



Kansas Public Employees Retirement System

KPERS Long-Term Funding

Joint Committee on Pensions, Investments and Benefits

▪ *December 14, 2009*

Introduction

- Throughout the fall, KPERS has been conducting an analysis of options for addressing long-term funding challenges faced by the KPERS State, School, and Local Groups.
- At the November meeting of the Joint Committee on Pensions, Investments and Benefits, KPERS provided analyses of a range of long-term funding options. The options included various combinations of –
 - Raising the cap on employer rate increases.
 - Increasing the employee contribution rate.
 - Changing the multiplier used in the benefit formula.
- KPERS also presented background information related to defined contribution (DC) plans, along with several design and funding options for a DC plan.
- In response to requests from the Joint Committee, KPERS has developed several variations on options presented in November.
- In addition, KPERS was requested to analyze the impact of using pension obligation bonds (bonds) in lieu of raising the employer contribution cap. Analyses of two options that use bonds to manage the State's costs over the next few fiscal years are included.

Baseline and Basic Funding Solution Options

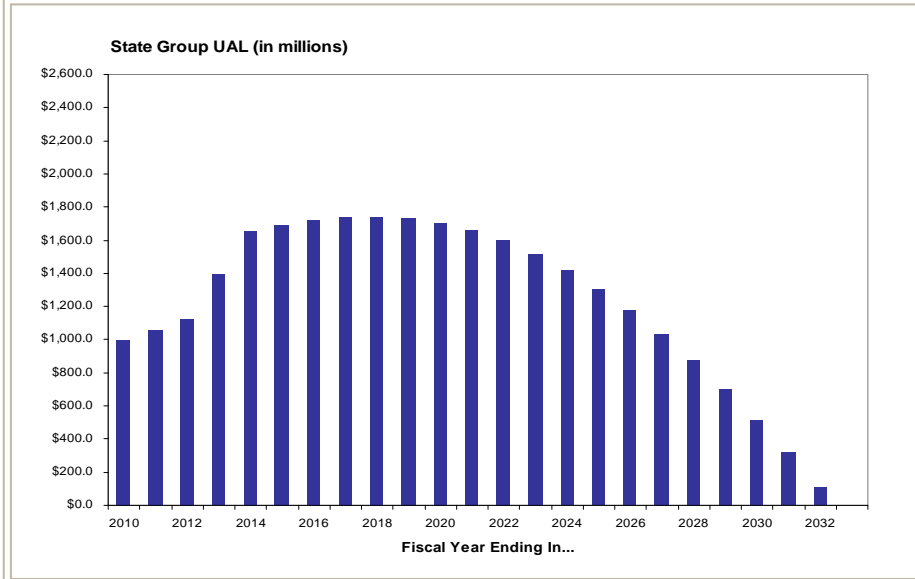
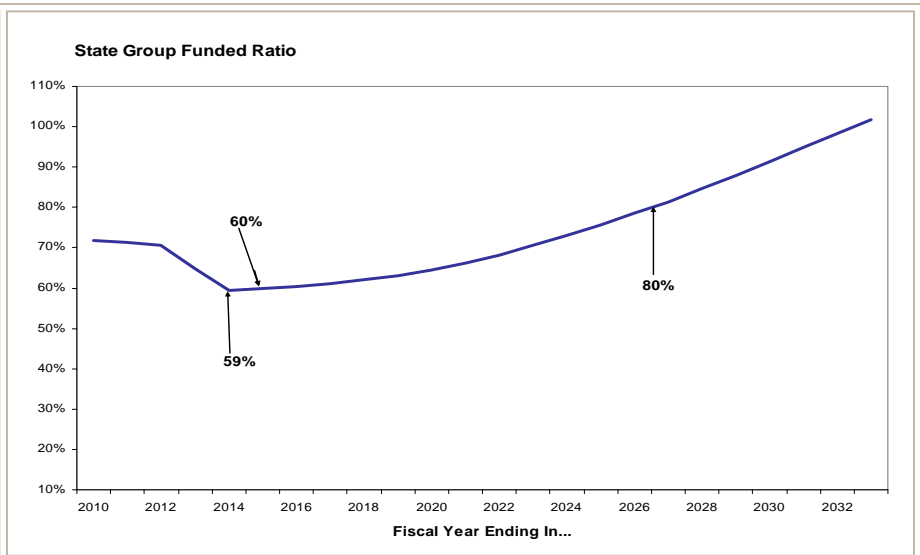
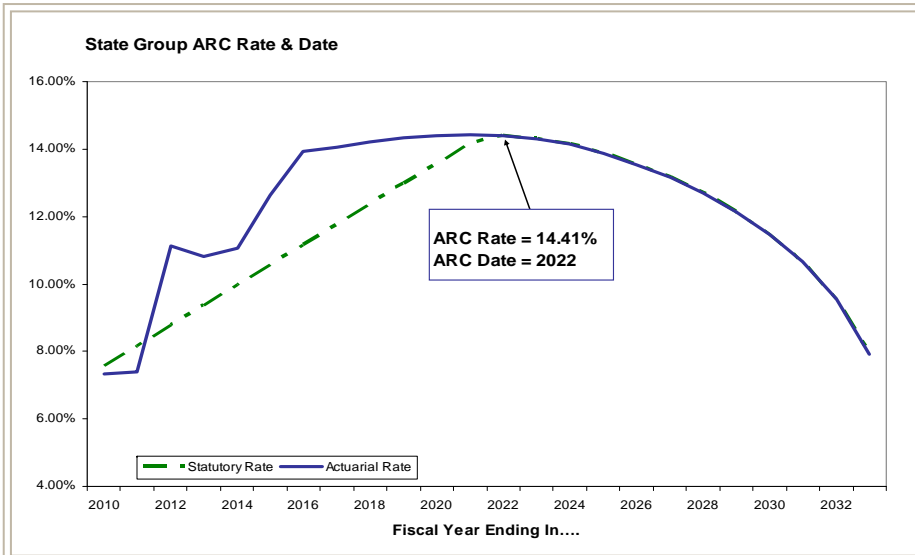
- To provide a frame of reference for the new options, projections for the KPERs “Baseline” and three of the options presented at the November meeting follow.
- The assumptions used for the Baseline and for each of the options are listed below. All projections assume a level, 8% annual investment return.
- **Baseline:**
 - Employer Contribution Rate: Cap remains at 0.6%.
 - Employee Contribution Rate: No change.
- **Option A:**
 - Employer Contribution Rate: Increase cap to 1.0%, effective 7/1/10 (FY 2011).
 - Employee Contribution Rate: No change.
- **Option C:**
 - Employer Contribution Rate: Increase cap to 1.0%, effective 7/1/10 (FY 2011).
 - Employee Contribution Rate: Increase rate by .5% for both Tiers 1 and 2 in each of four years, beginning 7/1/10 (FY 2011).

Basic Funding Solution Options (Continued)

- **Option H:**
 - Employer Contribution Rate: Increase cap to 1.0%, effective 7/1/10 (FY 2011).
 - Employee Contribution Rate: Increase rate 1.0% for Tier I only, effective 7/1/10 (FY 2011).
 - Benefit Multiplier: Increase multiplier to 1.85% for future service (Tier 1 only).

State Group: Baseline Projections

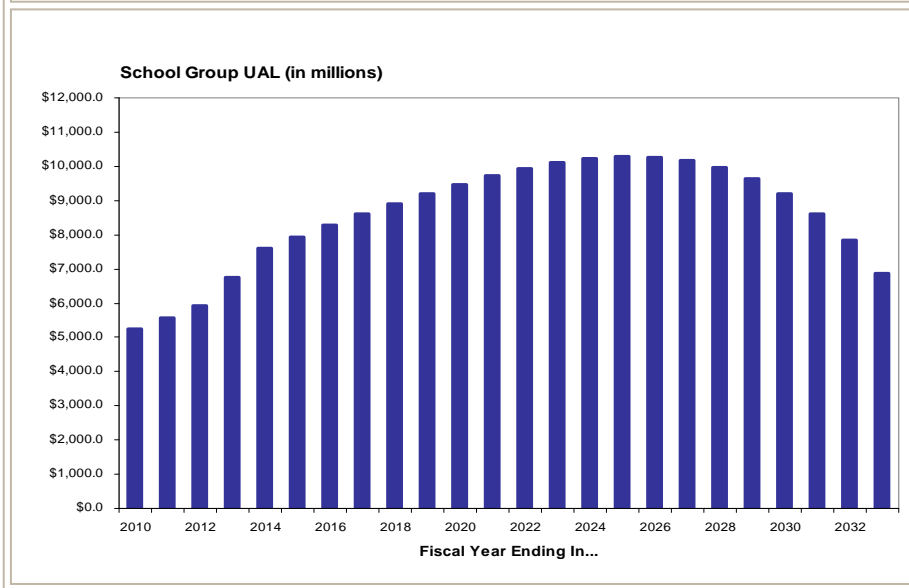
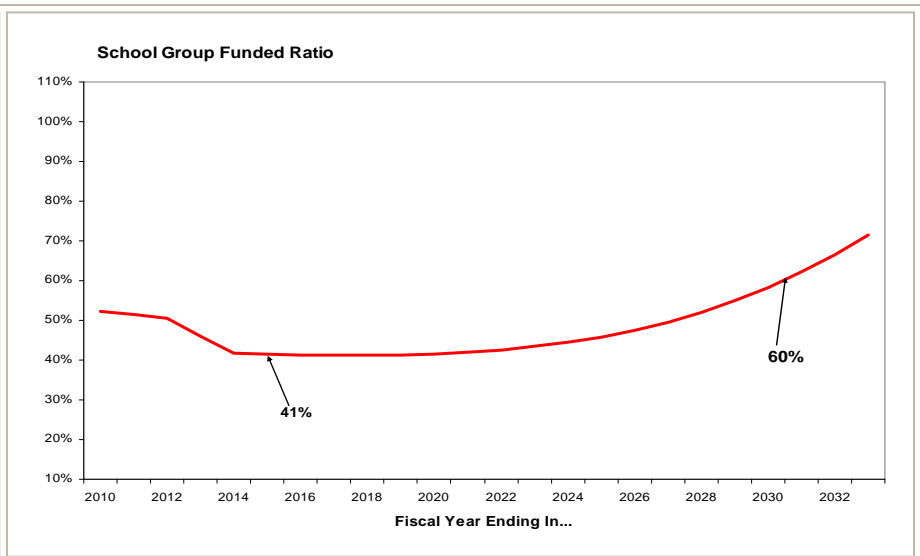
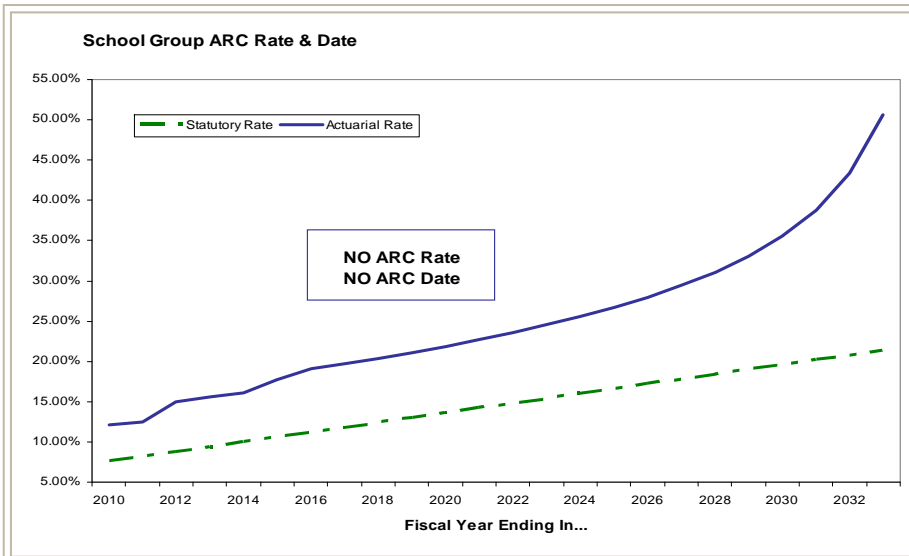
▪No change in the .6% employer rate increase cap.



- The projected ARC rate is nearly double the state/school rate paid by state agencies in FY 2010 (7.57%).
- The funded ratio reaches a low of 59% in FY 2014.
- It remains near 60% for an additional 5 years and only reaches 80% in FY 2027.
- The projected UAL rises by nearly 75% to \$1.74 billion in FY 2018.

School Group: Baseline Projections

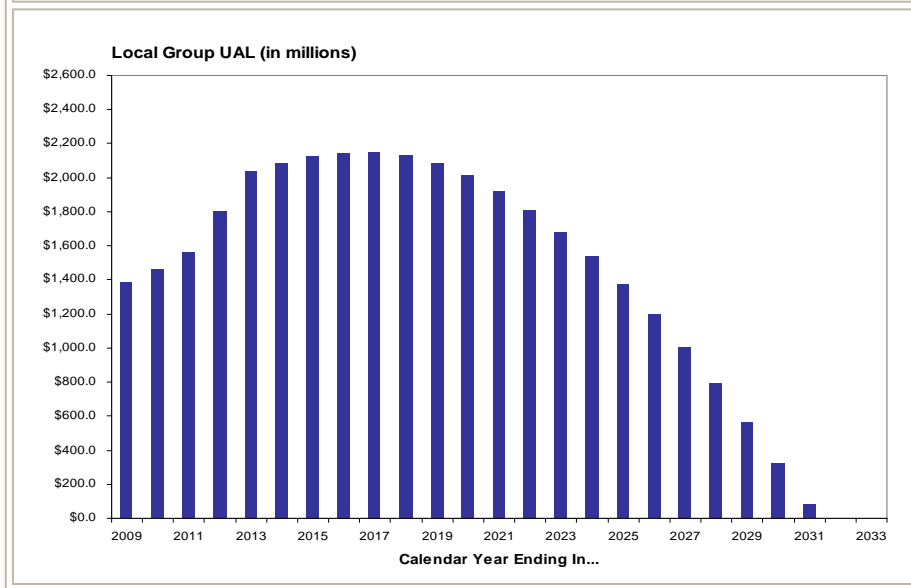
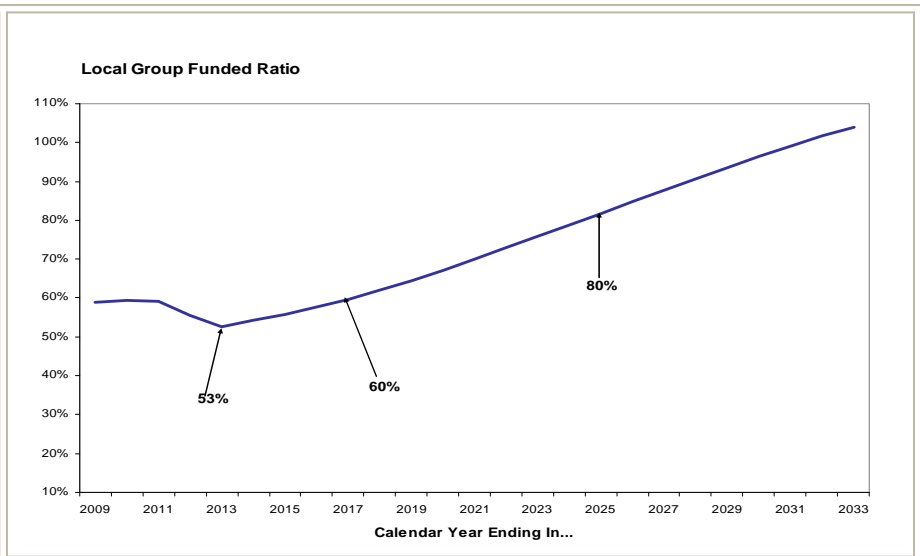
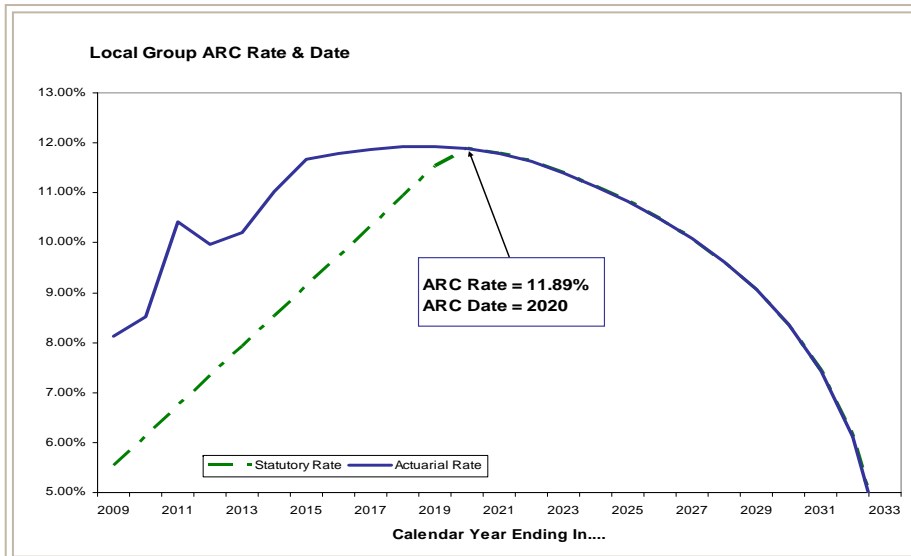
- No change in the .6% employer rate increase cap.



- The School Group is not in actuarial balance by FY 2033.
- The funded ratio reaches a low of 41% in FY 2015 and remains at 41 to 43% for 9 years.
- The funded ratio does not reach 60% until FY 2031 and only reaches 80% in FY 2035.
- The projected UAL nearly doubles to \$10.3 billion in FY 2025.

Local Group: Baseline Projections

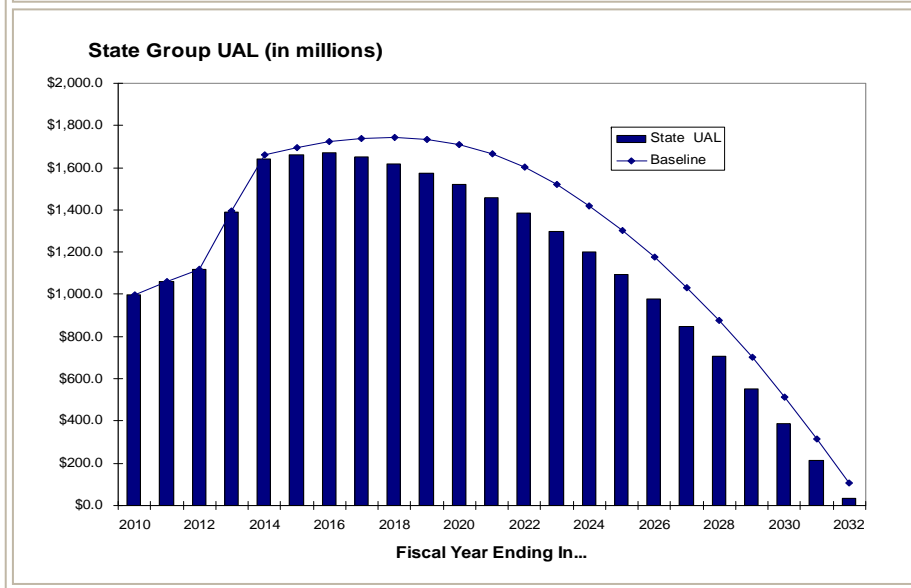
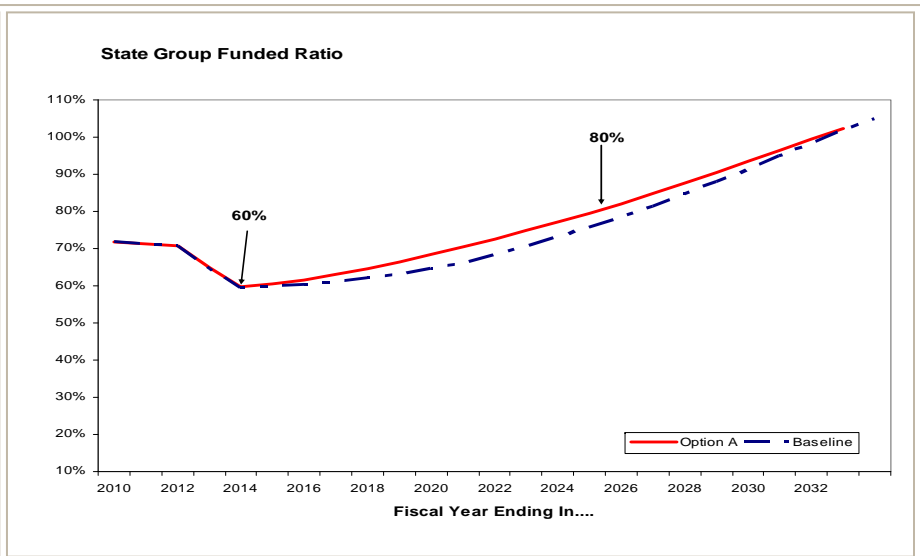
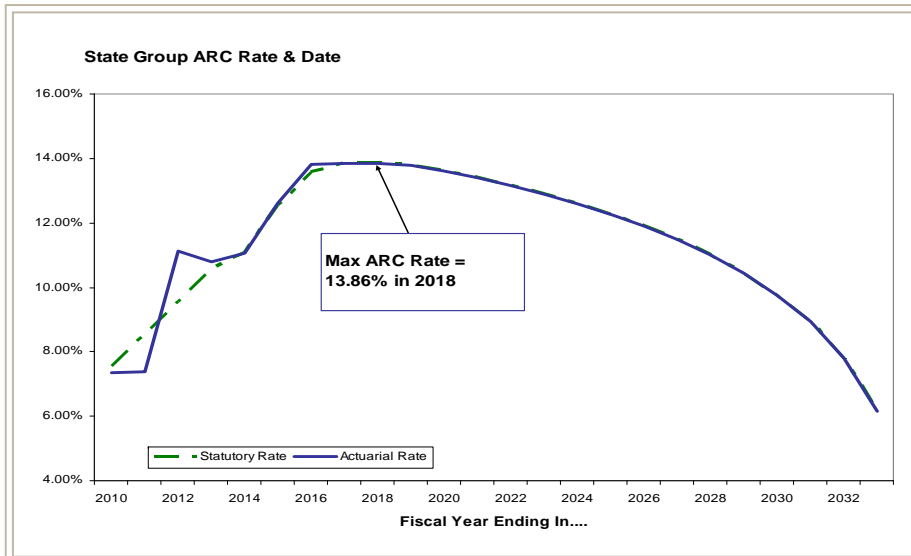
▪ **No change in the .6% employer rate increase cap.**



- The Local Group ARC rate is projected to double to 11.89% by CY 2020.
- Its projected funded ratio will fall to 53% by CY 2013, regaining 60% by CY 2017. The funded ratio is projected to reach 80% by CY 2025.
- The UAL is projected to increase by 55.4% to \$2.15 billion by CY 2017.

State Group: Option A

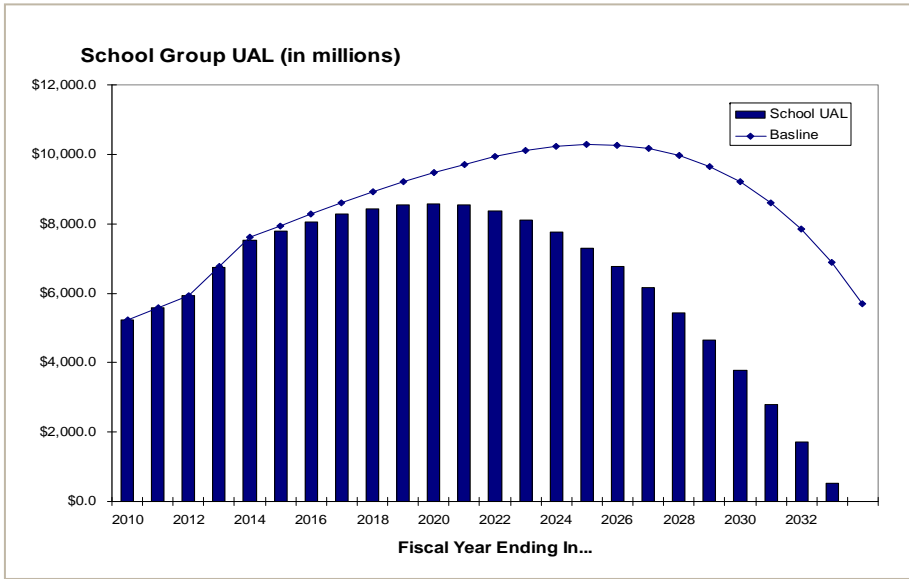
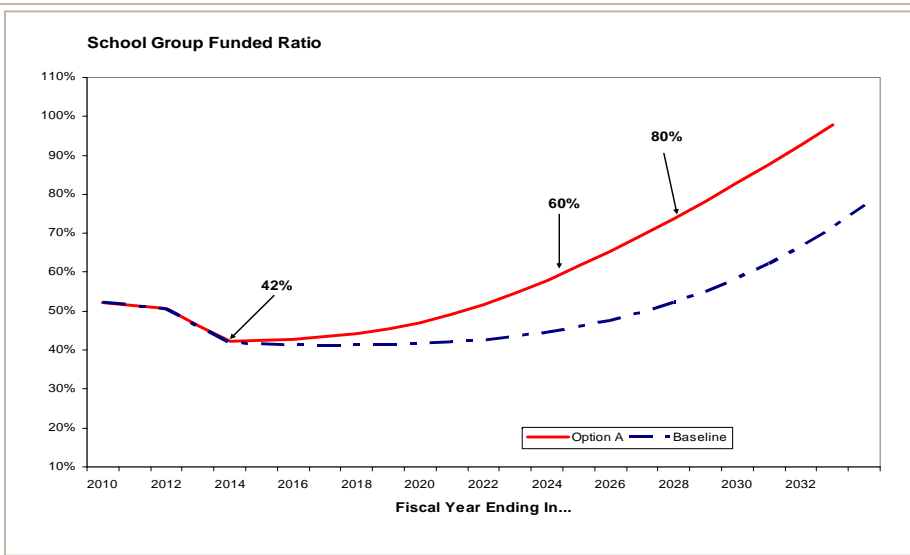
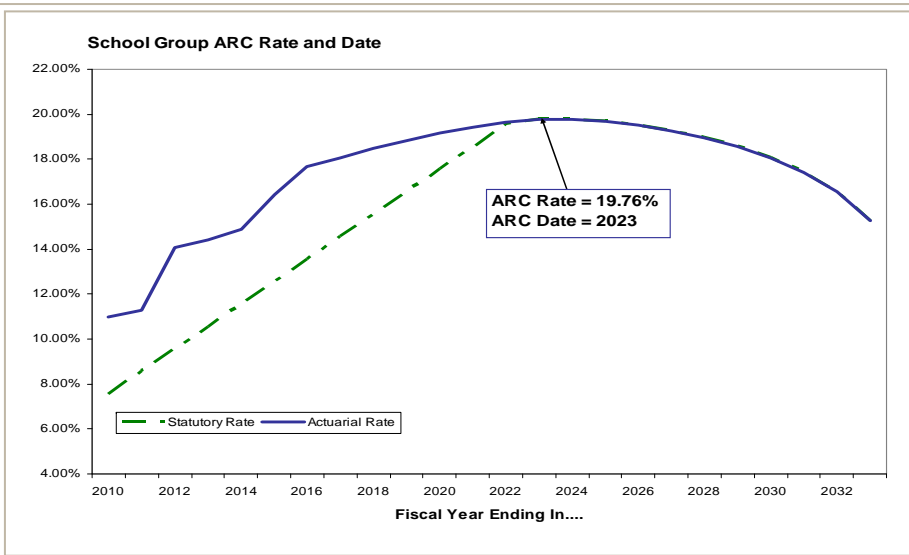
- Raise cap on employer rate increases to 1% in FY '11.



- The projected ARC rate rises to a maximum of nearly 14% by FY 2018.
- The funded ratio projections are similar to the Baseline, reaching a low of 60% in FY 2014.
- The funded ratio recovers very gradually to 80% in FY 2026 – one year earlier than the Baseline.
- The projected UAL rises to \$1.67 billion in FY 2016 – two years earlier and \$74.9 million less than the Baseline.

School Group: Option A

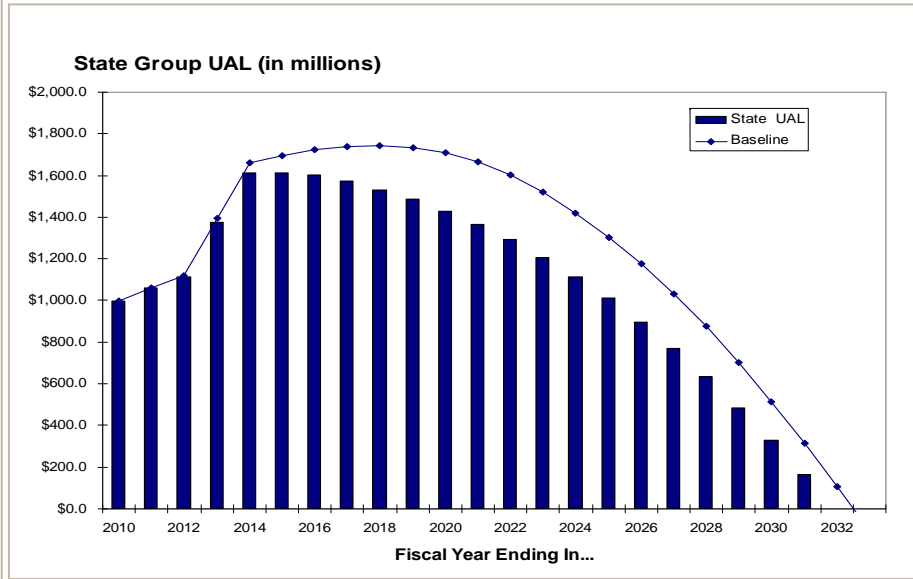
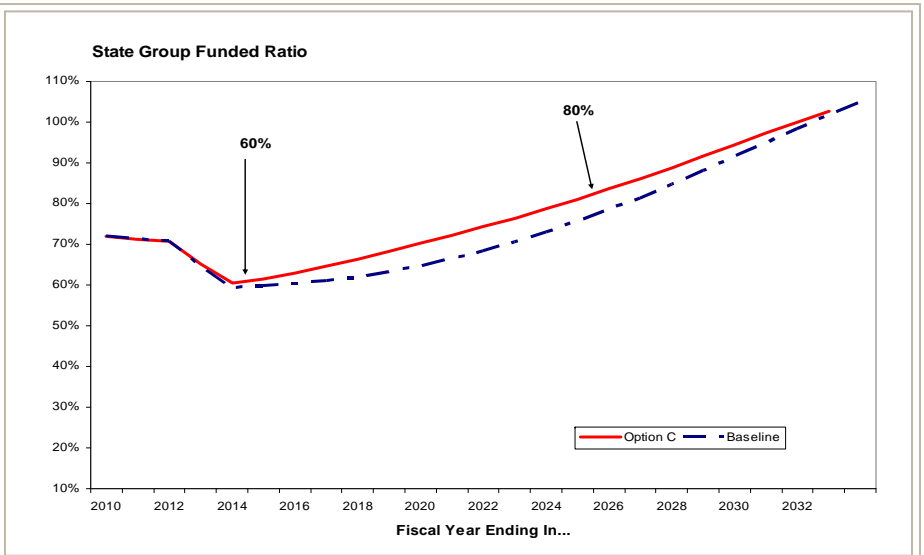
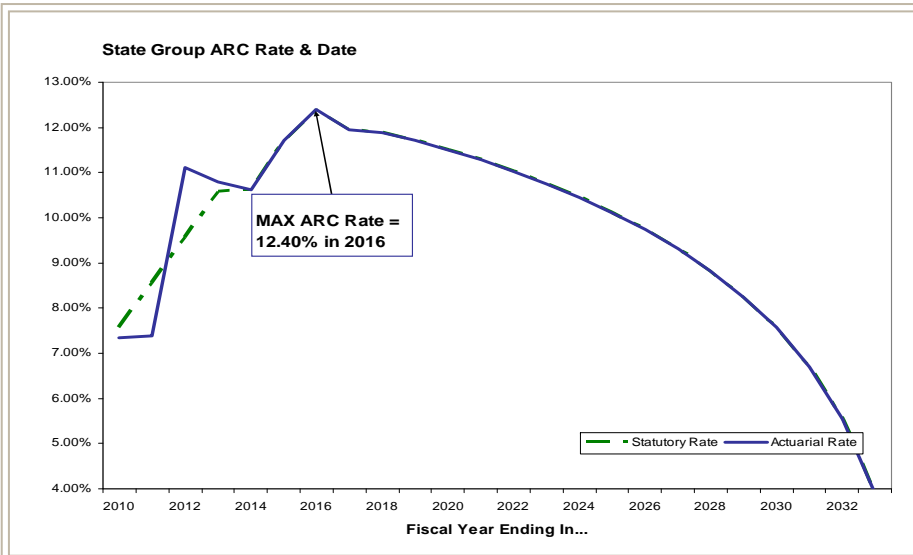
- Raise cap on employer rate increases to 1% in FY '11.



- A 1% cap on employer rate pulls the School Group back into actuarial balance by FY 2023, but at a rate of 19.76%.
- The funded ratio is depressed for an extended period of time, falling to 42% in FY 2014 and remaining below 50% for another 7 years.
- The funded ratio continues increasing slowly to 60% in 2025 and to 80% by FY 2030.
- The projected UAL peaks at \$8.6 billion in FY 2020 – five years earlier and \$1.7 billion less than the Baseline.

State Group: Option C

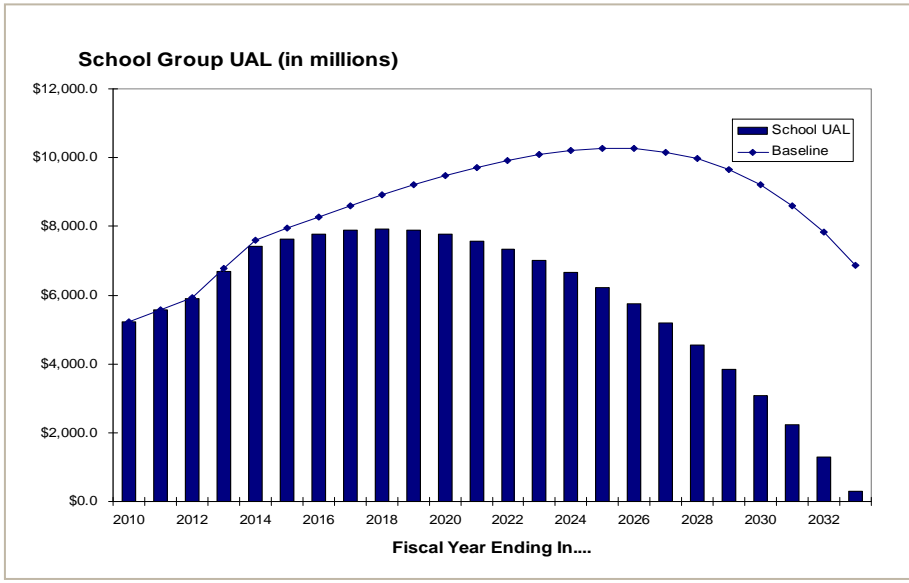
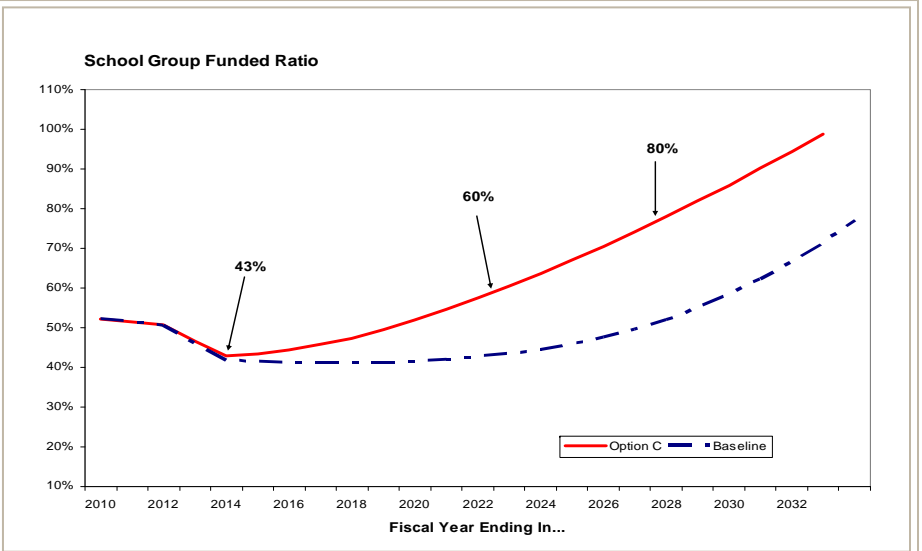
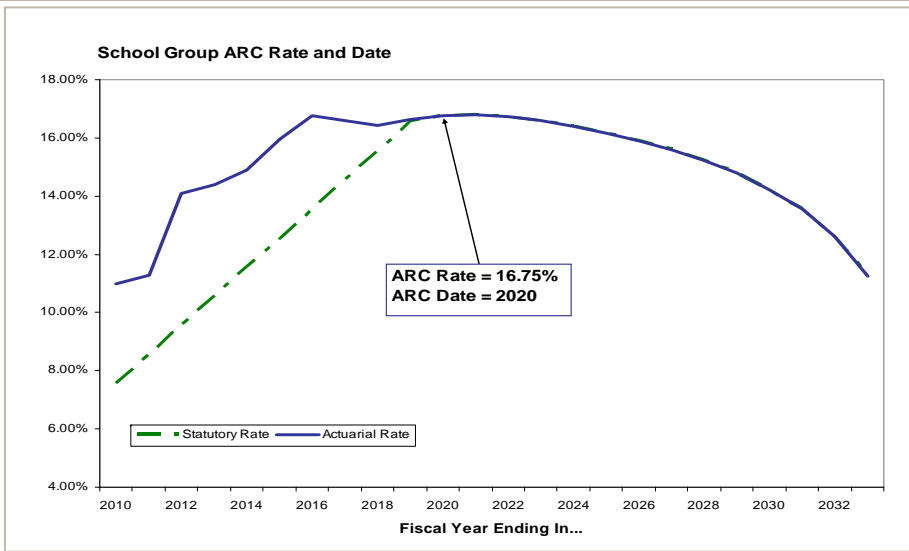
▪ Raise cap on employer rate increases to 1% in FY '11. Increase member contributions by .5% in each of four years, beginning FY 2011.



- With the phased addition of 2% in additional member contributions, the projected ARC rate peaks at 12.40% in FY 2016. (The maximum ARC rate is 13.86% in FY 2018 for the 1% cap alone.)
- Funded ratio projections are in the same range as those for the 1% cap option.
- The UAL projections are slightly lower than the 1% cap option, peaking three years earlier at \$1.61 billion and \$131 million less than the Baseline.

School Group: Option C

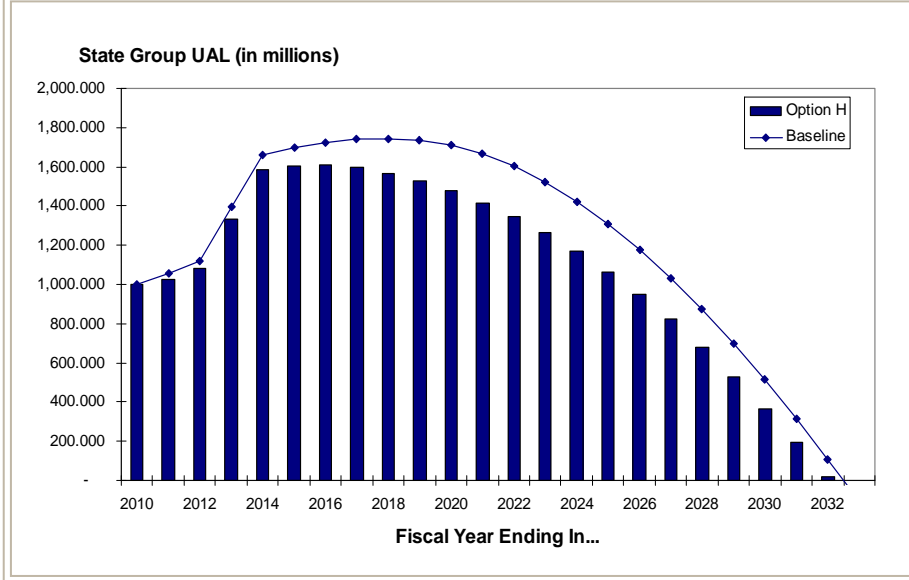
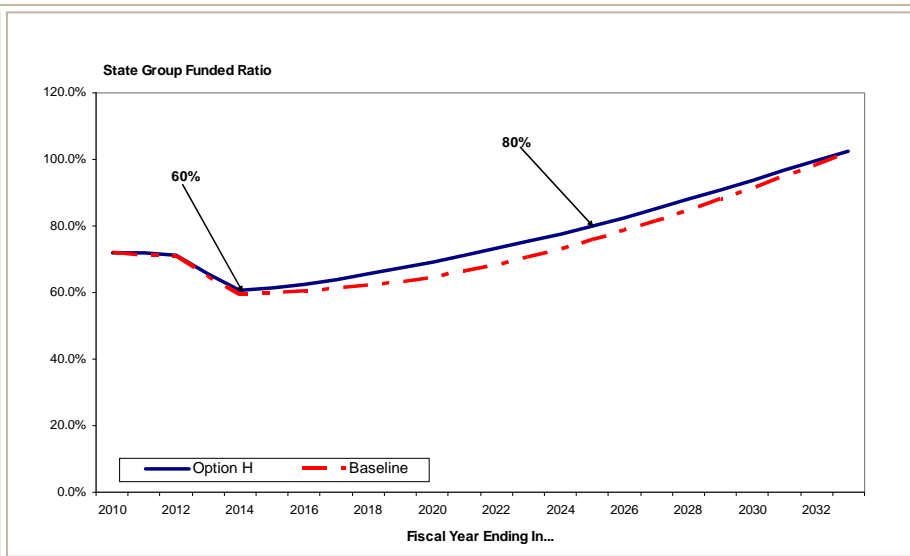
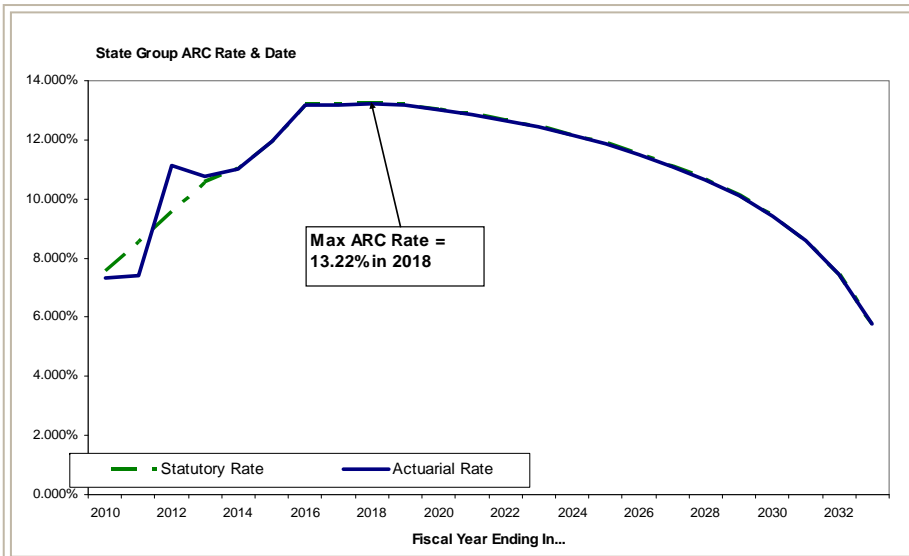
▪ Raise cap on employer rate increases to 1% in FY '11. Increase member contributions by .5% in each of four years, beginning FY 2011.



- The ARC rate and date drops from 19.76% in FY 2023 with the 1% cap to 16.75% in FY 2020 if a phased-in 2% member contribution increase is added.
- The low point of the funded ratio projections is similar to the 1% cap option. A 60% funded ratio is reached in FY 2023 – two years earlier than the 1% option. An 80% funded ratio is projected in FY 2029.
- With the additional member contributions, the projected UAL peaks seven years earlier – in FY 2018 at \$7.9 billion or \$2.4 billion less than the Baseline.

State Group: Option H

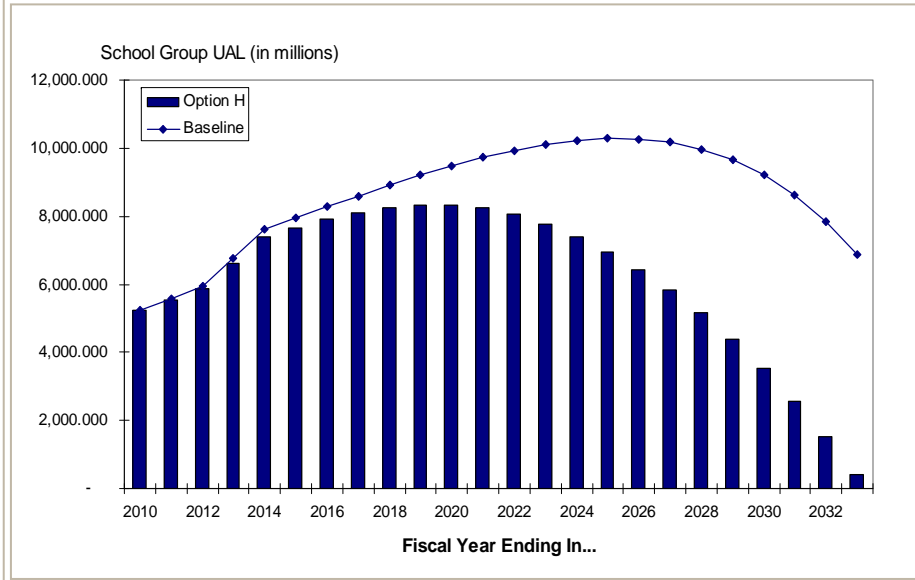
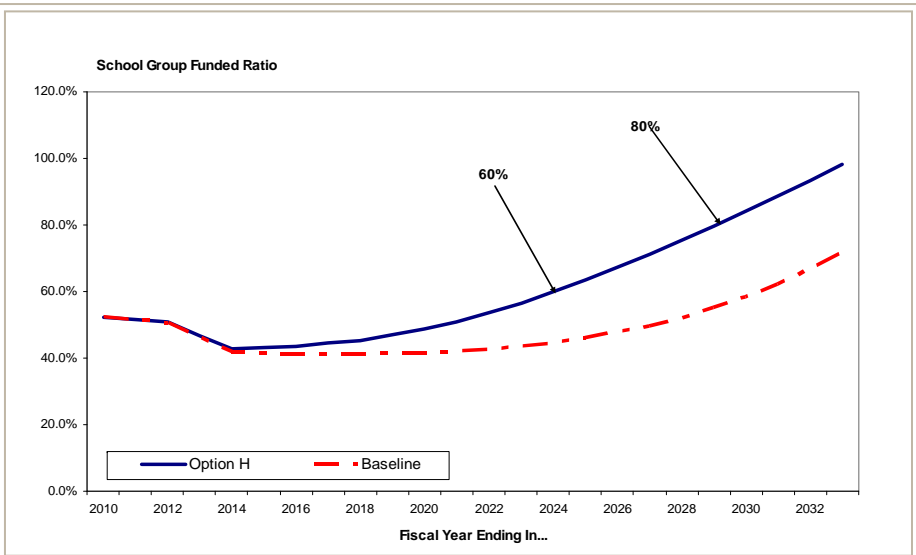
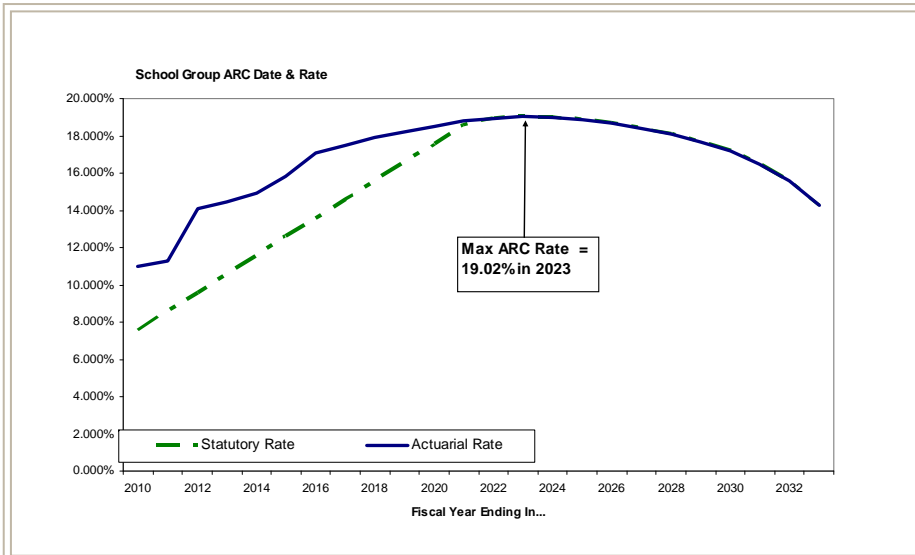
- Raise cap on employer rate increases to 1.0% in FY '11. Raise Tier I employee rate by 1.0% in FY '11. Increase Tier I multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 13.22% in FY 2018 – .64% lower than Option A.
- The funded ratio projections are similar to the Baseline, reaching a low of 61% in FY 2014.
- The funded ratio recovers gradually to 80% in FY 2025 – two years earlier than the Baseline.
- The projected UAL peaks at \$1.61 billion in FY 2016 – two years earlier and \$134.5 million less than the Baseline.

School Group: Option H

- Raise cap on employer rate increases to 1.0% in FY '11. Raise Tier I employee rate by 1.0% in FY '11. Increase Tier I multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 19.02% in FY 2023 – .74% lower than Option A.
- The funded ratio reaches a low of 43% in FY 2014 and remains below 50% for another 6 years.
- The funded ratio recovers to 60% in FY 2024 and 80% in 2030.
- The projected UAL peaks at \$8.3 billion in FY 2020 – five years earlier and \$1.96 billion less than the Baseline.

Effect on State Contributions

Option A* Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option A</u>	<u>Additional ER Contributions</u>
FY 2011 Increase in Employer Contributions	\$39.35	\$57.64	\$18.29
FY 2011 Total Employer Contributions	\$373.57	\$391.86	\$18.29
FY 2015 Increase in Employer Contributions	\$44.80	\$67.48	\$22.68
FY 2015 Total Employer Contributions	\$538.96	\$640.95	\$101.99
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$25,492.03	\$1,514.38

Option C** Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option C</u>	<u>Additional ER Contributions</u>
FY 2011 Increase in Employer Contributions	\$39.35	\$57.64	\$18.29
FY 2011 Total Employer Contributions	\$373.57	\$391.86	\$18.29
FY 2015 Increase in Employer Contributions	\$44.80	\$67.48	\$22.68
FY 2015 Total Employer Contributions	\$538.96	\$640.95	\$101.99
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$21,936.48	(\$2,041.17)

*Raise cap on employer rate increases to 1.0% in FY 2011.

**Raise cap on employer rate increases to 1% in FY '11. Increase employee rate by .5% for both Tier 1 and 2 in each of four years, beginning FY 2011.

Effect on State Contributions

Option H* Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option H</u>	<u>Additional ER Contributions</u>
FY 2011 Increase in Employer Contributions	\$39.35	\$57.64	\$18.29
FY 2011 Total Employer Contributions	\$373.57	\$391.86	\$18.29
FY 2015 Increase in Employer Contributions	\$44.80	\$67.48	\$22.68
FY 2015 Total Employer Contributions	\$538.96	\$640.95	\$101.99
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$24,689.52	\$711.87

*Raise cap on employer rate increases to 1.0% in FY '11. Raise Tier I employee rate by 1.0% in FY '11. Increase Tier I multiplier to 1.85% for future service.

Funding Solution Option Variations

- The Joint Committee requested that KPERs prepare projections for six variations that are based on Options C and H.
- The factors differentiating the variations are the amount and timing of employer and member contribution increases, as well as which Tiers are included in member increases.

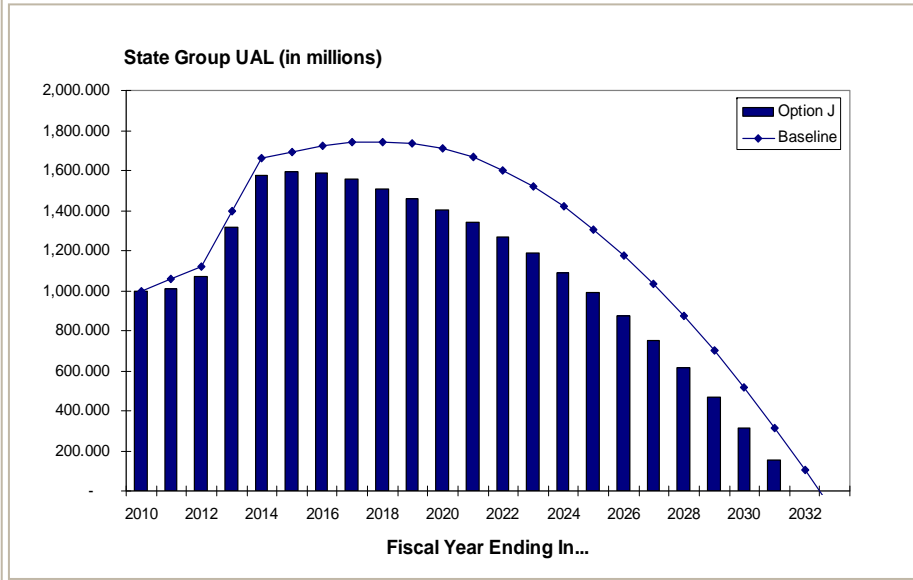
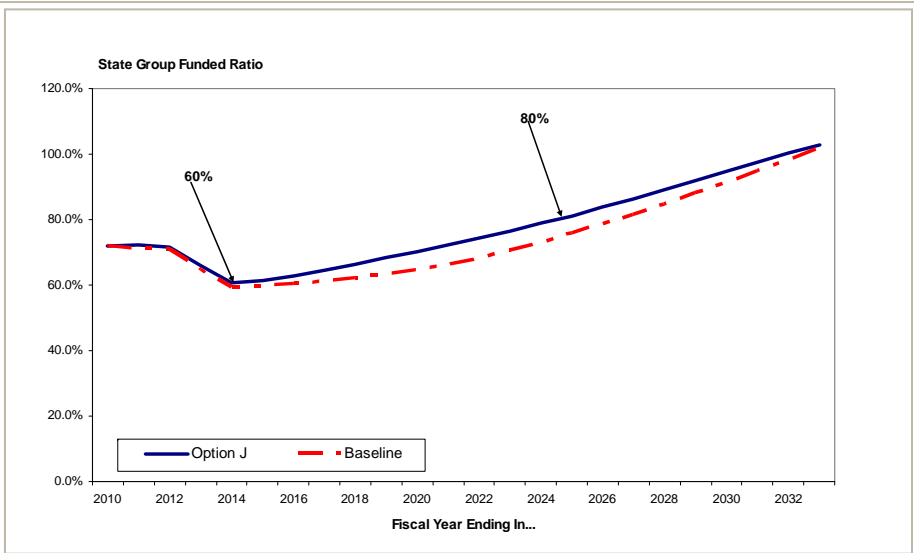
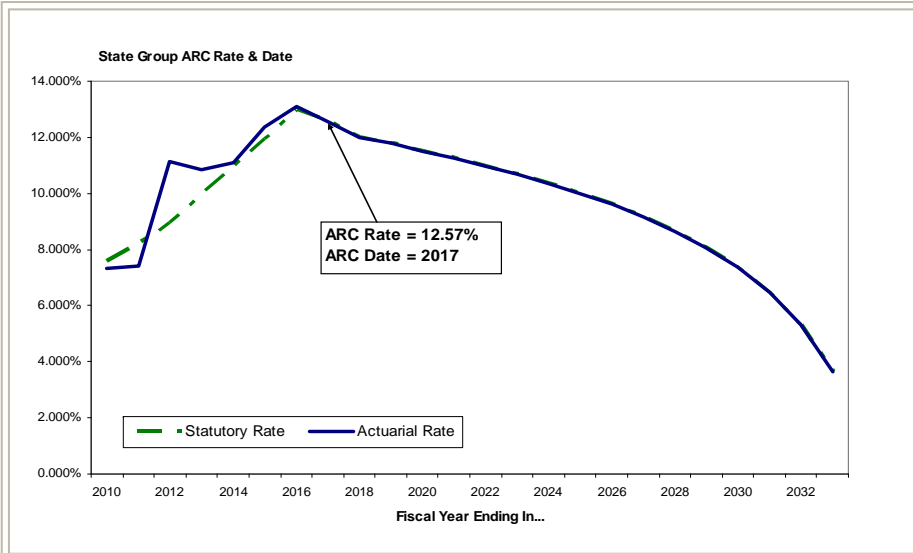
Variation 1 (Opt. J: Both Tiers & Opt. K: Tier 1)	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>
Raise employer rate increase cap to:	.8%	1.0%	--	--
Raise employee rate by:	0.5%	0.5%	0.5%	0.5%
Increase multiplier for future service to 1.85%.				

Variation 2 (Opt. L: Both Tiers & Opt. M: Tier 1)	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>
Raise employer rate increase cap to:	1.0%	--	--	--
Raise employee rate by:	1.0%	1.0%		
Increase multiplier for future service to 1.85%.				

Variation 3 (Opt. N: Both Tiers & Opt. O: Tier 1)	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>
Raise employer rate increase cap to:	.8%	1.0%	--	--
Raise employee rate by:	1.0%	1.0%	--	--
Increase multiplier for future service to 1.85%.				

State Group: Option J

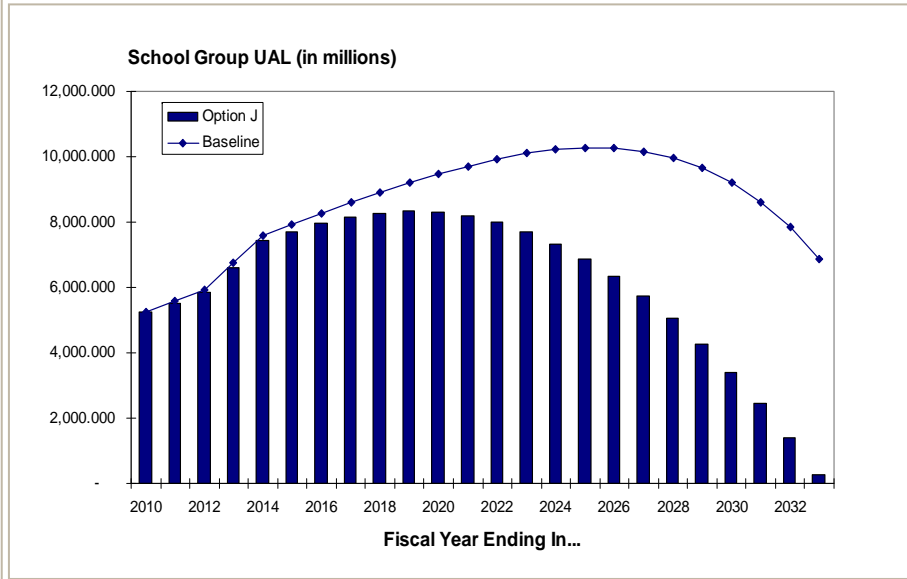
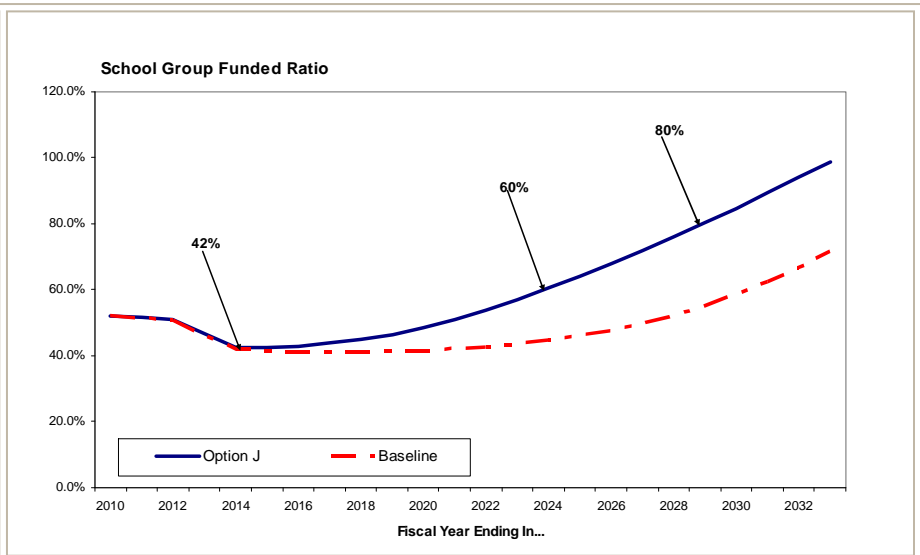
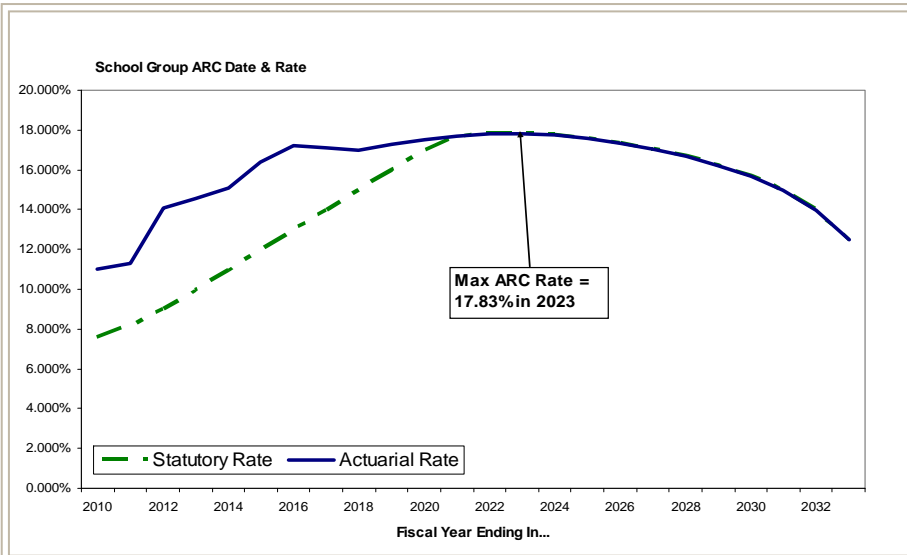
▪ Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tiers I & 2 employee rate by 0.5% in each of four years, beginning in FY '12 . Increase Tiers I & 2 multiplier to 1.85% for future service.



- The projected ARC rate rises to 12.57% in FY 2017 – very similar to Option C without the multiplier increase.
- The funded ratio projections reach a low of 60.7% in FY 2014.
- The funded ratio recovers to 80% in FY 2025 –two years earlier than the Baseline.
- The projected UAL peaks at \$1.59 billion in FY 2015 – three years earlier and \$151 million less than the Baseline.

School Group: Option J

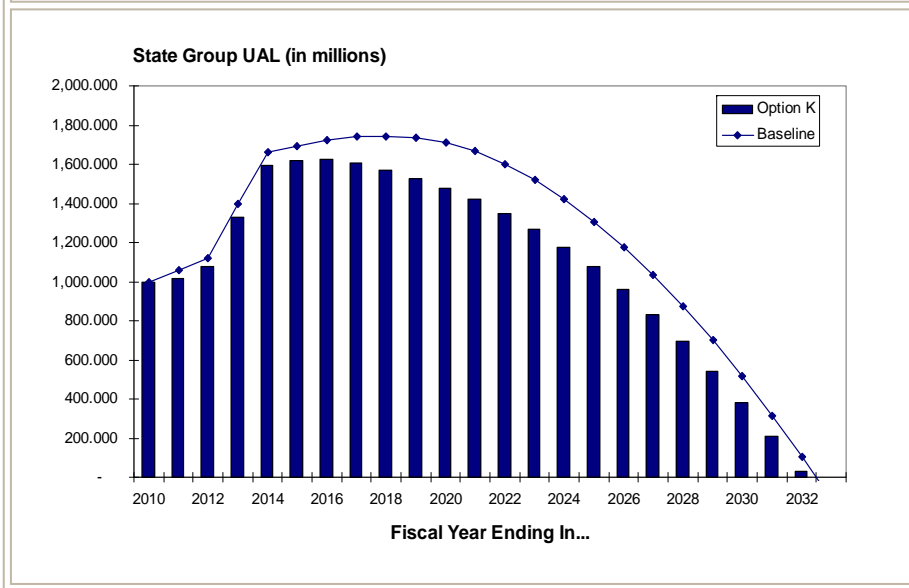
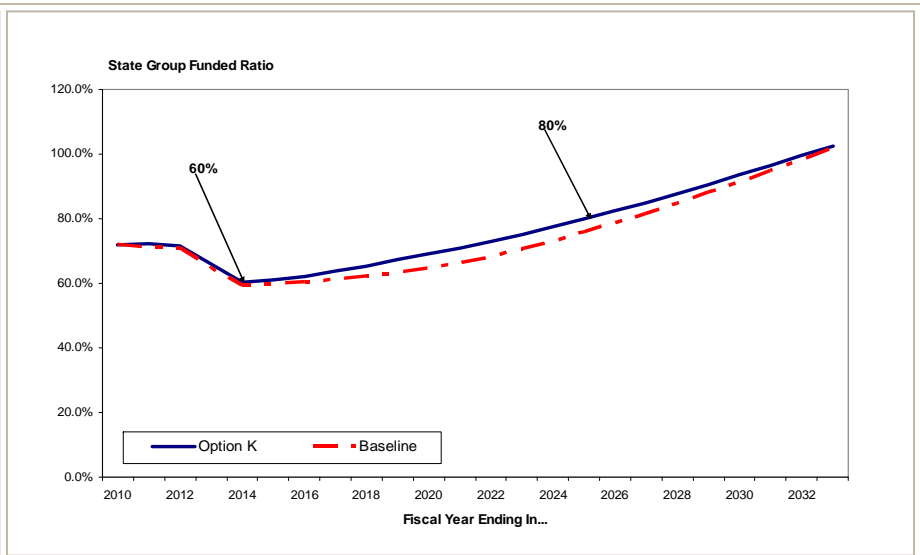
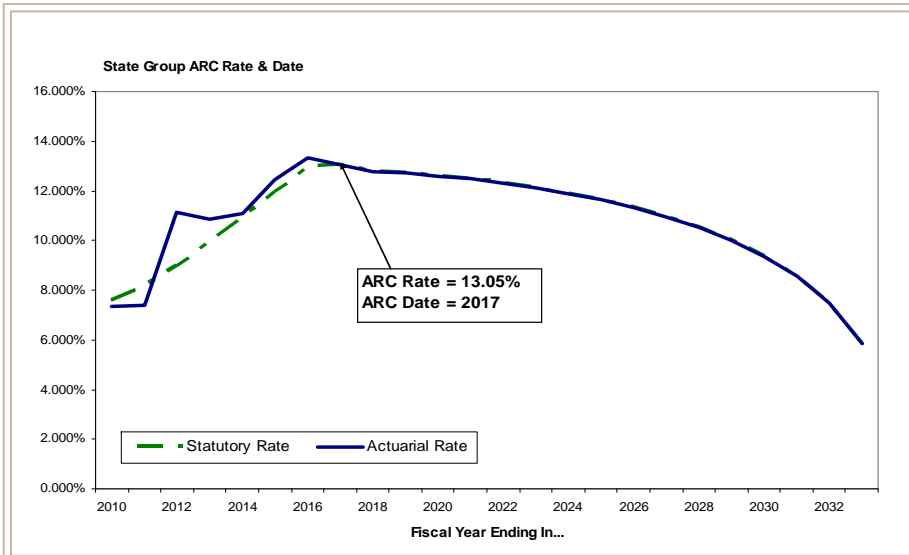
▪ Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tiers I & 2 employee rate by 0.5% in each of four years, beginning in FY '12 . Increase Tiers I & 2 multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 17.83% in FY 2023 – two years later and 1% higher than Option C.
- The funded ratio falls to a low of 42.4% in FY 2014 and remains below 50% for a total of eight years.
- The funded ratio reaches 60% in FY 2024 and 80% by FY 2029 – similar to Option C.
- The projected UAL peaks at \$8.34 billion in FY 2019 – six years earlier and \$1.94 billion less than the Baseline.

State Group: Option K

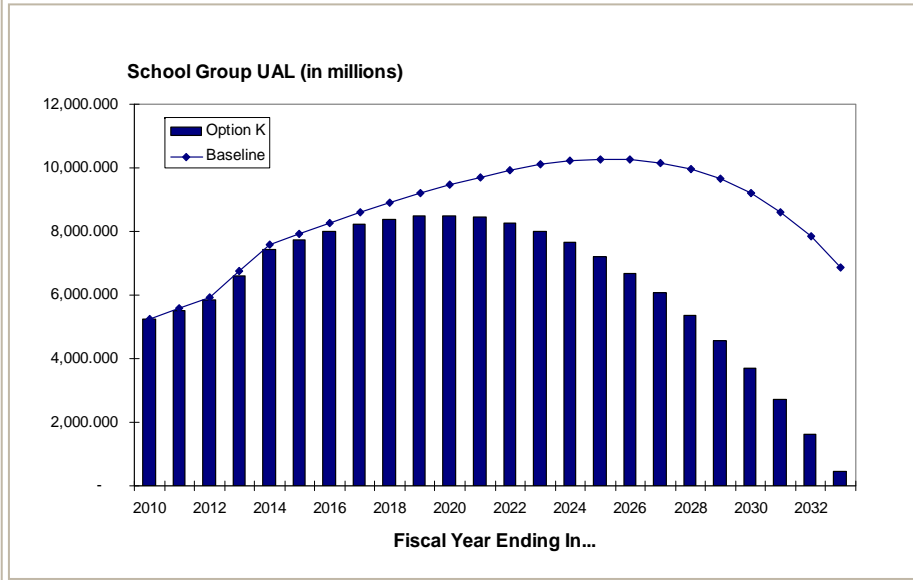
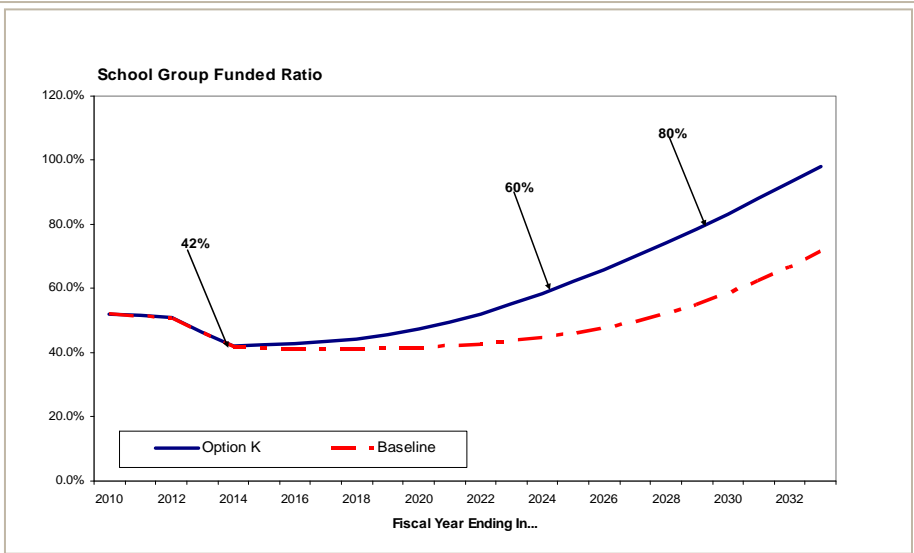
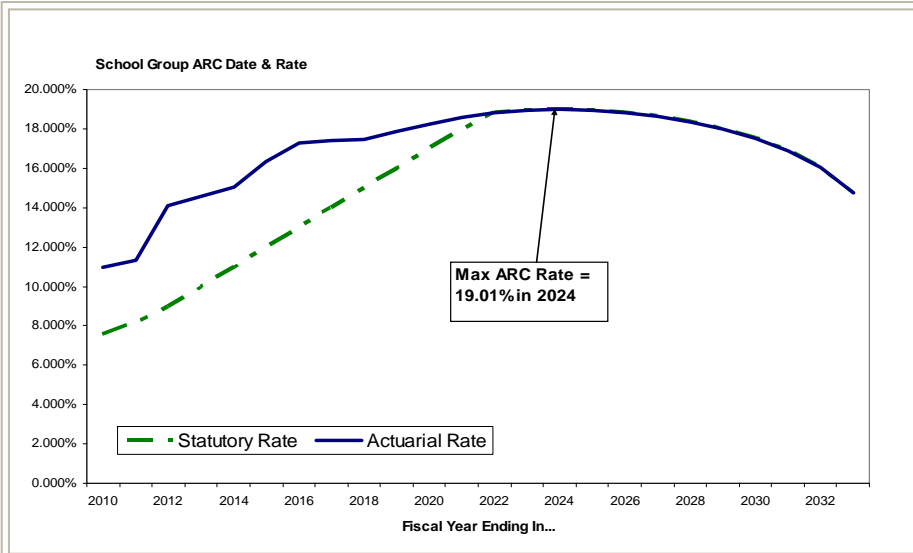
▪ Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I employee rate by 0.5% in each of four years, beginning in FY '12. Increase Tier I multiplier to 1.85% for future service.



- The projected ARC rate rises to 13.05% in FY 2017 – approximately .5% more than Option J.
- The funded ratio projections reach a low of 60.4% in FY 2014.
- The funded ratio recovers to 80% in FY 2026.
- The projected UAL peaks at \$1.62 billion in FY 2016 – \$30 million more than Option J.

School Group: Option K

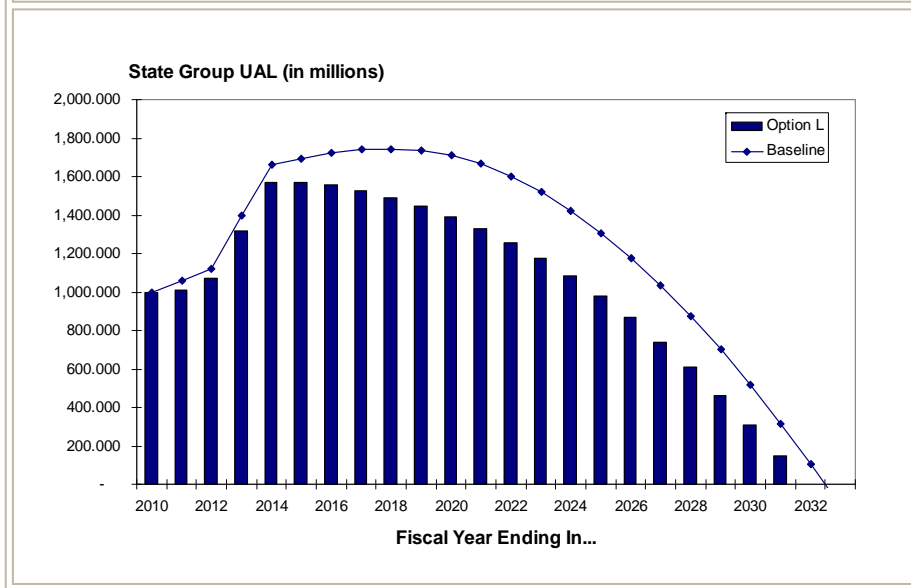
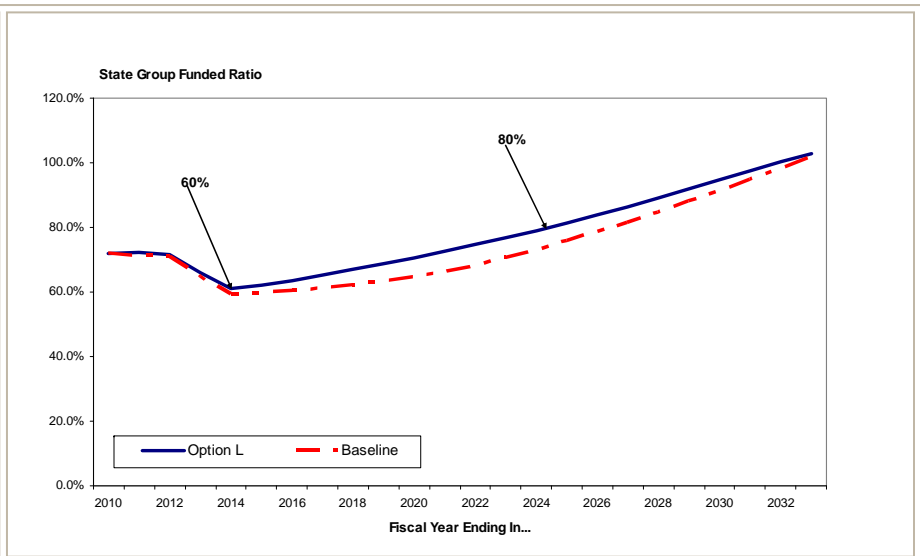
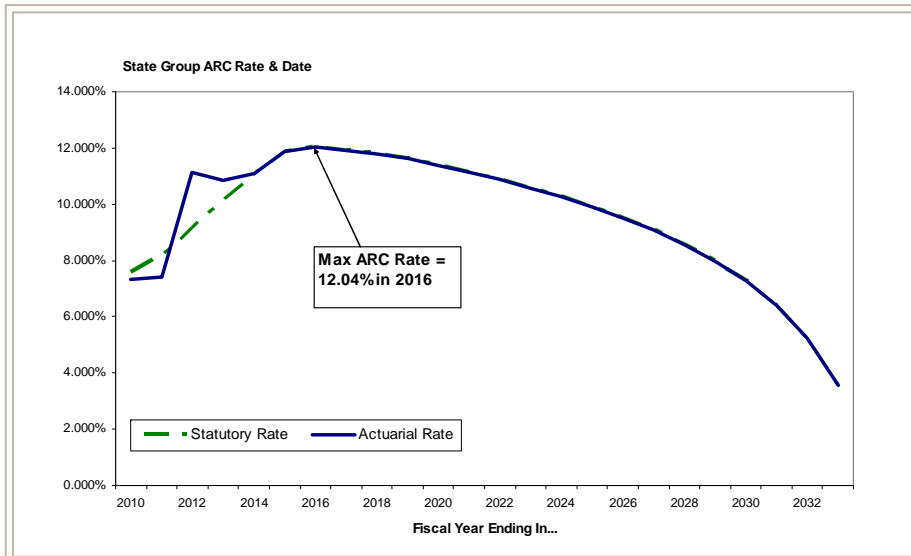
▪ Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I employee rate by 0.5% in each of four years, beginning in FY '12. Increase Tier I multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 19.01% in FY 2024 – 1.18% more than Option J.
- The funded ratio falls to a low of 42.3% in FY 2014 and remains below 50% for a total of nine years.
- The funded ratio reaches 60% in FY 2025 and 80% by FY 2030.
- The projected UAL peaks at \$8.50 billion in FY 2020 – \$165 million more than Option J.

State Group: Option L

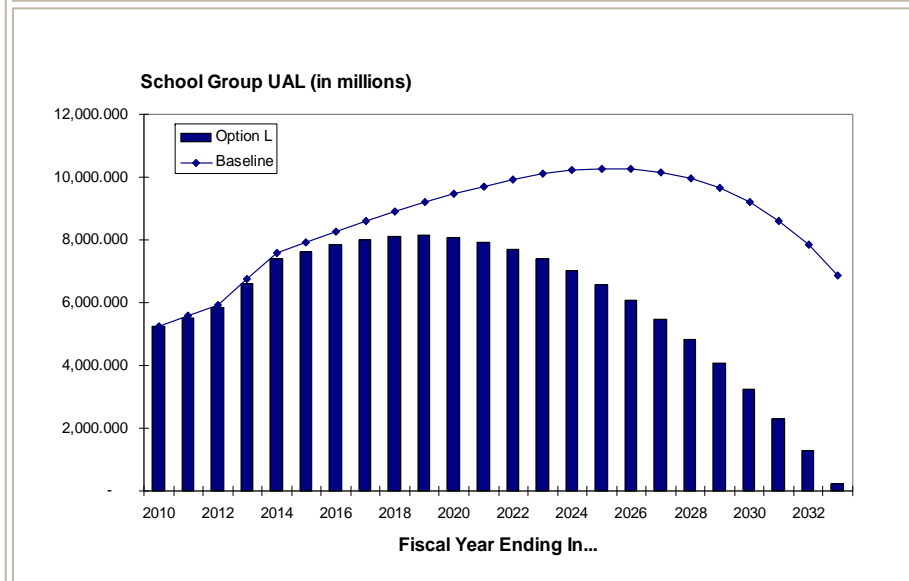
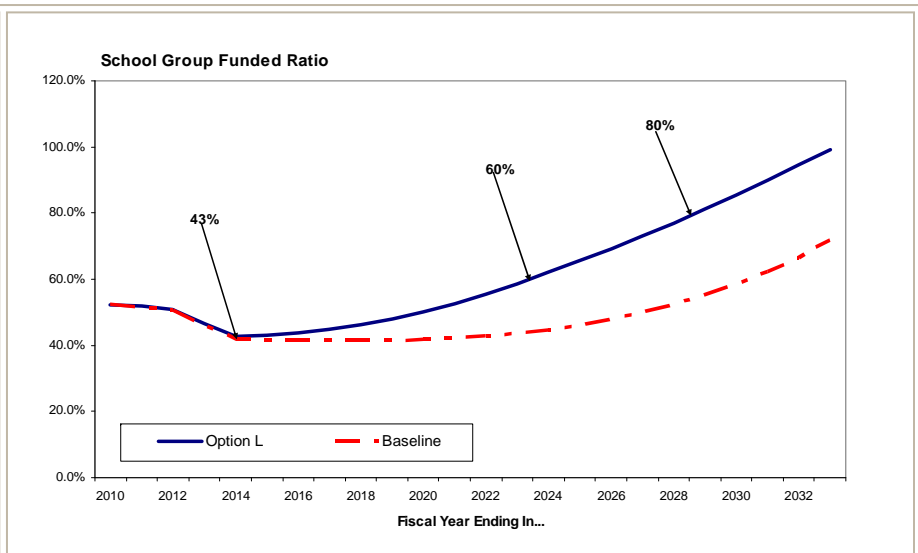
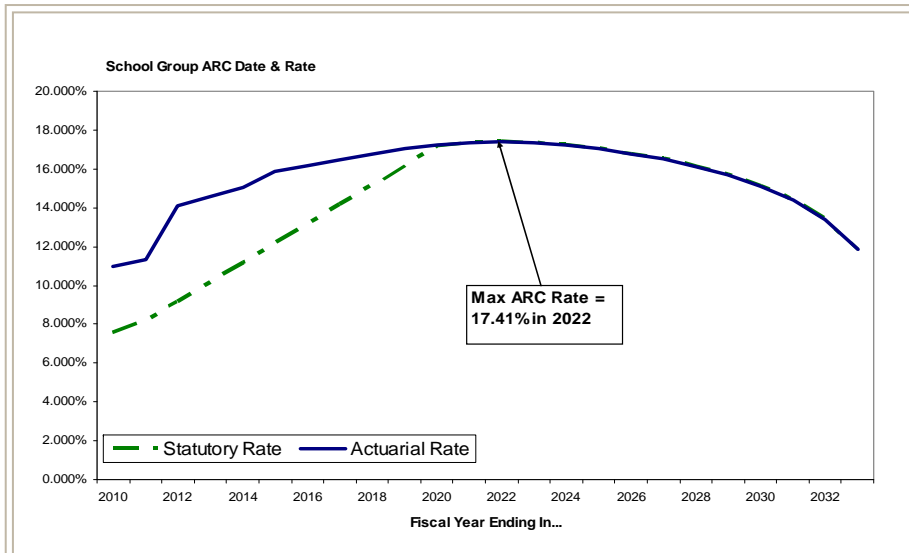
- Raise cap on employer rate increases to 1.0% in FY '12. Raise Tiers I & 2 employee rate by 1.0% in FY '12 and in FY '13. Increase Tiers I & 2 multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 12.04% in FY 2016 – one year earlier and .5% less than Option J.
- The funded ratio projections reach a low of 60.9% in FY 2014.
- The funded ratio recovers to 80% in FY 2025.
- The projected UAL peaks at \$1.57 billion in FY 2015 – \$24 million less than Option J.

School Group: Option L

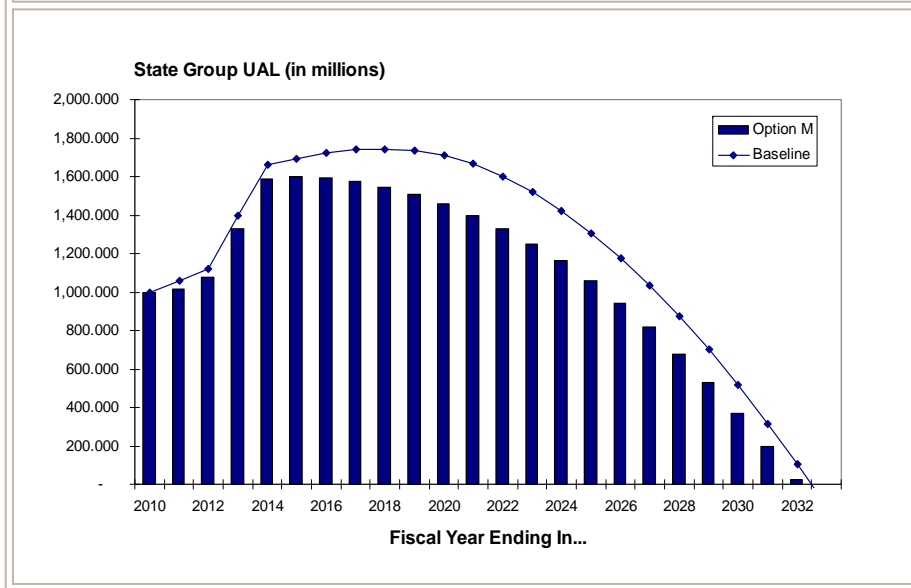
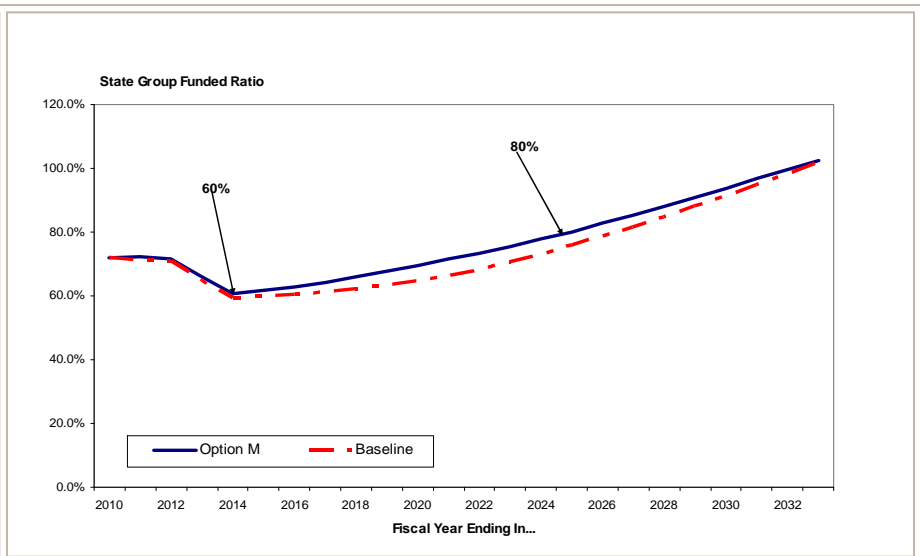
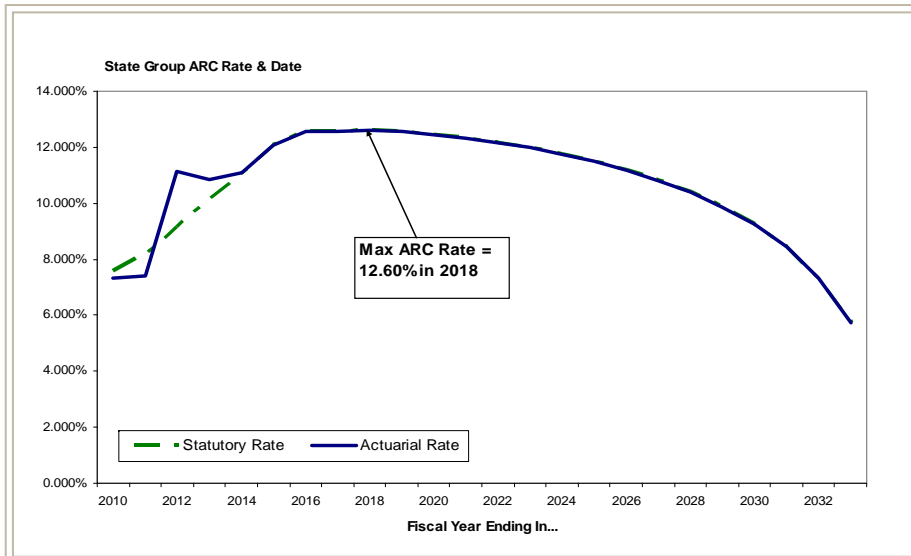
▪ Raise cap on employer rate increases to 1.0% in FY '12. Raise Tiers I & 2 employee rate by 1.0% in FY '12 and in FY '13. Increase Tiers I & 2 multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 17.41% in FY 2022 – one year earlier and .42% less than Option J.
- The funded ratio falls to a low of 42.6% in FY 2014 and remains below 50% for a total of seven years.
- The funded ratio reaches 60% in FY 2024 and 80% by FY 2029.
- The projected UAL peaks at \$8.13 billion in FY 2019 – \$207 million less than Option J.

State Group: Option M

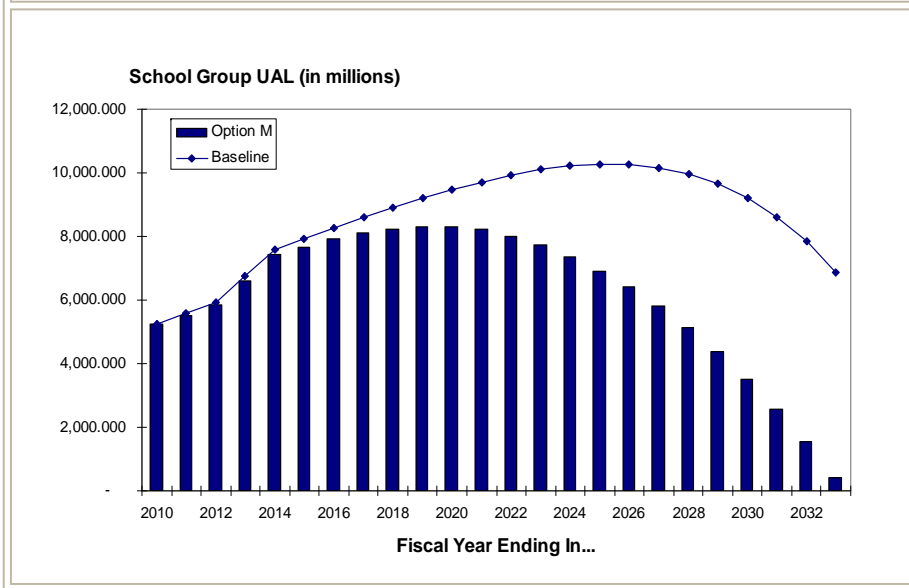
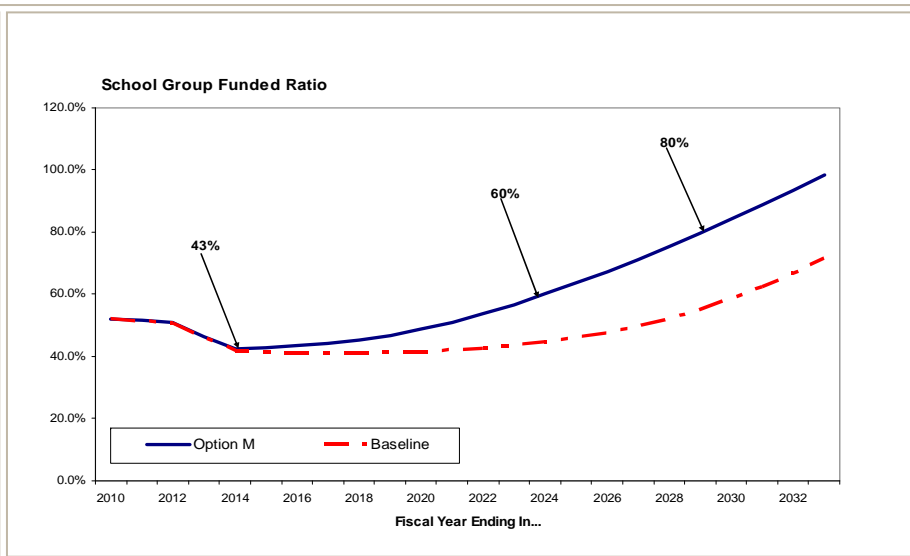
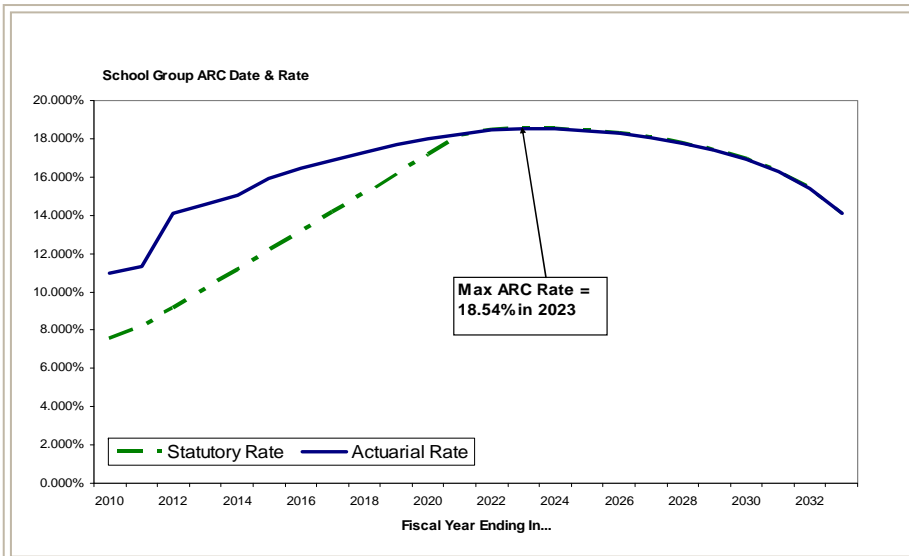
- Raise cap on employer rate increases to 1.0% in FY '12. Raise Tier I employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 12.60% in FY 2018 – two years later and .56% more than Option L.
- The funded ratio projections reach a low of 60.6% in FY 2014.
- The funded ratio recovers to 80% in FY 2025.
- The projected UAL peaks at \$1.60 billion in FY 2015 – \$29 million more than Option L.

School Group: Option M

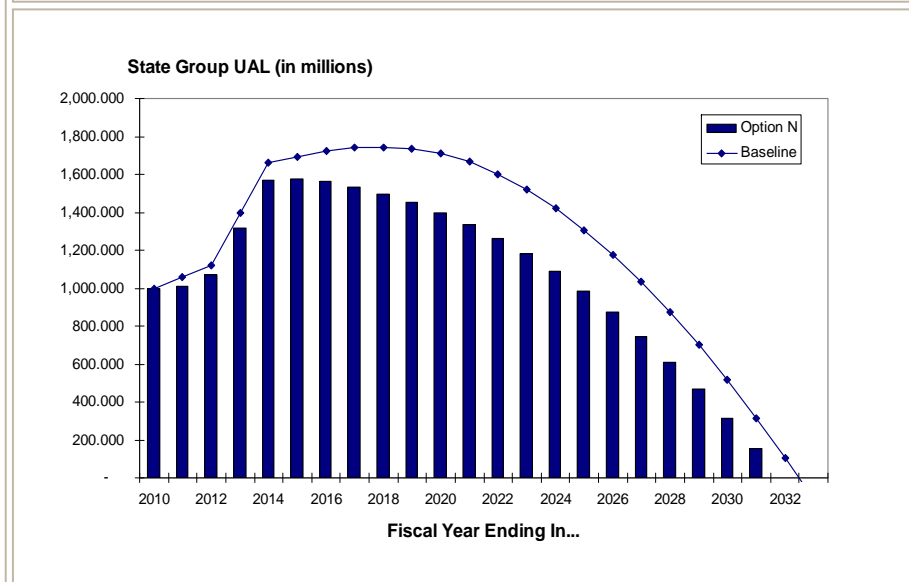
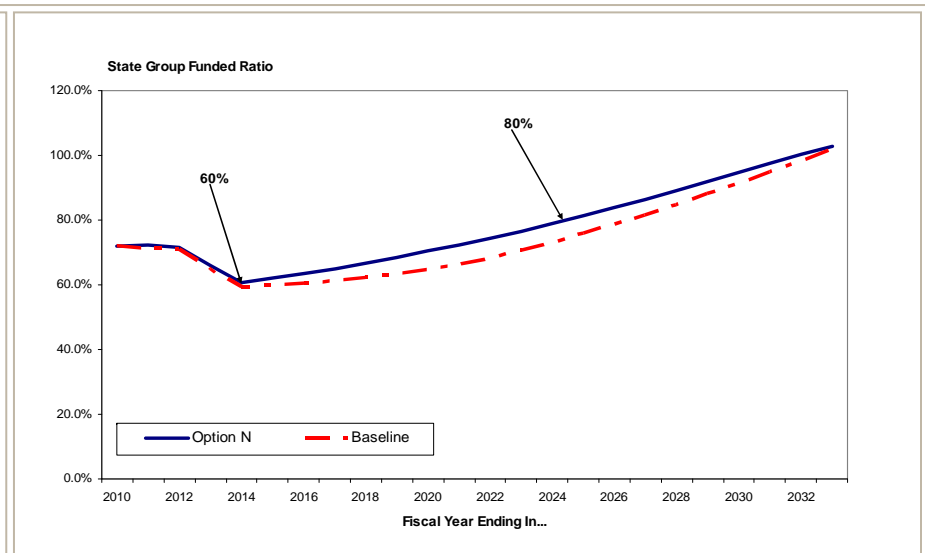
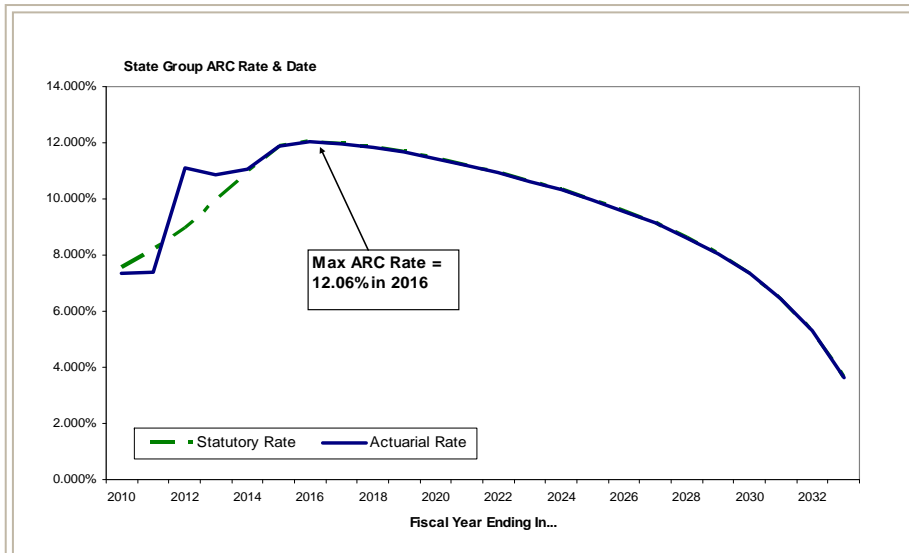
▪ Raise cap on employer rate increases to 1.0% in FY '12. Raise Tier I employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 18.54% in FY 2023 – one year later and 1.13% more than Option L.
- The funded ratio falls to a low of 42.5% in FY 2014 and remains below 50% for a total of eight years.
- The funded ratio reaches 60% in FY 2024 and 80% by FY 2030.
- The projected UAL peaks at \$8.31 billion in FY 2019 – \$177 million more than Option L.

State Group: Option N

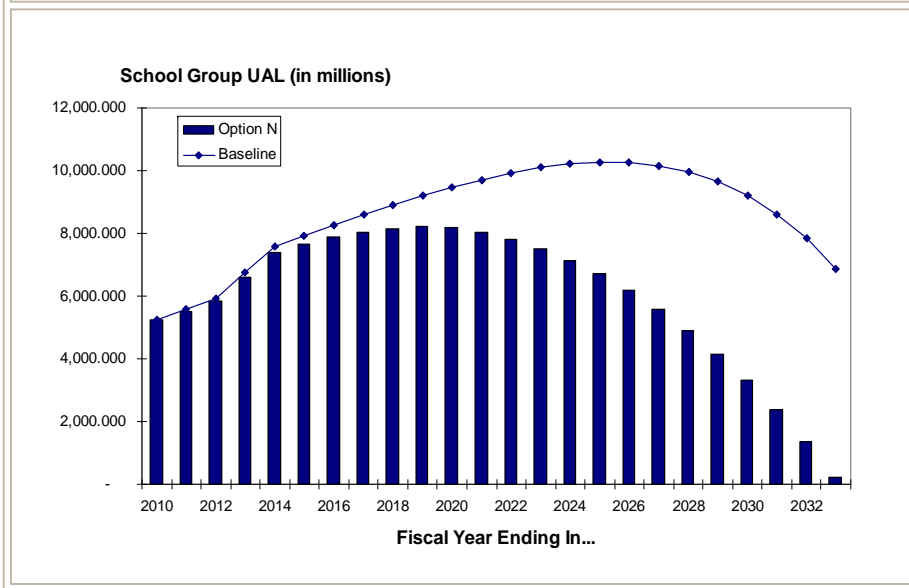
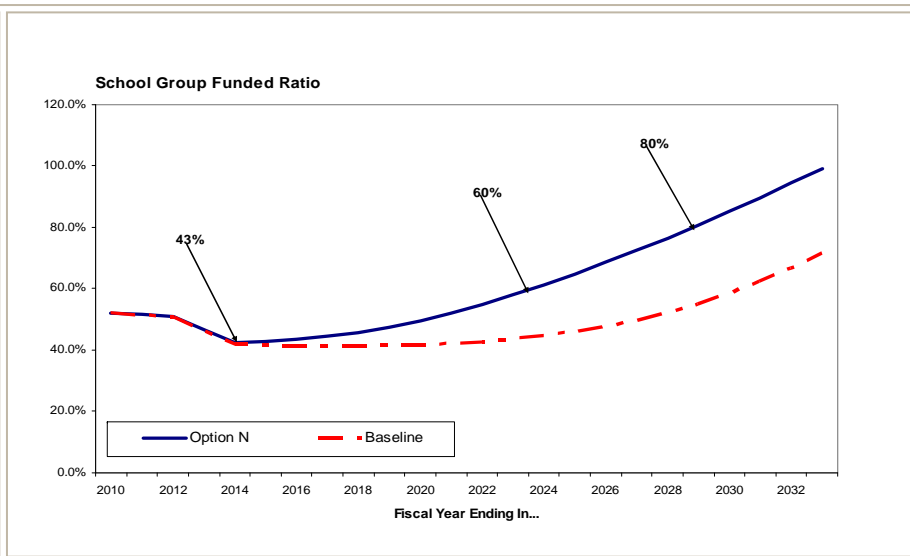
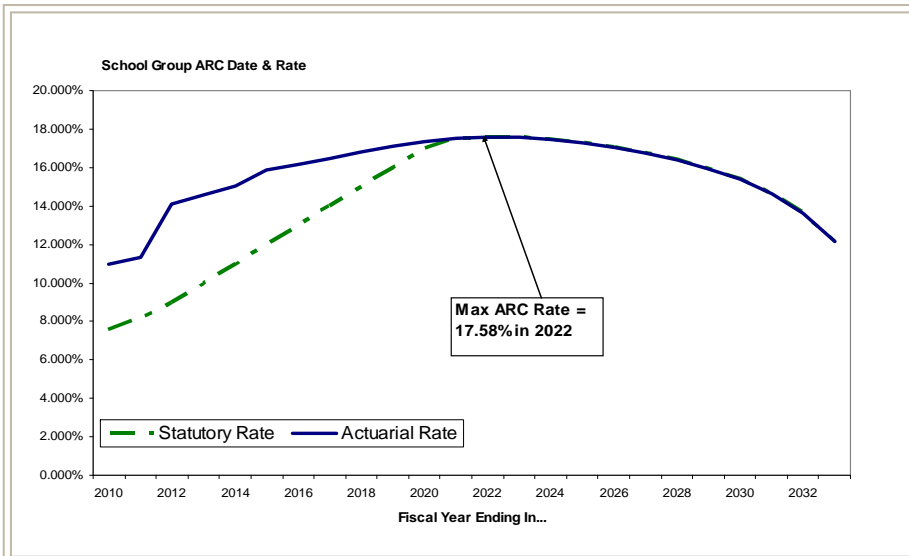
▪ Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I & 2 employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I & 2 multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 12.06% in FY 2016 – one year earlier and .5% less than Option J.
- The funded ratio projections reach a low of 60.8% in FY 2014.
- The funded ratio recovers to 80% in FY 2025.
- The projected UAL peaks at \$1.57 billion in FY 2015 – \$19 million less than Option J.

School Group: Option N

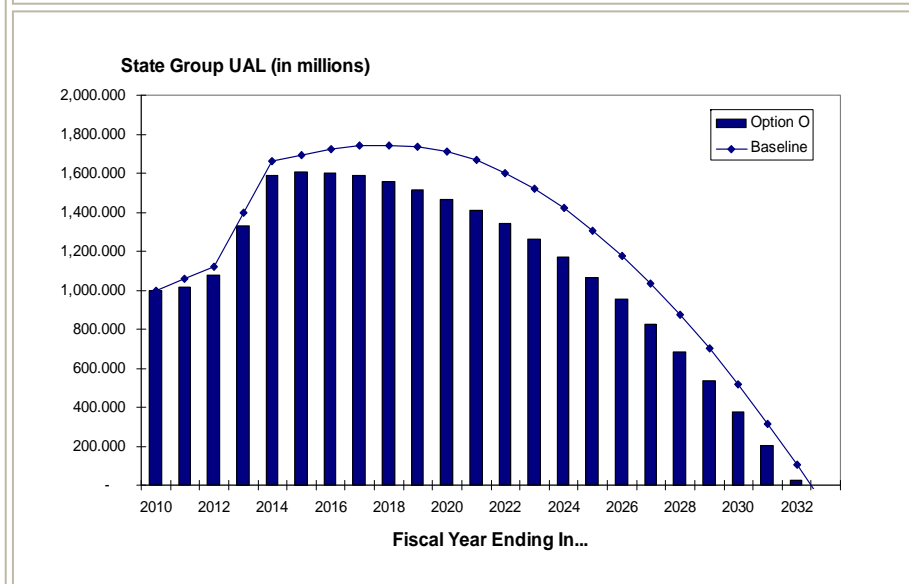
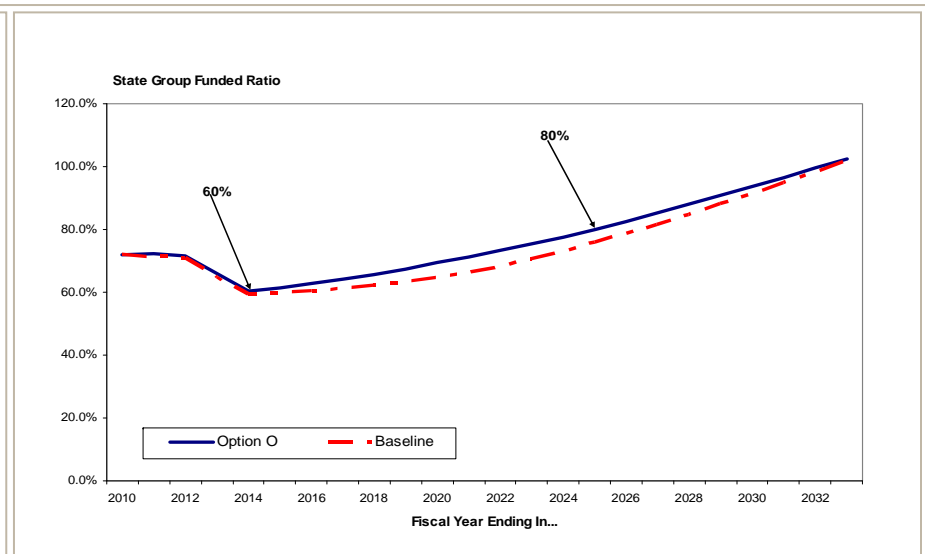
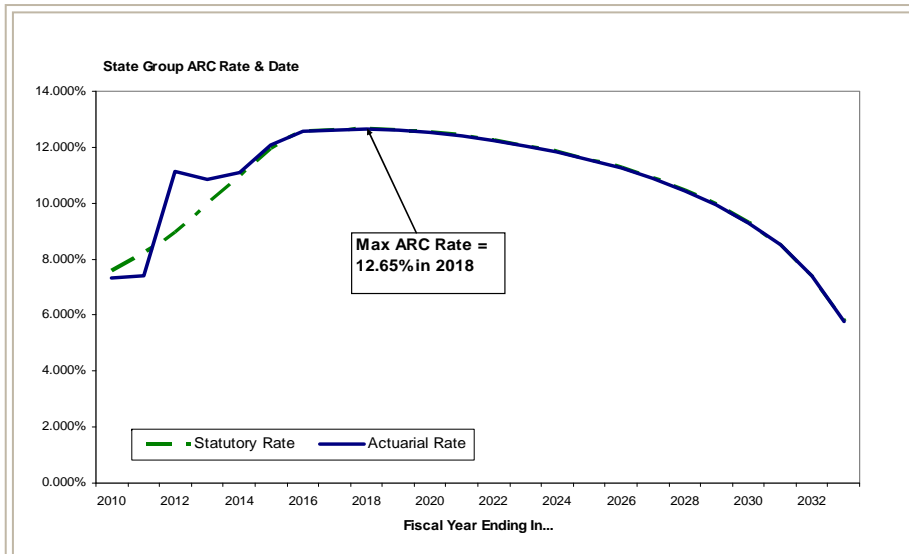
▪ Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I & 2 employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I & 2 multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 17.58% in FY 2022 – one year earlier and .25% less than Option J.
- The funded ratio falls to a low of 42.5% in FY 2014 and remains below 50% for a total of eight years.
- The funded ratio reaches 60% in FY 2024 and 80% by FY 2029.
- The projected UAL peaks at \$8.2 billion in FY 2019 – \$130 million less than Option J.

State Group: Option O

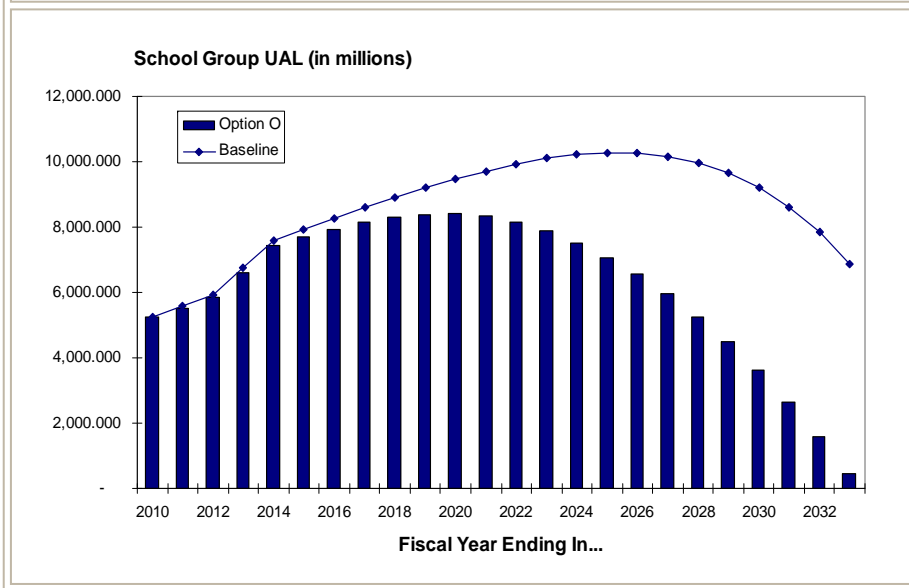
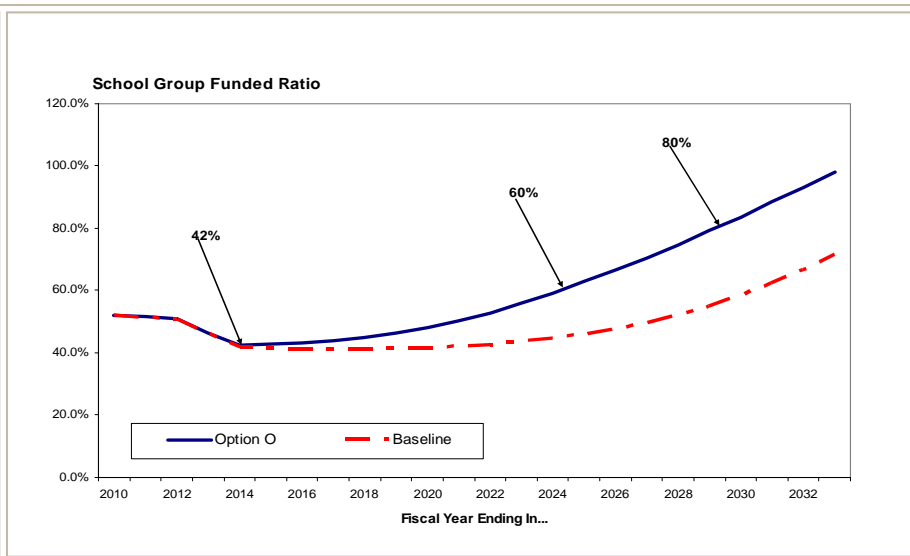
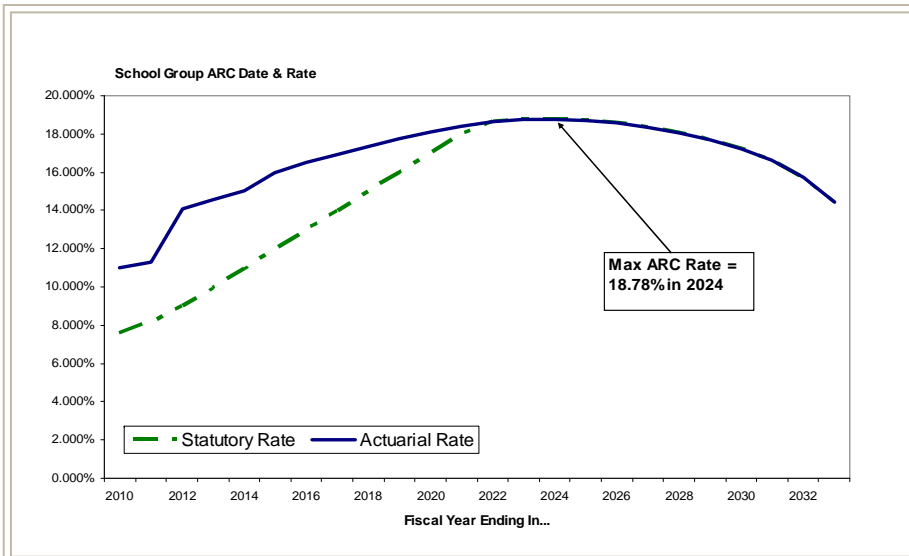
▪ Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 12.65% in FY 2018 – two years later and .59% more than Option N.
- The funded ratio projections are similar to Options K and M – reaching a low of 60.5% in FY 2014.
- The funded ratio recovers to 80% in FY 2025.
- The projected UAL peaks at \$1.60 billion in FY 2015 – \$29.5 million more than Option N.

School Group: Option O

▪ Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 18.78% in FY 2024 – two years later and 1.2% higher than Option N.
- The funded ratio falls to a low of 42.4% in FY 2014 and remains below 50% for a total of eight years.
- The funded ratio reaches 60% in FY 2025 and 80% by FY 2030.
- The projected UAL peaks at \$8.40 billion in FY 2020 – \$188 million more than Option N.

Effect on State Contributions

Option J* Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option J</u>	<u>Additional ER Contributions</u>
FY 2012 Increase in Employer Contributions	\$38.13	\$47.52	\$9.39
FY 2012 Total Employer Contributions	\$411.70	\$421.09	\$9.39
FY 2015 Increase in Employer Contributions	\$44.80	\$66.62	\$21.82
FY 2015 Total Employer Contributions	\$538.96	\$610.35	\$71.39
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$23,006.01	(\$971.64)

Option K** Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option K</u>	<u>Additional ER Contributions</u>
FY 2012 Increase in Employer Contributions	\$38.13	\$47.52	\$9.39
FY 2012 Total Employer Contributions	\$411.70	\$421.09	\$9.39
FY 2015 Increase in Employer Contributions	\$44.80	\$66.62	\$21.82
FY 2015 Total Employer Contributions	\$538.96	\$610.35	\$71.39
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$24,557.87	\$580.22

*Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tiers I & 2 employee rate by 0.5% in each of four years, beginning in FY '12. Increase Tiers I & 2 multiplier to 1.85% for future service.

** Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I employee rate by 0.5% in each of four years, beginning in FY '12. Increase Tier I multiplier to 1.85% for future service.

Effect on State Contributions

Option L* Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option L</u>	<u>Additional ER Contributions</u>
FY 2012 Increase in Employer Contributions	\$38.13	\$56.91	\$18.78
FY 2012 Total Employer Contributions	\$411.70	\$430.48	\$18.78
FY 2015 Increase in Employer Contributions	\$44.80	\$66.91	\$22.11
FY 2015 Total Employer Contributions	\$538.96	\$620.55	\$81.59
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$22,570.82	(\$1,406.83)

Option M** Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option M</u>	<u>Additional ER Contributions</u>
FY 2012 Increase in Employer Contributions	\$38.13	\$56.91	\$18.78
FY 2012 Total Employer Contributions	\$411.70	\$430.48	\$18.78
FY 2015 Increase in Employer Contributions	\$44.80	\$66.91	\$22.11
FY 2015 Total Employer Contributions	\$538.96	\$620.55	\$81.59
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$24,155.06	\$177.41

*Raise cap on employer rate increases to 1.0% in FY '12. Raise Tiers I & 2 employee rate by 1.0% in FY '12 and in FY '13. Increase Tiers I & 2 multiplier to 1.85% for future service.

**Raise cap on employer rate increases to 1.0% in FY '12. Raise Tier I employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I multiplier to 1.85% for future service.

Effect on State Contributions

Option N* Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option N</u>	<u>Additional ER Contributions</u>
FY 2012 Increase in Employer Contributions	\$38.13	\$47.52	\$9.39
FY 2012 Total Employer Contributions	\$411.70	\$421.09	\$9.39
FY 2015 Increase in Employer Contributions	\$44.80	\$66.62	\$21.82
FY 2015 Total Employer Contributions	\$538.96	\$610.35	\$71.39
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$22,714.30	(\$1,263.35)

Option O** Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option O</u>	<u>Additional ER Contributions</u>
FY 2012 Increase in Employer Contributions	\$38.13	\$47.52	\$9.39
FY 2012 Total Employer Contributions	\$411.70	\$421.09	\$9.39
FY 2015 Increase in Employer Contributions	\$44.80	\$66.62	\$21.82
FY 2015 Total Employer Contributions	\$538.96	\$610.35	\$71.39
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$24,317.79	\$340.14

*Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I & 2 employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I & 2 multiplier to 1.85% for future service.

**Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I multiplier to 1.85% for future service.

2004 Pension Obligation Bonds

At the November meeting, the Joint Committee members requested information about the pension obligation bonds issued in February 2004. Key points regarding this bond issue include:

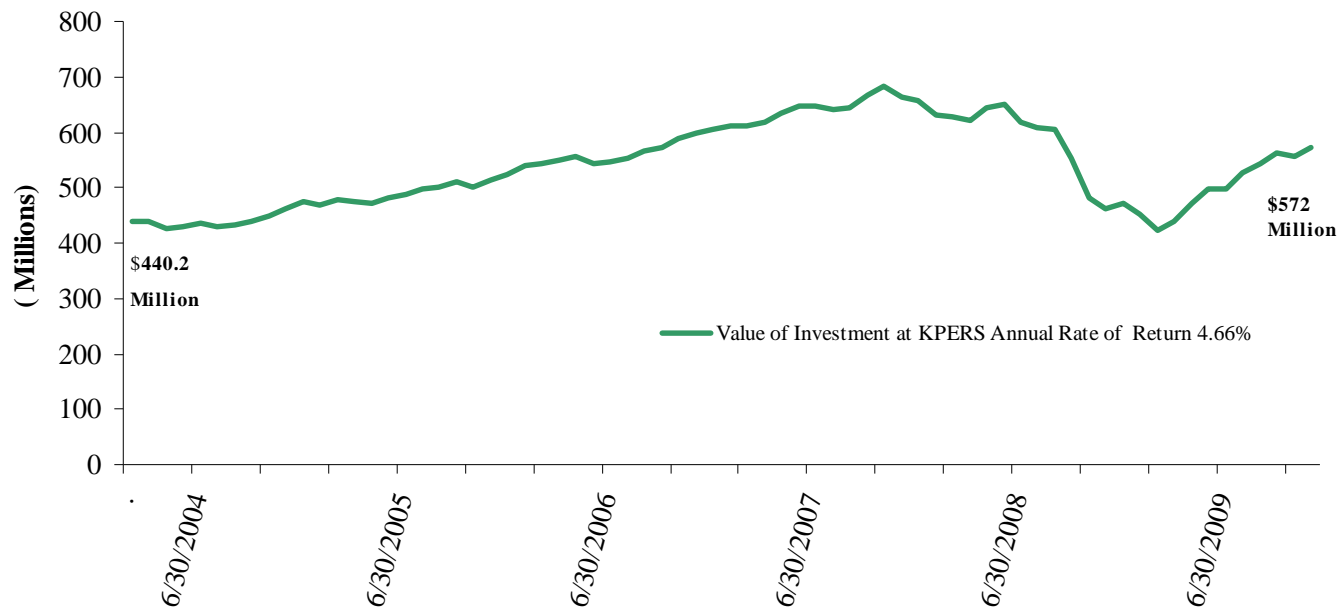
- The Kansas Development Finance Authority (KDFA) issued \$500 million of bonds on March 10, 2004, with an effective interest rate of 5.39 percent.
- The KPERS Fund received net proceeds of \$440.2 million.
- \$55 million of the bond proceeds were used for capitalized interest to lower the debt service in the first three years.
- Debt service on the bonds is paid by the State General Fund. The current annual payment is \$36.1 million through FY 2034.
- KDFA anticipates receiving a request from the Secretary of Administration to currently refund the May 1, 2010, \$10.415M Series 2004C principal payment in order to obtain current fiscal year budgetary relief. The refunding transaction was authorized by the State Finance Council at its meeting on September 3, 2009.

2004 Pension Obligation Bonds (Continued)

- The annualized return on the investment of the \$440.2 million through November 30, 2009, is 4.66 percent, which has generated an additional \$132 million in investment earnings to the KPERS Fund.
- See Appendix A for the Sources & Uses Table and Debt Service Schedule for these bonds.

Growth of 2004 Bond Proceeds

Investment Value of Proceeds of \$500 Pension Obligation Bonds



Pension Obligation Bond Options

At its November meeting, the Committee also requested that KPERs work with KDFA to model two pension obligation bond options. A key reason for considering these options was the substantial projected State budget shortfall in FY 2011 that makes it very difficult to increase employer contribution rates for the next few years.

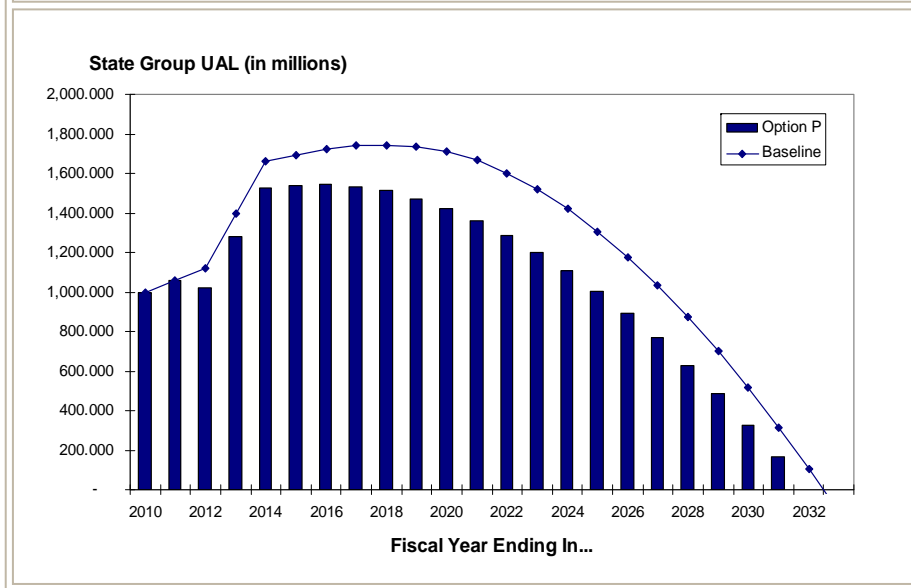
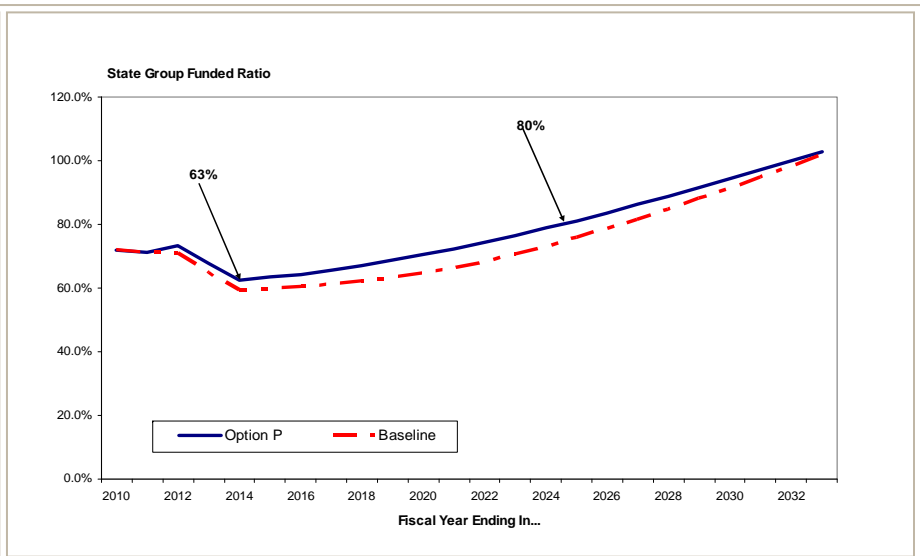
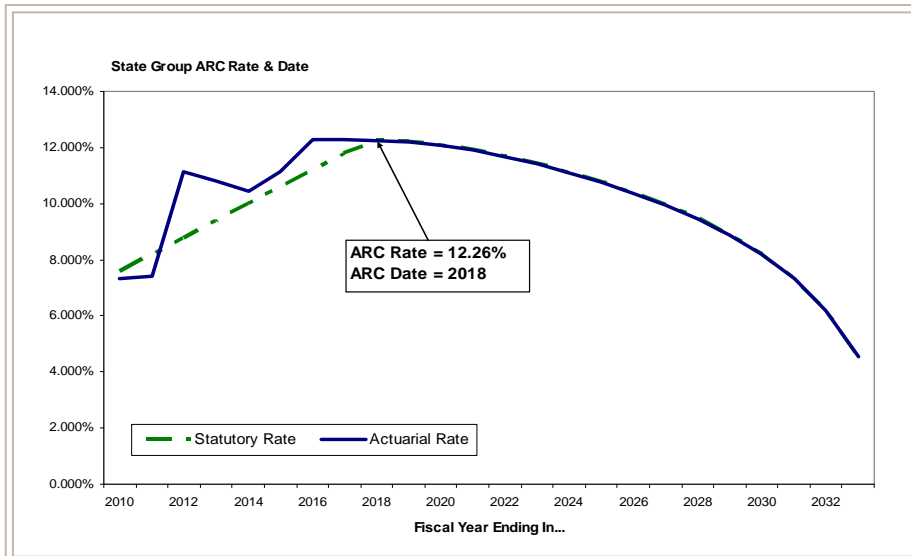
- **Bond Option P:** The approach in this option is for the State to make an “up-front” employer contribution through a bond issue that matches the present value of a 1% employee contribution increase. In addition, it assumes that member contributions are raised by 1.0% in FY 2012 for Tiers 1 and 2.
- **Bond Option Q:** The approach in this option is for the State to make an “up-front” employer contribution through a bond issue that matches the present value of raising the employer contribution cap from 0.6% to 1.0% (Option A). In addition, it assumes an employee contribution rate increase of .5% for Tiers 1 and 2 in each of four years, beginning FY 2012.

Bond Option P

- The approach in this option is for the State to make an up-front employer contribution that matches the present value of a 1% employee contribution increase.
- Assuming a 1.0% increase in the employee contribution rate for both Tiers 1 and 2, effective 7/1/11 (FY 2012), the net present value of the additional employee contributions through FY 2033 is \$590 million.
- In addition to the 1.0% increase in member contributions for Tiers 1 and 2, Option P “matches” these employee contributions with a bond issue of \$590 million (par amount of \$660.3 million).
- Option P is based on the following assumptions.
 - Issuance in 2010.
 - A 23-year amortization period.
 - Phased-in debt service.

State Group: Bond Option P

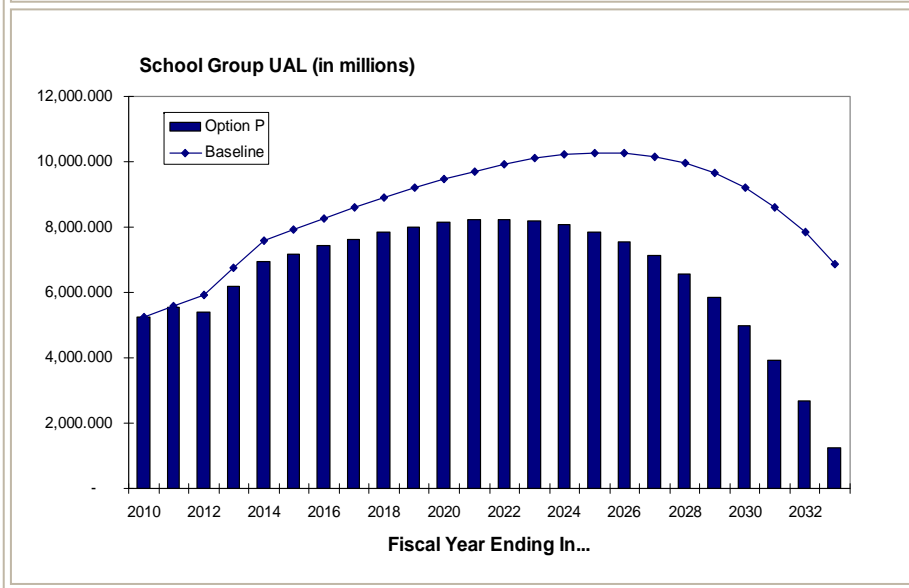
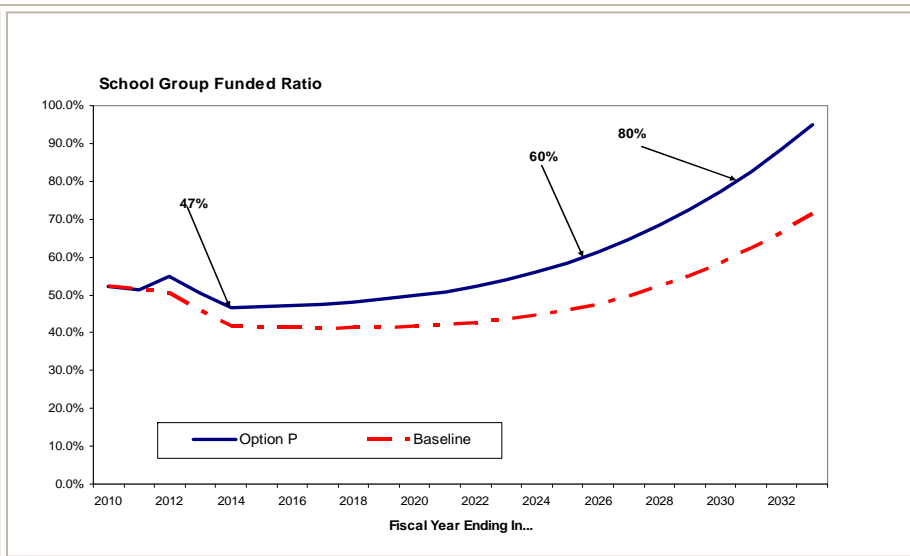
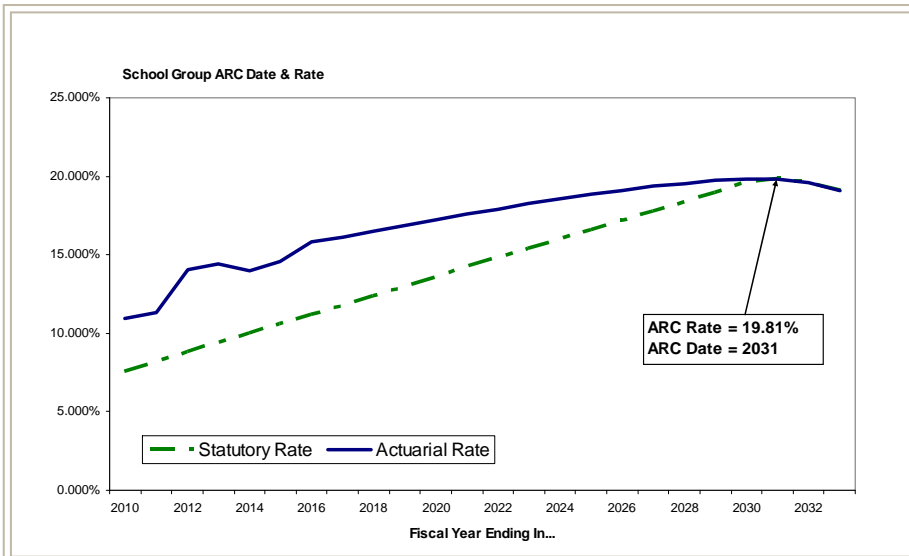
▪ Issue bonds with proceeds of \$590 million in 2010 with payments phased in beginning FY '13. Raise Tier I & 2 employee rate by 1.0% in FY '12.



- The projected ARC rate rises to a maximum of 12.26% in FY 2018 – four years earlier and 2.15% less than the Baseline.
- The funded ratio falls to a low of 62.6% in FY 2014 – 3.2% higher than the Baseline.
- The funded ratio reaches 80% by FY 2025.
- The projected UAL peaks at \$1.54 billion in FY 2016 – two years earlier and \$200 million less than the Baseline.

School Group: Bond Option P

▪ Issue bonds with proceeds of \$590 million in 2010 with payments phased in beginning FY '13. Raise Tier I & 2 employee rate by 1.0% in FY '12.



- The projected ARC rate rises to a maximum of 19.81% in FY 2031. The Baseline does not achieve ARC.
- The funded ratio falls to a low of 46.7% in FY 2014, 5.6% higher than the Baseline.
- The funded ratio reaches 60% in FY 2026 and 80% by FY 2031.
- The projected UAL peaks at \$8.23 billion in FY 2022 – \$2 billion less than the Baseline.

Option P: State Contributions and Debt Service

Fiscal Year	Baseline*		Option P: \$590 Million Bond Issue*			Total Increase in Annual State Outlays*
	State/School Current Contributions (0.6% Cap)	Annual Increase in Contributions	Option P: State/School Contributions (0.6% Cap)	SGF Debt Service Payments	Total State Payment	
2011	\$ 373.57	\$ 39.35	\$ 373.57	\$ -	\$ 373.57	\$ 39.35
2012	\$ 411.70	\$ 38.13	\$ 411.70	\$ -	\$ 411.70	\$ 38.13
2013	\$ 451.81	\$ 40.11	\$ 451.81	\$ 36.69	\$ 488.50	\$ 76.80
2014	\$ 494.17	\$ 42.36	\$ 494.17	\$ 36.69	\$ 530.86	\$ 79.05
2015	\$ 538.96	\$ 44.79	\$ 538.96	\$ 58.36	\$ 597.32	\$ 103.15
2020	\$ 805.78	\$ 59.76	\$ 805.78	\$ 58.36	\$ 864.14	\$ 118.12
2025	\$ 1,164.48	\$ 80.45	\$ 1,164.48	\$ 58.36	\$ 1,222.84	\$ 138.81
2033	\$ 2,004.25	\$ 126.70	\$ 1,857.81	\$ 58.36	\$ 1,916.17	\$ 185.06
Total	\$ 23,977.65		\$ 23,775.54	\$1,182.24	\$ 24,957.78	

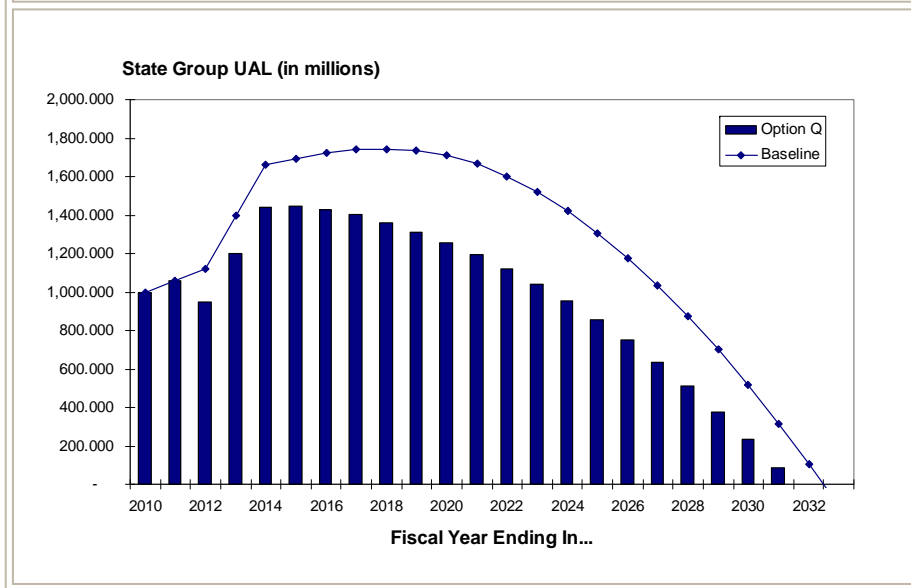
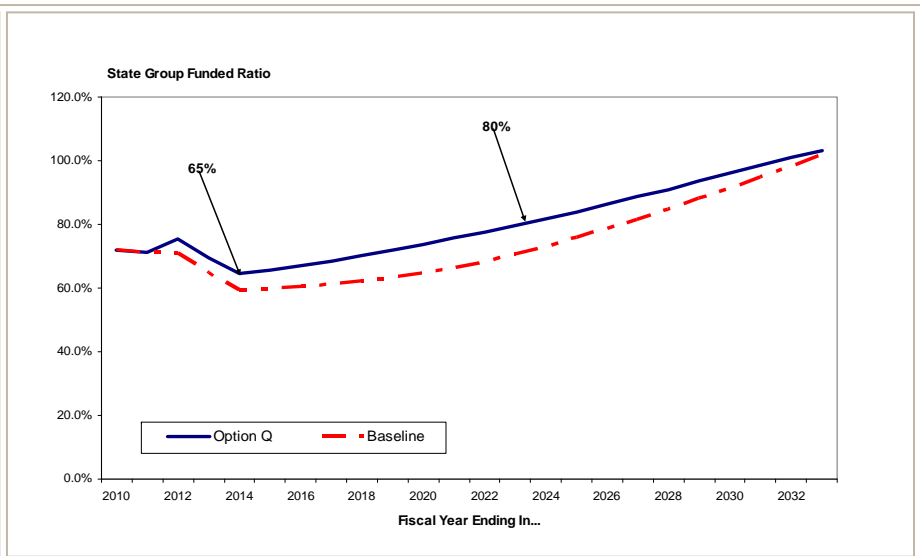
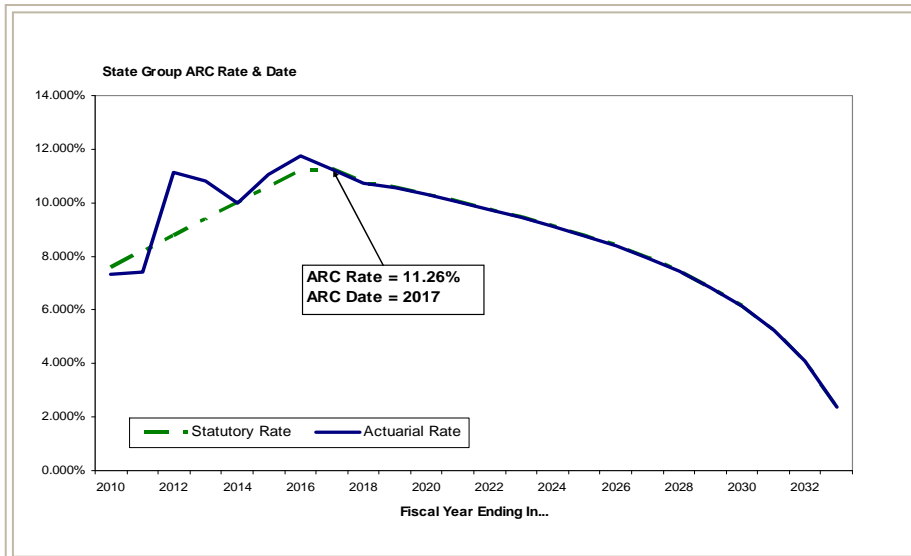
* In millions

Bond Option Q

- Option A raises the cap on employer contribution rate increases to 1% per year beginning in FY 2011.
- When compared to the Baseline employer contributions with a .6% cap, Option A results in additional employer contributions of \$1.5 billion through the end of the actuarial amortization period (FY 2033).
- The net present value of that payment stream is equivalent to \$1.055 billion.
- Option Q replaces the additional employer contribution increases generated by a 1% cap with a bond issue of \$1.055 billion (par amount of \$1.2 billion). In addition, it includes an increase in member contributions of .5% for both Tiers 1 and 2 in each of four years, beginning FY 2012.
- Option Q is based on the following assumptions:
 - Issuance in 2010.
 - A 23-year amortization period.
 - Phased-in debt service.

State Group: Bond Option Q

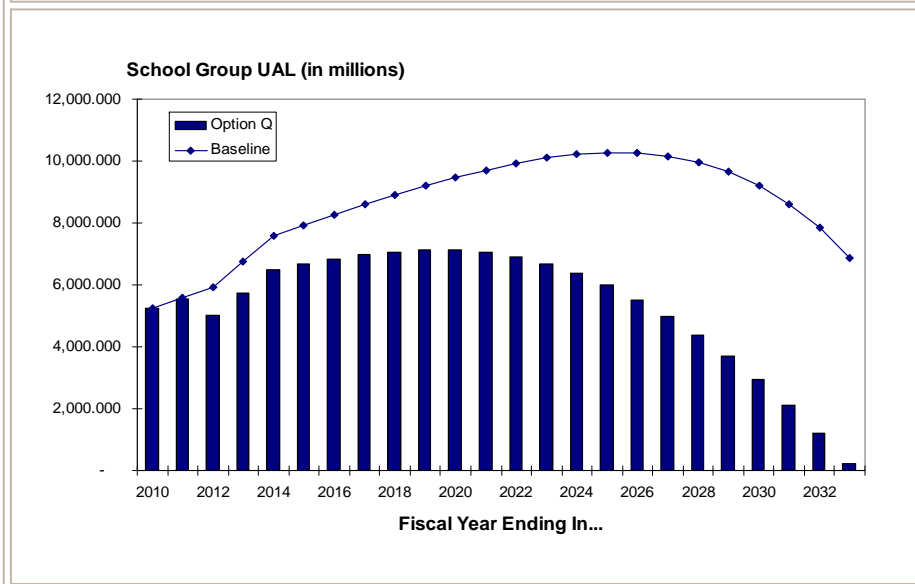
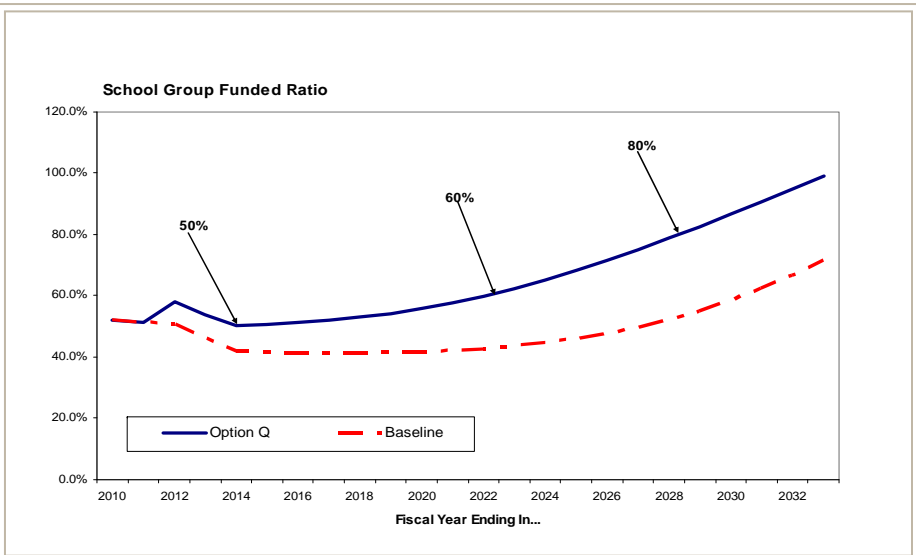
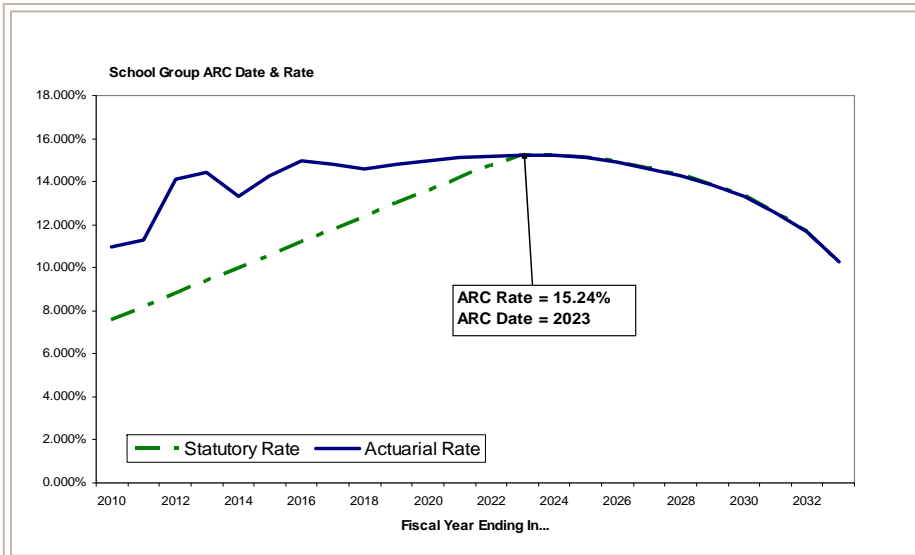
- Issue bonds with proceeds of \$1.055 billion in 2010 with payments phased in, beginning FY '13.
- Raise Tier I & 2 employee rate by .05% in each of four years, beginning in FY '12.



- The projected ARC rate rises to a maximum of 11.26% in FY 2017 – 1.0% lower and one year earlier than Option P.
- The funded ratio dips to 64.7% in FY 2014 and reaches 80% by FY 2024.
- The projected UAL peaks at \$1.44 billion in FY 2015 – \$100 million less and one year earlier than Option P.

School Group: Bond Option Q

- Issue bonds with proceeds of \$1.055 billion in 2010 with payments phased in, beginning FY '13. Raise Tier I & 2 employee rate by .05% in each of four years, beginning in FY '12.



- The projected ARC rate rises to a maximum of 15.24% in FY 2023 – 4.6% lower and 8 years earlier than Option P.
- The funded ratio falls to a low of 50.2% in FY 2014. This is the only option that remains above 50% through FY 2033.
- The funded ratio reaches 60% in FY 2023 and 80% by FY 2029.
- The projected UAL peaks at \$7.13 billion in FY 2019 -- \$1.1 billion less and three years earlier than Option P.

Option Q: State Contributions and Debt Service

Fiscal Year	Baseline*		Option Q: \$1.055 Billion Bond Issue*			Total Increase in Annual State Outlays*
	State/School Current Contributions (0.6% Cap)	Annual Increase in Contributions	Option Q: State/School Contributions (0.6% Cap)	SGF Debt Service Payments	Total State Payment	
2011	\$ 373.57	\$ 39.35	\$ 373.57	\$ -	\$ 373.57	\$ 39.35
2012	\$ 411.70	\$ 38.13	\$ 411.70	\$ -	\$ 411.70	\$ 38.13
2013	\$ 451.81	\$ 40.11	\$ 451.81	\$ 65.55	\$ 517.36	\$ 105.66
2014	\$ 494.17	\$ 42.36	\$ 494.17	\$ 65.55	\$ 559.72	\$ 107.91
2015	\$ 538.96	\$ 44.79	\$ 538.96	\$ 104.26	\$ 643.22	\$ 149.05
2020	\$ 805.78	\$ 59.76	\$ 805.78	\$ 104.26	\$ 910.04	\$ 164.02
2025	\$ 1,164.48	\$ 80.45	\$ 1,061.41	\$ 104.26	\$ 1,165.67	\$ 184.71
2033	\$ 2,004.25	\$ 126.70	\$ 965.89	\$ 104.26	\$ 1,070.15	\$ 230.96
Total	\$ 23,977.65		\$ 19,625.62	\$2,112.03	\$ 21,737.65	

* In millions

Observations Regarding Options

A review of all options illustrates various trade-offs and limitations, some of which are summarized below:

ARC Rates and Dates

- The State Group is currently at its ARC of 7.34%, but the ARC will rise to 14.41% in FY 2022 under the Baseline. The School Group is out of actuarial balance under the Baseline.
- ARC rates will rise over a period of years under all options presented to the Committee – for 6 to 8 years for the State Group and 7 to 21 years for the School Group.
 - The State Group’s maximum ARC rate ranges from 11.25% to 14.00%.
 - While all options bring the School Group into actuarial balance, many are at very high ARC rates after 10 to 15 years of annual increases.
 - The School Group’s maximum ARC rate varies from 15.24% to 20.68%.
- For both Groups, Option Q results in the lowest ARC rate and Option E the highest.
 - Option Q: \$1.055 billion bond issue with a 2% increase in member contributions phased in over four years.
 - Option E: Phase in a 1% cap on employer contribution rate increases. No employee rate increases.

Observations Regarding Options (Continued)

Funded Ratios

- Increases in employer contributions, while necessary, will not substantially affect the funded ratio for a number of years until compounding of investment earnings has the opportunity to grow the new assets relative to liabilities.
- Under all options presented to the Committee, funded ratios continue falling through FY 2014.
 - The State Group's lowest funded ratios are clustered around 60%, while the School Group's low point primarily falls between 41% to 45%.
- A funded ratio of 80% and rising is generally considered to be a "healthy" level for public pension plans.
- Under the options presented to the Committee, both the State Group and School Group will remain below 80% funded for much of the remainder of the amortization period ending in FY 2033. Under most options –
 - The State Group reaches 80% funded around FY 2025.
 - The School Group reaches 80% funded around FY 2028 to FY 2030.

Observations Regarding Options (Continued)

- A funded ratio of 60% or below is generally considered to reflect severe underfunding that requires prompt remedial action.
 - The State Group's funded ratio hovers around 60% at its low point in FY 2014.
 - Under all options provided to the Committee, the School Group's funded ratio remains below 60% for 10 to 15 years, and it remains below 50% for 7 to 9 years under many of the options. As a result, the School Group will remain particularly vulnerable to further market downturns that result in investment performance below 8%.
- A major injection of money in the early years (such as through pension obligation bonds) or large, sustained investment returns in the near term may improve funded ratios somewhat faster than increases in employer and/or employee contributions alone.

Unfunded Actuarial Liability

- Under the Baseline, the State Group's UAL peaks at \$1.743 billion in FY 2018, and the School Group's UAL peaks at \$10.282 billion in FY 2025.
- As the investment losses from 2009 are smoothed in over the next four years, the UAL is expected to rise more steeply under all options. It will continue rising another one to six years.

Observations Regarding Options (Continued)

- All options provided to the Committee reduce the maximum UAL.
 - The reduction in the State Group's UAL ranges from 3% (Option E) to 17% (Option Q).
 - The reduction in the School Group's UAL ranges from 14% (Option E) to 31% (Option Q).

Effect of Additional Funding

- The timing, size and combination of additional funding sources – higher caps on employer rate increases, employee rate increases, or pension obligation bonds – affect all of the measures of the System's long-term funding status.
 - Providing additional funding quickly and in larger amounts results in –
 - The greatest reductions in the ARC rates and UAL.
 - A smaller decline in funded ratios through FY 2014.
 - Lower total employer contributions through the end of the amortization period.
 - Options G and Q provide examples of these effects.
 - Option G: 2% employer cap and 2% Tier 1 employee rate increase, both in FY 2011.
 - Option Q: \$1.055 billion bond issue with a 2% increase in member contributions phased in over four years.

Observations Regarding Options (Continued)

- Options involving delayed and smaller amounts of funding increases result in –
 - The highest UAL's and ARC rates, which rise to levels that may become unsustainable.
 - Greater declines in funded ratios through FY 2014.
 - Higher total employer contributions through the end of the amortization period.
- Options A and E provide examples of these effects.
 - Option A: 1% cap on employer contribution rate increases, effective FY 2011. No employee rate increases.
 - Option E: Phase in a 1% cap on employer contribution rate increases. No employee rate increases.



Appendix A