifications

This report has been prepared under the supervision of Matthew Widick. Matthew is a member of the American Academy of Actuaries, a Fellow of the Society of Actuaries, and a consulting actuary with Findley, A Division of USI, who has met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions herein. To the best of my knowledge this report has been prepared in accordance with generally accepted actuarial standards, including the overall appropriateness of the analysis, assumptions, and results and conforms to appropriate Standards of Practice as promulgated from time to time by the Actuarial Standards Board, which standards form the basis for the actuarial report. I am not aware of any direct or material indirect financial interest or relationship, including investment management or other services that could create, or appear to create, a conflict of interest that would impair the objectivity of this work.



January 22, 2021

Matthew S. Widick
Associate, Society of Actuaries
Enrollment No. 20-08159
Phone 615.665.5407

Date

Kentucky Legislators Retirement Plan
Cost Projections - HB 121
Prepared by Findley, A Division of USI
January 22, 2021
Pension Plan Only (pre-2014 Legacy only)

Contribution (\$M)	Contribution (%)		Accrued Liability (\$M)		Unfunded Liability (\$M)		(Assets/Liabilities)		Funded Ratio	
	Proposed	Current	Proposed	Current	Current	Proposed	Current	Proposed	Year Beginning July 1	Current
2020	\$ 0.29	\$ 0.00	25.7%	0.0%	\$ 70.04	\$ 70.04	\$ (2.48)	\$ (2.48)	104%	104%
2021	\$ 0.31	\$ 0.00	33.8%	0.0%	\$ 68.29	\$ 61.33	\$ (4.78)	\$ (11.89)	107%	119%
2022	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 66.41	\$ 59.41	\$ (6.46)	\$ (13.77)	110%	123%
2023	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 64.47	\$ 57.44	\$ (7.52)	\$ (15.35)	112%	127%
2024	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 62.49	\$ 55.44	\$ (7.79)	\$ (16.19)	112%	129%
2025	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 60.46	\$ 53.40	\$ (8.18)	\$ (17.18)	114%	132%
2026	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 58.39	\$ 51.34	\$ (8.62)	\$ (18.25)	115%	136%
2027	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 56.29	\$ 49.26	\$ (9.10)	\$ (19.39)	116%	139%
2028	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 54.14	\$ 47.15	\$ (9.62)	\$ (20.61)	118%	144%
2029	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 51.95	\$ 45.02	\$ (10.19)	\$ (21.92)	120%	149%
2030	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 49.75	\$ 42.90	\$ (10.81)	\$ (23.33)	122%	154%
2031	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 47.57	\$ 40.80	\$ (11.46)	\$ (24.82)	124%	161%
2032	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 45.35	\$ 38.69	\$ (12.17)	\$ (26.42)	127%	168%
2033	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 43.18	\$ 36.62	\$ (12.92)	\$ (28.12)	130%	177%
2034	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 41.03	\$ 34.59	\$ (13.73)	\$ (29.93)	133%	187%
2035	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 38.89	\$ 32.58	\$ (14.59)	\$ (31.86)	138%	198%
2036	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 36.75	\$ 30.60	\$ (15.51)	\$ (33.92)	142%	211%
2037	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 34.63	\$ 28.66	\$ (16.49)	\$ (36.12)	148%	226%
2038	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 32.51	\$ 26.74	\$ (17.55)	\$ (38.46)	154%	244%
2039	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 30.44	\$ 24.89	\$ (18.68)	\$ (40.96)	161%	265%
2040	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 28.42	\$ 23.10	\$ (19.90)	\$ (43.62)	170%	289%
2041	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 26.46	\$ 21.37	\$ (21.19)	\$ (46.46)	180%	317%
2042	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 24.59	\$ 19.74	\$ (22.57)	\$ (49.48)	192%	351%
2043	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 22.80	\$ 18.18	\$ (24.04)	\$ (52.70)	205%	390%
2044	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 21.07	\$ 16.70	\$ (25.60)	\$ (56.13)	221%	436%
2045	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 19.44	\$ 15.31	\$ (27.27)	\$ (59.78)	240%	490%
2046	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 17.89	\$ 14.00	\$ (29.04)	\$ (63.67)	262%	555%
2047	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 16.43	\$ 12.78	\$ (30.93)	\$ (67.81)	288%	631%
2048	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 15.05	\$ 11.63	\$ (32.95)	\$ (72.23)	319%	721%
2049	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 13.75	\$ 10.56	\$ (35.09)	\$ (76.92)	355%	828%
2050	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 12.53	\$ 9.56	\$ (37.38)	\$ (81.93)	398%	957%
Sum of Contributions	\$ 0.60	\$ 0.00								
Net Present Value	\$ 0.56	\$ 0.00								

Assumes 6.5% future asset returns beginning July 1, 2020 in the Traditional Defined Benefit plan.

In the Current column, Assumes 100% of the recommended contribution is contributed each year. However, in the Proposed column, assumes no employer contribution is made in any year.

Unfunded Liability is calculated as Accrued Liability minus the Actuarial Assets Value. Funded Ratio is calculated as Actuarial Value of Assets divided by Accrued Liability.

Contribution(%) is calculated as the Contribution(\$) divided by total payroll in the Traditional plan.

Kentucky Legislators Retirement Plan
Cost Projections - HB 121
Prepared by Findley, A Division of USI
January 22, 2021
Traditional OPEB Plan Only

Contribution (\$M)	Contribution (%)				Accrued Liability (\$M)		Unfunded Liability (\$M)		(Assets/Liabilities)		Funded Ratio	
	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Year Beginning July 1	Current	Proposed
2020	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 19.71	\$ 19.71	\$ (30.05)	\$ (30.05)	252%	252%		
2021	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 19.78	\$ 19.78	\$ (33.27)	\$ (33.27)	268%	268%		
2022	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 19.79	\$ 19.79	\$ (36.15)	\$ (36.15)	283%	283%		
2023	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 19.75	\$ 19.75	\$ (38.92)	\$ (38.92)	297%	297%		
2024	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 19.67	\$ 19.67	\$ (41.30)	\$ (41.30)	310%	310%		
2025	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 19.54	\$ 19.54	\$ (43.90)	\$ (43.90)	325%	325%		
2026	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 19.37	\$ 19.37	\$ (46.68)	\$ (46.68)	341%	341%		
2027	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 19.19	\$ 19.19	\$ (49.65)	\$ (49.65)	359%	359%		
2028	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 18.93	\$ 18.93	\$ (52.81)	\$ (52.81)	379%	379%		
2029	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 18.63	\$ 18.63	\$ (56.19)	\$ (56.19)	402%	402%		
2030	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 18.27	\$ 18.27	\$ (59.80)	\$ (59.80)	427%	427%		
2031	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 17.87	\$ 17.87	\$ (63.65)	\$ (63.65)	456%	456%		
2032	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 17.45	\$ 17.45	\$ (67.75)	\$ (67.75)	488%	488%		
2033	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 17.06	\$ 17.06	\$ (72.11)	\$ (72.11)	523%	523%		
2034	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 16.62	\$ 16.62	\$ (76.76)	\$ (76.76)	562%	562%		
2035	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 16.18	\$ 16.18	\$ (81.72)	\$ (81.72)	605%	605%		
2036	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 15.72	\$ 15.72	\$ (87.00)	\$ (87.00)	653%	653%		
2037	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 15.23	\$ 15.23	\$ (92.63)	\$ (92.63)	708%	708%		
2038	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 14.69	\$ 14.69	\$ (98.64)	\$ (98.64)	771%	771%		
2039	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 14.11	\$ 14.11	\$ (105.03)	\$ (105.03)	844%	844%		
2040	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 13.49	\$ 13.49	\$ (111.85)	\$ (111.85)	929%	929%		
2041	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 12.86	\$ 12.86	\$ (119.11)	\$ (119.11)	1026%	1026%		
2042	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 12.22	\$ 12.22	\$ (126.85)	\$ (126.85)	1138%	1138%		
2043	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 11.61	\$ 11.61	\$ (135.09)	\$ (135.09)	1264%	1264%		
2044	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 11.00	\$ 11.00	\$ (143.86)	\$ (143.86)	1408%	1408%		
2045	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 10.41	\$ 10.41	\$ (153.21)	\$ (153.21)	1572%	1572%		
2046	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 9.83	\$ 9.83	\$ (163.16)	\$ (163.16)	1760%	1760%		
2047	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 9.27	\$ 9.27	\$ (173.77)	\$ (173.77)	1975%	1975%		
2048	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 8.69	\$ 8.69	\$ (185.06)	\$ (185.06)	2230%	2230%		
2049	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 8.12	\$ 8.12	\$ (197.08)	\$ (197.08)	2527%	2527%		
2050	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 7.56	\$ 7.56	\$ (209.89)	\$ (209.89)	2876%	2876%		
Sum of Contributions	\$ 0.00	\$ 0.00										
Net Present Value	\$ 0.00	\$ 0.00										

Assumes 6.5% future asset returns beginning July 1, 2020 in the Traditional OPEB plan.

In the Current column, Assumes 100% of the recommended contribution is contributed each year. However, in the Proposed column, assumes no employer contribution is made in any year.

Unfunded Liability is calculated as Accrued Liability minus the Actuarial Assets Value. Funded Ratio is calculated as Actuarial Value of Assets divided by Accrued Liability.

Contribution(%) is calculated as the Contribution(\$) divided by total payroll of participants in the Traditional OPEB plan.

Kentucky Legislators Retirement Plan
Cost Projections - HB 121
Prepared by Findley, A Division of USI
January 22, 2021
Pension Plan Only (post-2014 Hybrid Tier)

Contribution (\$M)	Contribution (%)		Accrued Liability (\$M)		Unfunded Liability (\$M)		(Assets/Liabilities) Year		Funded Ratio	
	Proposed*	Current	Proposed*	Current	Current	Proposed*	Current	Proposed*	Beginning July 1	Current
2020	\$ 0.07	N/A	2.2%	N/A	\$ 0.44	N/A	\$ 0.07	N/A	84%	N/A
2021	\$ 0.07	N/A	2.1%	N/A	\$ 0.65	N/A	\$ 0.05	N/A	92%	N/A
2022	\$ 0.13	N/A	3.6%	N/A	\$ 0.89	N/A	\$ 0.08	N/A	91%	N/A
2023	\$ 0.13	N/A	3.5%	N/A	\$ 1.19	N/A	\$ 0.07	N/A	94%	N/A
2024	\$ 0.13	N/A	3.3%	N/A	\$ 1.37	N/A	\$ 0.05	N/A	96%	N/A
2025	\$ 0.14	N/A	3.4%	N/A	\$ 1.63	N/A	\$ 0.04	N/A	98%	N/A
2026	\$ 0.15	N/A	3.5%	N/A	\$ 1.91	N/A	\$ 0.03	N/A	98%	N/A
2027	\$ 0.16	N/A	3.5%	N/A	\$ 2.23	N/A	\$ 0.02	N/A	99%	N/A
2028	\$ 0.17	N/A	3.5%	N/A	\$ 2.59	N/A	\$ 0.01	N/A	100%	N/A
2029	\$ 0.18	N/A	3.5%	N/A	\$ 2.95	N/A	\$ 0.00	N/A	100%	N/A
2030	\$ 0.19	N/A	3.5%	N/A	\$ 3.35	N/A	\$ (0.01)	N/A	100%	N/A
2031	\$ 0.20	N/A	3.6%	N/A	\$ 3.73	N/A	\$ (0.02)	N/A	101%	N/A
2032	\$ 0.20	N/A	3.5%	N/A	\$ 4.09	N/A	\$ (0.03)	N/A	101%	N/A
2033	\$ 0.21	N/A	3.5%	N/A	\$ 4.46	N/A	\$ (0.04)	N/A	101%	N/A
2034	\$ 0.22	N/A	3.5%	N/A	\$ 4.85	N/A	\$ (0.06)	N/A	101%	N/A
2035	\$ 0.23	N/A	3.5%	N/A	\$ 5.30	N/A	\$ (0.07)	N/A	101%	N/A
2036	\$ 0.24	N/A	3.6%	N/A	\$ 5.72	N/A	\$ (0.09)	N/A	102%	N/A
2037	\$ 0.25	N/A	3.6%	N/A	\$ 6.21	N/A	\$ (0.10)	N/A	102%	N/A
2038	\$ 0.26	N/A	3.5%	N/A	\$ 6.68	N/A	\$ (0.12)	N/A	102%	N/A
2039	\$ 0.27	N/A	3.5%	N/A	\$ 7.11	N/A	\$ (0.14)	N/A	102%	N/A
2040	\$ 0.28	N/A	3.5%	N/A	\$ 7.49	N/A	\$ (0.16)	N/A	102%	N/A
2041	\$ 0.29	N/A	3.5%	N/A	\$ 7.83	N/A	\$ (0.18)	N/A	102%	N/A
2042	\$ 0.30	N/A	3.5%	N/A	\$ 8.35	N/A	\$ (0.21)	N/A	103%	N/A
2043	\$ 0.31	N/A	3.5%	N/A	\$ 8.91	N/A	\$ (0.23)	N/A	103%	N/A
2044	\$ 0.32	N/A	3.5%	N/A	\$ 9.52	N/A	\$ (0.25)	N/A	103%	N/A
2045	\$ 0.33	N/A	3.5%	N/A	\$ 10.21	N/A	\$ (0.27)	N/A	103%	N/A
2046	\$ 0.34	N/A	3.5%	N/A	\$ 10.94	N/A	\$ (0.29)	N/A	103%	N/A
2047	\$ 0.35	N/A	3.5%	N/A	\$ 11.76	N/A	\$ (0.31)	N/A	103%	N/A
2048	\$ 0.36	N/A	3.4%	N/A	\$ 12.59	N/A	\$ (0.33)	N/A	103%	N/A
2049	\$ 0.37	N/A	3.4%	N/A	\$ 12.92	N/A	\$ (0.35)	N/A	103%	N/A
2050	\$ 0.38	N/A	3.4%	N/A	\$ 13.09	N/A	\$ (0.40)	N/A	103%	N/A
Sum of Contributions	\$ 7.23	N/A								
Net Present Value	\$ 3.65	N/A								

*Under 2021 HB 121, all members are assumed to move to the KERS nonhazardous hybrid cash balance plan and will no longer impact KLRP. Assumes

4.0% future asset returns beginning July 1, 2020 in the Hybrid Defined Benefit plan.

Assumes 100% of the recommended contribution is contributed each year.

Unfunded Liability is calculated as Accrued Liability minus the Actuarial Assets Value. Funded Ratio is calculated as Actuarial Value of Assets divided by Accrued Liability.

Contribution(%) is calculated as the Contribution(\$) divided by total payroll in the Traditional plan.

Kentucky Legislators Retirement Plan
Cost Projections - HB 121
Prepared by Findley, A Division of USI
January 22, 2021
Hybrid OPEB Plan Only

Contribution (\$M)	Contribution (%)		Accrued Liability (\$M)		Unfunded Liability (\$M)		(Assets/Liabilities) Year		Funded Ratio	
	Proposed*	Current	Proposed*	Current	Current	Proposed*	Current	Proposed*	Beginning July 1	Current
2020	\$ 0.02	N/A	0.4%	N/A	\$ 0.14	N/A	\$ 0.05	N/A	64%	N/A
2021	\$ 0.03	N/A	0.5%	N/A	\$ 0.27	N/A	\$ 0.10	N/A	63%	N/A
2022	\$ 0.09	N/A	1.3%	N/A	\$ 0.43	N/A	\$ 0.16	N/A	63%	N/A
2023	\$ 0.09	N/A	1.2%	N/A	\$ 0.61	N/A	\$ 0.17	N/A	72%	N/A
2024	\$ 0.11	N/A	1.3%	N/A	\$ 0.82	N/A	\$ 0.18	N/A	78%	N/A
2025	\$ 0.11	N/A	1.2%	N/A	\$ 1.04	N/A	\$ 0.19	N/A	82%	N/A
2026	\$ 0.12	N/A	1.2%	N/A	\$ 1.29	N/A	\$ 0.20	N/A	84%	N/A
2027	\$ 0.13	N/A	1.2%	N/A	\$ 1.57	N/A	\$ 0.20	N/A	87%	N/A
2028	\$ 0.14	N/A	1.2%	N/A	\$ 1.87	N/A	\$ 0.21	N/A	89%	N/A
2029	\$ 0.14	N/A	1.1%	N/A	\$ 2.20	N/A	\$ 0.21	N/A	90%	N/A
2030	\$ 0.15	N/A	1.1%	N/A	\$ 2.56	N/A	\$ 0.22	N/A	91%	N/A
2031	\$ 0.16	N/A	1.1%	N/A	\$ 2.94	N/A	\$ 0.22	N/A	93%	N/A
2032	\$ 0.17	N/A	1.2%	N/A	\$ 3.35	N/A	\$ 0.22	N/A	93%	N/A
2033	\$ 0.17	N/A	1.1%	N/A	\$ 3.77	N/A	\$ 0.22	N/A	94%	N/A
2034	\$ 0.17	N/A	1.1%	N/A	\$ 4.22	N/A	\$ 0.22	N/A	95%	N/A
2035	\$ 0.18	N/A	1.1%	N/A	\$ 4.66	N/A	\$ 0.20	N/A	96%	N/A
2036	\$ 0.17	N/A	1.0%	N/A	\$ 5.12	N/A	\$ 0.19	N/A	96%	N/A
2037	\$ 0.18	N/A	1.0%	N/A	\$ 5.62	N/A	\$ 0.19	N/A	97%	N/A
2038	\$ 0.18	N/A	1.0%	N/A	\$ 6.15	N/A	\$ 0.20	N/A	97%	N/A
2039	\$ 0.19	N/A	1.0%	N/A	\$ 6.71	N/A	\$ 0.20	N/A	97%	N/A
2040	\$ 0.19	N/A	0.9%	N/A	\$ 7.30	N/A	\$ 0.20	N/A	97%	N/A
2041	\$ 0.20	N/A	1.0%	N/A	\$ 7.85	N/A	\$ 0.17	N/A	98%	N/A
2042	\$ 0.18	N/A	0.8%	N/A	\$ 8.44	N/A	\$ 0.14	N/A	98%	N/A
2043	\$ 0.18	N/A	0.8%	N/A	\$ 9.01	N/A	\$ 0.14	N/A	98%	N/A
2044	\$ 0.18	N/A	0.8%	N/A	\$ 9.63	N/A	\$ 0.13	N/A	99%	N/A
2045	\$ 0.18	N/A	0.7%	N/A	\$ 10.26	N/A	\$ 0.13	N/A	99%	N/A
2046	\$ 0.18	N/A	0.7%	N/A	\$ 10.93	N/A	\$ 0.13	N/A	99%	N/A
2047	\$ 0.19	N/A	0.7%	N/A	\$ 11.62	N/A	\$ 0.13	N/A	99%	N/A
2048	\$ 0.12	N/A	0.5%	N/A	\$ 12.24	N/A	\$ 0.06	N/A	100%	N/A
2049	\$ 0.13	N/A	0.5%	N/A	\$ 12.81	N/A	\$ 0.08	N/A	99%	N/A
2050	\$ 0.14	N/A	0.5%	N/A	\$ 13.26	N/A	\$ 0.09	N/A	99%	N/A
Sum of Contributions	\$ 4.57	N/A								
Net Present Value	\$ 2.43	N/A								

*Under 2021 HB 121, all members are assumed to move to the KERS nonhazardous hybrid cash balance plan and will no longer impact KLRP. Assumes

4.0% future asset returns beginning July 1, 2020 in the Hybrid OPEB plan.

Assumes 100% of the recommended contribution is contributed each year.

Unfunded Liability is calculated as Accrued Liability minus the Actuarial Assets Value. Funded Ratio is calculated as Actuarial Value of Assets divided by Accrued Liability.

Contribution(%) is calculated as the Contribution(\$) divided by total payroll of participants in the Hybrid OPEB plan.

Kentucky Judicial Retirement Plan
Cost Projections - HB 121
Prepared by Findley, A Division of USI
January 22, 2021
Pension Plan Only (pre-2014 Legacy only)

Contribution (\$M)	Contribution (%)		Accrued Liability (\$M)		Unfunded Liability (\$M)		(Assets/Liabilities)		Funded Ratio	
	Proposed	Current	Proposed	Current	Current	Proposed	Current	Proposed	Year Beginning July 1	Current
2020	\$ 6.57	\$ 6.57	44.0%	44.0%	\$ 364.19	\$ 364.19	\$ 40.83	\$ 40.83	89%	89%
2021	\$ 7.00	\$ 7.00	54.3%	54.3%	\$ 359.27	\$ 359.27	\$ 28.97	\$ 28.97	92%	92%
2022	\$ 3.66	\$ 3.66	33.3%	33.3%	\$ 353.31	\$ 353.31	\$ 19.39	\$ 19.39	95%	95%
2023	\$ 3.90	\$ 3.90	40.8%	40.8%	\$ 346.49	\$ 346.49	\$ 14.46	\$ 14.46	96%	96%
2024	\$ 2.13	\$ 2.13	25.5%	25.5%	\$ 338.83	\$ 338.83	\$ 12.73	\$ 12.73	96%	96%
2025	\$ 2.27	\$ 2.27	30.2%	30.2%	\$ 330.58	\$ 330.58	\$ 12.22	\$ 12.22	96%	96%
2026	\$ 1.73	\$ 1.73	26.5%	26.5%	\$ 321.64	\$ 321.64	\$ 11.42	\$ 11.42	96%	96%
2027	\$ 1.84	\$ 1.84	32.2%	32.2%	\$ 312.16	\$ 312.16	\$ 11.03	\$ 11.03	96%	96%
2028	\$ 1.48	\$ 1.48	30.6%	30.6%	\$ 302.16	\$ 302.16	\$ 10.43	\$ 10.43	97%	97%
2029	\$ 1.57	\$ 1.57	40.4%	40.4%	\$ 291.55	\$ 291.55	\$ 10.07	\$ 10.07	97%	97%
2030	\$ 1.21	\$ 1.21	38.8%	38.8%	\$ 280.45	\$ 280.45	\$ 9.49	\$ 9.49	97%	97%
2031	\$ 1.28	\$ 1.28	53.5%	53.5%	\$ 268.84	\$ 268.84	\$ 9.13	\$ 9.13	97%	97%
2032	\$ 0.94	\$ 0.94	50.7%	50.7%	\$ 256.83	\$ 256.83	\$ 8.59	\$ 8.59	97%	97%
2033	\$ 1.00	\$ 1.00	67.9%	67.9%	\$ 244.59	\$ 244.59	\$ 8.34	\$ 8.34	97%	97%
2034	\$ 0.80	\$ 0.80	69.1%	69.1%	\$ 232.19	\$ 232.19	\$ 7.96	\$ 7.96	97%	97%
2035	\$ 0.85	\$ 0.85	93.0%	93.0%	\$ 219.76	\$ 219.76	\$ 7.75	\$ 7.75	96%	96%
2036	\$ 0.70	\$ 0.70	106.9%	106.9%	\$ 207.36	\$ 207.36	\$ 7.44	\$ 7.44	96%	96%
2037	\$ 0.74	\$ 0.74	189.0%	189.0%	\$ 194.94	\$ 194.94	\$ 7.24	\$ 7.24	96%	96%
2038	\$ 0.61	\$ 0.61	298.7%	298.7%	\$ 182.61	\$ 182.61	\$ 6.96	\$ 6.96	96%	96%
2039	\$ 0.65	\$ 0.65	543.5%	543.5%	\$ 170.47	\$ 170.47	\$ 6.78	\$ 6.78	96%	96%
2040	\$ 0.55	\$ 0.55	784.2%	784.2%	\$ 158.62	\$ 158.62	\$ 6.54	\$ 6.54	96%	96%
2041	\$ 0.59	\$ 0.59	1632.3%	1632.3%	\$ 147.10	\$ 147.10	\$ 6.38	\$ 6.38	96%	96%
2042	\$ 0.51	\$ 0.51	0.0%	0.0%	\$ 135.96	\$ 135.96	\$ 6.17	\$ 6.17	95%	95%
2043	\$ 0.54	\$ 0.54	0.0%	0.0%	\$ 125.26	\$ 125.26	\$ 6.03	\$ 6.03	95%	95%
2044	\$ 0.48	\$ 0.48	0.0%	0.0%	\$ 115.05	\$ 115.05	\$ 5.84	\$ 5.84	95%	95%
2045	\$ 0.51	\$ 0.51	0.0%	0.0%	\$ 105.34	\$ 105.34	\$ 5.71	\$ 5.71	95%	95%
2046	\$ 0.46	\$ 0.46	0.0%	0.0%	\$ 96.17	\$ 96.17	\$ 5.53	\$ 5.53	94%	94%
2047	\$ 0.49	\$ 0.49	0.0%	0.0%	\$ 87.53	\$ 87.53	\$ 5.40	\$ 5.40	94%	94%
2048	\$ 0.43	\$ 0.43	0.0%	0.0%	\$ 79.44	\$ 79.44	\$ 5.23	\$ 5.23	93%	93%
2049	\$ 0.46	\$ 0.46	0.0%	0.0%	\$ 71.88	\$ 71.88	\$ 5.11	\$ 5.11	93%	93%
2050	\$ 0.41	\$ 0.41	0.0%	0.0%	\$ 64.84	\$ 64.84	\$ 4.95	\$ 4.95	92%	92%
Sum of Contributions	\$ 46.36	\$ 46.36								
Net Present Value	\$ 30.97	\$ 30.97								

Assumes 6.5% future asset returns beginning July 1, 2020 in the Traditional Defined Benefit plan. Assumes 100% of the recommended contribution is contributed each year.

Unfunded Liability is calculated as Accrued Liability minus the Actuarial Assets Value. Funded Ratio is calculated as Actuarial Value of Assets divided by Accrued Liability.

Contribution(%) is calculated as the Contribution(\$) divided by total payroll in the Traditional plan.

Kentucky Judicial Retirement Plan
Cost Projections - HB 121
Prepared by Findley, A Division of USI
January 22, 2021
Traditional OPEB Plan Only

Contribution (\$M)	Contribution (%)		Accrued Liability (\$M)		Unfunded Liability (\$M)		(Assets/Liabilities)		Funded Ratio	
	Proposed	Current	Proposed	Current	Current	Proposed	Current	Proposed	Year Beginning July 1	Current
2020	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 48.38	\$ 48.38	\$ (45.70)	\$ (45.70)	194%	194%
2021	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 49.45	\$ 49.45	\$ (50.75)	\$ (50.75)	203%	203%
2022	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 50.35	\$ 50.35	\$ (55.11)	\$ (55.11)	209%	209%
2023	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 51.07	\$ 51.07	\$ (59.24)	\$ (59.24)	216%	216%
2024	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 51.60	\$ 51.60	\$ (62.54)	\$ (62.54)	221%	221%
2025	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 51.96	\$ 51.96	\$ (66.21)	\$ (66.21)	227%	227%
2026	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 52.12	\$ 52.12	\$ (70.15)	\$ (70.15)	235%	235%
2027	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 52.02	\$ 52.02	\$ (74.38)	\$ (74.38)	243%	243%
2028	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 51.81	\$ 51.81	\$ (78.92)	\$ (78.92)	252%	252%
2029	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 51.43	\$ 51.43	\$ (83.79)	\$ (83.79)	263%	263%
2030	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 50.87	\$ 50.87	\$ (89.03)	\$ (89.03)	275%	275%
2031	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 50.17	\$ 50.17	\$ (94.66)	\$ (94.66)	289%	289%
2032	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 49.25	\$ 49.25	\$ (100.69)	\$ (100.69)	304%	304%
2033	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 48.16	\$ 48.16	\$ (107.13)	\$ (107.13)	322%	322%
2034	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 46.95	\$ 46.95	\$ (114.01)	\$ (114.01)	343%	343%
2035	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 45.71	\$ 45.71	\$ (121.35)	\$ (121.35)	365%	365%
2036	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 44.39	\$ 44.39	\$ (129.19)	\$ (129.19)	391%	391%
2037	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 42.98	\$ 42.98	\$ (137.54)	\$ (137.54)	420%	420%
2038	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 41.50	\$ 41.50	\$ (146.45)	\$ (146.45)	453%	453%
2039	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 39.97	\$ 39.97	\$ (155.95)	\$ (155.95)	490%	490%
2040	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 38.39	\$ 38.39	\$ (166.08)	\$ (166.08)	533%	533%
2041	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 36.76	\$ 36.76	\$ (176.86)	\$ (176.86)	581%	581%
2042	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 35.08	\$ 35.08	\$ (188.34)	\$ (188.34)	637%	637%
2043	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 33.41	\$ 33.41	\$ (200.57)	\$ (200.57)	700%	700%
2044	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 31.75	\$ 31.75	\$ (213.59)	\$ (213.59)	773%	773%
2045	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 30.09	\$ 30.09	\$ (227.47)	\$ (227.47)	856%	856%
2046	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 28.43	\$ 28.43	\$ (242.24)	\$ (242.24)	952%	952%
2047	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 26.78	\$ 26.78	\$ (257.97)	\$ (257.97)	1063%	1063%
2048	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 25.15	\$ 25.15	\$ (274.73)	\$ (274.73)	1192%	1192%
2049	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 23.52	\$ 23.52	\$ (292.58)	\$ (292.58)	1344%	1344%
2050	\$ 0.00	\$ 0.00	0.0%	0.0%	\$ 21.92	\$ 21.92	\$ (311.59)	\$ (311.59)	1521%	1521%
Sum of Contributions	\$ 0.00	\$ 0.00								
Net Present Value	\$ 0.00	\$ 0.00								

Assumes 6.5% future asset returns beginning July 1, 2020 in the Traditional OPEB plan. Assumes 100% of the recommended contribution is contributed each year.

Unfunded Liability is calculated as Accrued Liability minus the Actuarial Assets Value. Funded Ratio is calculated as Actuarial Value of Assets divided by Accrued Liability.

Contribution(%) is calculated as the Contribution(\$) divided by total payroll of participants in the Traditional OPEB plan.

Kentucky Judicial Retirement Plan
Cost Projections - HB 121
Prepared by Findley, A Division of USI
January 22, 2021
Pension Plan Only (post-2014 Hybrid Tier)

Contribution (\$M)	Contribution (%)		Accrued Liability (\$M)		Unfunded Liability (\$M)		(Assets/Liabilities) Year		Funded Ratio	
	Proposed*	Current	Proposed*	Current	Current	Proposed*	Current	Proposed*	Beginning July 1	Current
2020	\$ 0.17	N/A	1.1%	N/A	\$ 1.46	N/A	\$ (0.04)	N/A	103%	N/A
2021	\$ 0.18	N/A	1.0%	N/A	\$ 2.28	N/A	\$ (0.14)	N/A	106%	N/A
2022	\$ 0.62	N/A	3.2%	N/A	\$ 3.61	N/A	\$ 0.15	N/A	96%	N/A
2023	\$ 0.65	N/A	3.1%	N/A	\$ 5.18	N/A	\$ 0.10	N/A	98%	N/A
2024	\$ 0.78	N/A	3.3%	N/A	\$ 6.85	N/A	\$ 0.11	N/A	98%	N/A
2025	\$ 0.81	N/A	3.2%	N/A	\$ 8.79	N/A	\$ 0.08	N/A	99%	N/A
2026	\$ 0.94	N/A	3.4%	N/A	\$ 10.86	N/A	\$ 0.11	N/A	99%	N/A
2027	\$ 0.97	N/A	3.3%	N/A	\$ 13.13	N/A	\$ 0.07	N/A	99%	N/A
2028	\$ 1.09	N/A	3.5%	N/A	\$ 15.67	N/A	\$ 0.09	N/A	99%	N/A
2029	\$ 1.13	N/A	3.4%	N/A	\$ 18.43	N/A	\$ 0.06	N/A	100%	N/A
2030	\$ 1.24	N/A	3.5%	N/A	\$ 21.40	N/A	\$ 0.06	N/A	100%	N/A
2031	\$ 1.29	N/A	3.4%	N/A	\$ 24.56	N/A	\$ 0.04	N/A	100%	N/A
2032	\$ 1.40	N/A	3.5%	N/A	\$ 27.92	N/A	\$ 0.04	N/A	100%	N/A
2033	\$ 1.45	N/A	3.5%	N/A	\$ 31.58	N/A	\$ 0.01	N/A	100%	N/A
2034	\$ 1.54	N/A	3.6%	N/A	\$ 35.49	N/A	\$ 0.00	N/A	100%	N/A
2035	\$ 1.60	N/A	3.6%	N/A	\$ 39.51	N/A	\$ (0.04)	N/A	100%	N/A
2036	\$ 1.67	N/A	3.6%	N/A	\$ 42.68	N/A	\$ (0.08)	N/A	100%	N/A
2037	\$ 1.73	N/A	3.5%	N/A	\$ 45.56	N/A	\$ (0.17)	N/A	100%	N/A
2038	\$ 1.80	N/A	3.5%	N/A	\$ 48.29	N/A	\$ (0.27)	N/A	101%	N/A
2039	\$ 1.87	N/A	3.6%	N/A	\$ 50.72	N/A	\$ (0.39)	N/A	101%	N/A
2040	\$ 1.92	N/A	3.5%	N/A	\$ 52.74	N/A	\$ (0.52)	N/A	101%	N/A
2041	\$ 2.00	N/A	3.5%	N/A	\$ 54.27	N/A	\$ (0.71)	N/A	101%	N/A
2042	\$ 2.03	N/A	3.5%	N/A	\$ 57.37	N/A	\$ (0.85)	N/A	101%	N/A
2043	\$ 2.11	N/A	3.5%	N/A	\$ 60.92	N/A	\$ (0.95)	N/A	102%	N/A
2044	\$ 2.18	N/A	3.5%	N/A	\$ 64.99	N/A	\$ (1.04)	N/A	102%	N/A
2045	\$ 2.27	N/A	3.5%	N/A	\$ 69.41	N/A	\$ (1.12)	N/A	102%	N/A
2046	\$ 2.33	N/A	3.5%	N/A	\$ 74.49	N/A	\$ (1.20)	N/A	102%	N/A
2047	\$ 2.42	N/A	3.5%	N/A	\$ 80.21	N/A	\$ (1.26)	N/A	102%	N/A
2048	\$ 2.50	N/A	3.5%	N/A	\$ 83.28	N/A	\$ (1.37)	N/A	102%	N/A
2049	\$ 2.60	N/A	3.5%	N/A	\$ 85.45	N/A	\$ (1.52)	N/A	102%	N/A
2050	\$ 2.65	N/A	3.4%	N/A	\$ 86.60	N/A	\$ (1.73)	N/A	102%	N/A
Sum of Contributions	\$ 47.94	N/A								
Net Present Value	\$ 23.52	N/A								

*Under 2021 HB 121, all members are assumed to move to the KERS nonhazardous hybrid cash balance plan and will no longer impact KJRP. Assumes

4.0% future asset returns beginning July 1, 2020 in the Hybrid Defined Benefit plan.

Assumes 100% of the recommended contribution is contributed each year.

Unfunded Liability is calculated as Accrued Liability minus the Actuarial Assets Value. Funded Ratio is calculated as Actuarial Value of Assets divided by Accrued Liability.

Contribution(%) is calculated as the Contribution(\$) divided by total payroll in the Traditional plan.

Kentucky Judicial Retirement Plan
Cost Projections - HB 121
Prepared by Findley, A Division of USI
January 22, 2021
Hybrid OPEB Plan Only

Contribution (\$M)	Contribution (%)		Accrued Liability (\$M)		Unfunded Liability (\$M)		(Assets/Liabilities) Year		Funded Ratio	
	Proposed*	Current	Proposed*	Current	Current	Proposed*	Current	Proposed*	Beginning July 1	Current
2020	\$ 0.00	N/A	0.0%	N/A	\$ 0.16	N/A	\$ (0.04)	N/A	125%	N/A
2021	\$ 0.00	N/A	0.0%	N/A	\$ 0.30	N/A	\$ (0.07)	N/A	123%	N/A
2022	\$ 0.00	N/A	0.0%	N/A	\$ 0.47	N/A	\$ (0.10)	N/A	121%	N/A
2023	\$ 0.00	N/A	0.0%	N/A	\$ 0.66	N/A	\$ (0.13)	N/A	120%	N/A
2024	\$ 0.00	N/A	0.0%	N/A	\$ 0.88	N/A	\$ (0.17)	N/A	119%	N/A
2025	\$ 0.00	N/A	0.0%	N/A	\$ 1.12	N/A	\$ (0.21)	N/A	119%	N/A
2026	\$ 0.00	N/A	0.0%	N/A	\$ 1.39	N/A	\$ (0.25)	N/A	118%	N/A
2027	\$ 0.00	N/A	0.0%	N/A	\$ 1.68	N/A	\$ (0.30)	N/A	118%	N/A
2028	\$ 0.00	N/A	0.0%	N/A	\$ 2.01	N/A	\$ (0.35)	N/A	117%	N/A
2029	\$ 0.00	N/A	0.0%	N/A	\$ 2.36	N/A	\$ (0.42)	N/A	118%	N/A
2030	\$ 0.00	N/A	0.0%	N/A	\$ 2.74	N/A	\$ (0.49)	N/A	118%	N/A
2031	\$ 0.00	N/A	0.0%	N/A	\$ 3.14	N/A	\$ (0.57)	N/A	118%	N/A
2032	\$ 0.00	N/A	0.0%	N/A	\$ 3.57	N/A	\$ (0.66)	N/A	118%	N/A
2033	\$ 0.00	N/A	0.0%	N/A	\$ 4.03	N/A	\$ (0.76)	N/A	119%	N/A
2034	\$ 0.00	N/A	0.0%	N/A	\$ 4.52	N/A	\$ (0.86)	N/A	119%	N/A
2035	\$ 0.00	N/A	0.0%	N/A	\$ 5.03	N/A	\$ (0.97)	N/A	119%	N/A
2036	\$ 0.00	N/A	0.0%	N/A	\$ 5.58	N/A	\$ (1.10)	N/A	120%	N/A
2037	\$ 0.00	N/A	0.0%	N/A	\$ 6.16	N/A	\$ (1.23)	N/A	120%	N/A
2038	\$ 0.00	N/A	0.0%	N/A	\$ 6.77	N/A	\$ (1.37)	N/A	120%	N/A
2039	\$ 0.00	N/A	0.0%	N/A	\$ 7.42	N/A	\$ (1.52)	N/A	120%	N/A
2040	\$ 0.00	N/A	0.0%	N/A	\$ 8.10	N/A	\$ (1.69)	N/A	121%	N/A
2041	\$ 0.00	N/A	0.0%	N/A	\$ 8.70	N/A	\$ (1.92)	N/A	122%	N/A
2042	\$ 0.00	N/A	0.0%	N/A	\$ 9.33	N/A	\$ (2.14)	N/A	123%	N/A
2043	\$ 0.00	N/A	0.0%	N/A	\$ 9.96	N/A	\$ (2.39)	N/A	124%	N/A
2044	\$ 0.00	N/A	0.0%	N/A	\$ 10.59	N/A	\$ (2.65)	N/A	125%	N/A
2045	\$ 0.00	N/A	0.0%	N/A	\$ 11.25	N/A	\$ (2.93)	N/A	126%	N/A
2046	\$ 0.00	N/A	0.0%	N/A	\$ 11.95	N/A	\$ (3.22)	N/A	127%	N/A
2047	\$ 0.00	N/A	0.0%	N/A	\$ 12.71	N/A	\$ (3.54)	N/A	128%	N/A
2048	\$ 0.00	N/A	0.0%	N/A	\$ 13.32	N/A	\$ (4.01)	N/A	130%	N/A
2049	\$ 0.00	N/A	0.0%	N/A	\$ 13.84	N/A	\$ (4.47)	N/A	132%	N/A
2050	\$ 0.00	N/A	0.0%	N/A	\$ 14.19	N/A	\$ (4.97)	N/A	135%	N/A
Sum of Contributions	\$ 0.00	N/A								
Net Present Value	\$ 0.00	N/A								

*Under 2021 HB 121, all members are assumed to move to the KERS nonhazardous hybrid cash balance plan and will no longer impact KJRP. Assumes

4.0% future asset returns beginning July 1, 2020 in the Hybrid OPEB plan.

Assumes 100% of the recommended contribution is contributed each year.

Unfunded Liability is calculated as Accrued Liability minus the Actuarial Assets Value. Funded Ratio is calculated as Actuarial Value of Assets divided by Accrued Liability.

Contribution(%) is calculated as the Contribution(\$) divided by total payroll of participants in the Hybrid OPEB plan.