Office of the State Actuary
"Supporting financial security for generations."

PLANS 1 FUNDING POLICY REVIEW

Introduction

The Office of the State Actuary (OSA) submits this report based on the request of the Pension Funding Council (PFC) under the motion made at their July 25, 2022, meeting, which states:

> *The Office of the State Actuary, in consultation with the Pension Funding Work Group, will review the appropriateness of the unfunded actuarial accrued liability (UAAL) funding policy, including the provisions of RCW 41.45.150, and may recommend policy changes. Any recommended policy changes should attempt to reduce the risk of underfunding or overfunding and work to achieve employer rate and budget stability and predictability. The review should consider modifications to the minimum UAAL rates including when the UAAL rates would cease and be reinstated, if necessary. The Office of the State Actuary must report its findings to the Appropriations Committee of the House and Ways and Means Committee of the Senate by January 13, 2023. The report may include draft legislation, if needed.*

Based on the motion, OSA convened three meetings with the PFC Work Group (WG) to share our observations, analysis, and possible approaches to address funding goals for these plans. The meetings provided OSA with input from the WG to include in this report. Their input has been compiled in **Appendix A**.

The remainder of this report reflects the review and analysis performed by OSA and described under the following sections:

- **I. Executive Summary:** Summary of OSA's findings.
- **II. Background:** Details of the current funding policy and OSA's projections of contribution rates and funded status by plan.
- **III. OSA's Review of the UAAL Funding Policy:** Highlights of both the positive attributes and potential downside of the current funding policy.
- **IV. New Funding Policy Ideas:** OSA shares possible funding policy modifications that may better address specific funding goals.

Additional and supporting information may be found in the **Appendices** located at the end of this report.

We encourage you to submit any questions you might have regarding this report to our mailing address or our e-mail address at state.actuary@leg.wa.gov.

Respectfully Submitted,

Sarah Baker
Senior Actuarial Analyst

Graham Dyer
Senior Actuarial Analyst

Lisa A. Won, ASA, FCA, MAAA
Deputy State Actuary

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I. EXECUTIVE SUMMARY

At the request of the PFC, OSA analyzed both the current funding policy as well as several possible alternative methods for managing the Plans 1 Unfunded Actuarial Accrued Liability (UAAL). We then compared the alternative ideas to policy goals identified by the PFC (in their motion that called for this study) and highlighted the ideas that, in our opinion, best meet the PFC's goals. This report documents the results of that analysis.

We grouped and analyzed the current law funding policy and each funding policy alternative based on its ability to address one or more of the three components of Plans 1 UAAL funding:

- Achieving full funding.
- Maintaining full funding.
- Funding future benefit improvements.

OSA assessed the current funding policy for the Plans 1 UAAL as reasonable. The positive attributes include:

- The Public Employees' Retirement System (PERS) Plan 1 is expected to be fully funded in Fiscal Year (FY) 2026 and the Teachers' Retirement System (TRS) Plan 1 in FY 2023.
- The rate-setting process will collect contributions past the full funding date leading to an expected surplus which limits the risk that a Plan 1 UAAL reemerges in the future.

The potential downside of the current funding policy includes:

- Under current projections, the plans are expected to be funded above 100 percent if all assumptions are realized. This additional funding may be counter to the goal of affordability and may create surplus asset issues in the future.
- "Rate cliffs," or large changes in contribution rates from one biennium to the next, exist since the minimum rates are expected to be in place until the contributions shut off. If a UAAL reemerges and the current minimums are triggered, this creates another large change in rates from zero back up to the minimum rate. This would lead to rate and budget volatility.

As such, OSA assessed the current Plans 1 funding policy as heavily weighted towards plan solvency with a smaller emphasis on affordability and budget stability. This weighting may have been necessary to bring the chronically underfunded Plans 1 to their current, projected status. However, it may no longer be necessary as the plans approach and ultimately reach full funding.

With this assessment in mind, OSA reviewed several alternative policy ideas to improve the balance between the goals of plan solvency, affordability, and budget stability. Of the various ideas we reviewed in the **New Funding Policy Ideas** section, we identified two specific policy ideas for Reaching Full Funding that provide significant improvement to this balance:

1. Set minimum UAAL rates in statute that vary by fiscal year with recognition of delay period contributions[1].(**New Funding Policy Ideas**, Reaching Full Funding Idea #3). The minimum contribution rates would be structured to allow a glide path, or gradual decline, in contributions.
2. Eliminate minimum UAAL contribution rates in statute (**Appendix A, Remove Minimum Contribution Rates in Statute**). Future UAAL contribution rates would continue to be calculated using a ten-year rolling amortization period under current law.

Each of the above ideas are expected to result in full funding of the plans, eliminate large changes in contribution rates from one biennium to the next, and allow for a modest surplus of assets to protect against future adverse experience. These policy ideas may not be appropriate under different policy goals. Additionally, under adverse investment experience, for example, elimination of minimum UAAL contribution rates may not result in full funding. This outcome could be alleviated by including some smaller level of minimum rates.

For a comparison of current law and the two alternative policy ideas discussed above, we provide the following table with our expected projection results. We include both funded status and contribution rates for each policy and by plan. Additional information to support these results can be found throughout this report.

PERS Projections — Summary									
Current Law									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	0.00%	0.00%
Funded Status	85%	91%	99%	108%	120%	133%	146%	152%	160%
Reaching Full Funding Idea #3									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	3.50%	3.00%	2.50%	2.00%	1.50%	0.00%	0.00%	0.00%	0.00%
Funded Status	85%	90%	96%	102%	107%	110%	111%	112%	114%
WG Scenario — Remove Minimum UAAL Rate									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	3.50%	2.04%	2.04%	1.02%	1.02%	0.39%	0.39%	0.00%	0.00%
Funded Status	85%	89%	93%	96%	100%	103%	104%	105%	105%

[1] *Recognize the contributions collected between the rate-setting valuation measurement date and when the corresponding adopted contribution rates take effect.*

TRS Projections — Summary									
Current Law									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	5.75%	5.75%	5.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Funded Status	101%	111%	122%	126%	131%	137%	142%	147%	153%
Reaching Full Funding Idea #3									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	5.75%	3.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Funded Status	101%	107%	111%	115%	118%	122%	125%	128%	132%
WG Scenario — Remove Minimum UAAL Rate									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	5.75%	2.72%	2.72%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Funded Status	101%	107%	113%	117%	121%	125%	128%	132%	136%

Note: Includes $800 million lump sum payment on 6/30/2023.

While OSA has not made a recommendation regarding which, if any, of the ideas to pursue, we do recommend that if a new funding policy is enacted it includes new funding goals, as well as the contribution rates, if any, that would be calculated and collected if a UAAL reemerges after full funding has occurred.

Finally, we note that any changes made to the Plans 1 funding policy could impact the liquidity of the Commingled Trust Fund (CTF) and ultimately the investment earnings of the trust. For example, the Washington State Investment Board (WSIB) expects cash flow into the CTF based on our projections of contributions under current law plus the $800 million appropriation to TRS 1. If cash flows are reduced under a new Plan 1 funding policy and depending on the size and timing of those reductions, liquidity issues for the CTF could arise and may require selling assets earlier than expected.

II. BACKGROUND – CURRENT LAW FUNDING POLICY

Under current law, PERS 1 and TRS 1 UAAL rates have two components:

- **Base UAAL Rates –** The UAAL is amortized over a rolling ten-year period, as a level percentage of projected system payroll. This initial calculation is subject to minimum rates and excludes the unfunded cost of any post-2009 Plan 1 benefit improvements (see below).
  - All employers of PERS, the School Employees' Retirement System (SERS), and the Public Safety Employees' Retirement System (PSERS) members contribute toward the PERS 1 UAAL, while all employers of TRS members contribute towards the TRS 1 UAAL.
  - Employees do not make Plan 1 UAAL contributions.
  - A rolling amortization on its own may never reach full funding. Minimum contribution rates ensure complete amortization of the UAAL. The PERS 1 minimum rate is 3.50 percent and the TRS 1 minimum rate is 5.75 percent.
- **Amortization of Past Benefit Improvements –** The expected cost of benefit improvements enacted after June 30, 2009, is amortized over a fixed ten-year period. These rates are collected in addition to Base UAAL rates.

Based on current law, the minimum contribution rates apply to Base UAAL rate calculations until the actuarial value of assets equals one hundred percent of the Actuarial Accrued Liability (AAL) during a rate-setting valuation. For purposes of this calculation, we exclude the unfunded cost of any Plan 1 benefit improvements enacted after June 30, 2009. Contribution rates to amortize the expected cost of a Plan 1 benefit improvement cease after the completion of the fixed ten-year amortization period. As a result, rates to amortize benefit improvements may continue, or be added for future benefit improvements, after Base UAAL rates cease.

Current law is silent on what would happen if a Plan 1 UAAL reemerges after Base UAAL contributions ended. We assume the current Plan 1 funding policy will continue. As such, we assume employers would resume paying Base UAAL rates including minimum contribution rates, if applicable.

Under Engrossed Substitute Senate Bill 5092, the general fund-state is scheduled to appropriate $800 million to fund the TRS 1 UAAL. Given this is in current law, our Projections Model assumes this payment will occur on June 30, 2023, and will be an additional contribution over and above the Base UAAL contributions and benefit improvement amortization payments.

For details on the other assumptions and methods used in our projections, please see the **Actuarial Certification Letter**.

Current Law Projections

Our projection model estimates future PERS and TRS Plan 1 UAAL rates using assumptions for the future. The Base UAAL rates will be determined by future experience while rates used to amortize past benefit improvement costs are collected over a fixed ten-year period.

Using our projection model and assuming all experience will match the assumptions for the plans, we expect the Plans 1 UAALs will be paid off in FY 2026 for PERS and FY 2023 for TRS, excluding the remaining unfunded cost of benefit improvements. Under current law and rate adoption practices, we expect this will occur during the two-year rate-setting process in statute, so Base UAAL contributions will continue until the end of FY 2029 for PERS and FY 2025 for TRS. The following tables provide the projected Base UAAL contribution rates and funded status, excluding separately funded costs of benefit improvements.

PERS Projections — Current Law									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	0.00%	0.00%
Funded Status	85%	91%	99%	108%	120%	133%	146%	152%	160%

TRS Projections — Current Law									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	5.75%	5.75%	5.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Funded Status	101%	111%	122%	126%	131%	137%	142%	147%	153%

Note: Includes $800 million lump sum payment on 6/30/2023.

Absent any additional benefit improvements or change to current law, the following table displays rates to be collected in addition to the Base UAAL rates.

Benefit Improvement Contribution Rates — Current Law				
Fiscal Year	**2023-2028**	**2029-2030**	**2031-2032**	**2033+**
PERS	0.35%	0.25%	0.14%	0.00%
TRS	0.71%	0.50%	0.27%	0.00%

Sensitivity of Current Law Projections

The current law projections assume all experience of the plans match the assumptions. If experience differs from the assumptions, then the results will also differ. The most impactful assumption that may differ over short-term periods is the investment return assumption. While we expect the trust to earn 7.0 percent over the long-term, short-term volatility can impact the projected funded status and the resulting contribution rate requirements.

To test how sensitive our projection results are to the investment return assumption, we looked at what would happen under a different assumed FY 2023 return. When the CTF experiences significantly high returns, such as the 31.62 percent return in FY 2021, it is common to see some downturn in the market for a period afterwards. We saw a partial "give back" in FY 2022 with a 0.19 percent investment return on the trust fund assets. If we assume this same return of 0.19 percent occurs in FY 2023, instead of the expected 7 percent, below are the results of our projection model. For context, the current fiscal year-to-date (July through September) return on the CTF, as reported by WSIB, is (3.3) percent.

PERS Projections — Current Law Sensitivity									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	0.00%	0.00%
Funded Status	84%	89%	95%	103%	112%	123%	135%	139%	144%

TRS Projections — Current Law Sensitivity									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	5.75%	5.75%	5.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Funded Status	100%	108%	118%	120%	123%	127%	129%	133%	137%

Note: Includes $800 million lump sum payment on 6/30/2023.

Summary

The background information presented here serves as the framework for reviewing the current Plans 1 funding policy. This represents the current law framework from which we developed alternative funding policies. We compare alternatives to this framework and observe their sensitivity under the same FY 2023 return scenario outlined in this section.

III. OSA'S REVIEW OF THE UAAL FUNDING POLICY

To review the appropriateness of the current UAAL funding policy, OSA developed a decision framework that used the following components:

- Achieving full funding.
- Maintaining full funding.
- Funding future benefit improvements.

Within each component, we reviewed the balance achieved between each of the following pension funding goals:

- **Affordability –** Minimize state and local employer dollars allocated to Plans 1.
- **Plan Solvency –** Fully fund the plans and reduce the chance of a future UAAL.
- **Budget Stability –** Limit contribution rate cliffs (or large fluctuations in contribution rates from one fiscal year to the next) both before and after full funding.

Achieving Full Funding

As the Plans 1 approach full funding, it is our understanding that the current statutes and rate-setting process will require contributions to the UAAL past the date when each plan is assessed as being fully funded. As explained in the prior section, this occurs because the statutes require contributions to the UAAL to cease once an actuarial valuation determines them to be fully funded. However, the actuarial valuation completion has a lag of approximately one year from the measurement date. In addition, contributions remain in place until the biennium following the rate-setting adoption process.

For practical purposes, this would play out as follows: Assume for this illustration that full funding is achieved prior to completion of the *June 30, 2023, Actuarial Valuation Report* (AVR). That valuation will be complete in the summer of 2024. At that time, the PFC convenes to adopt contribution rates for the 2025-2027 Biennium. Thus, as an example, if the Plans 1 first become fully funded on the June 30, 2023, measurement date, contributions under current law wouldn't cease until July 1, 2025.

Assuming contributions are collected beyond the full funding date, the plans are expected to be more than 100 percent funded. In addition, if all assumptions are realized, the initial overfunding would continue to grow, increasing the funded status in future years. While this outcome limits the potential of a UAAL reemerging in the future, the excess contributions may be unaffordable for employer and state budgets and may exacerbate future issues regarding pension plan surplus assets.

Maintaining Full Funding

Once contributions to the UAAL cease, statutes aren't clear on what rates, if any, would be reinstated if a UAAL reemerges. In other words, we don't know if the current minimum rates would remain in effect, or whether the current rolling ten-year amortization of the UAAL would also remain in effect. We have assumed for purposes of this report that the Plans 1 funding policy would resume under this scenario, but the decision is not ours.

Further, if the current minimum rates remain (3.50 percent for PERS 1, and 5.75 percent for TRS 1), then the issue of rate cliffs continues which runs counter to the goal of budget stability. For the purpose of this report, we define a rate cliff as a large change in required contributions from one biennium to the next. For example, having a 3.50 percent rate in one biennium followed by a 0.00 percent rate in the next biennium. We also consider a rate cliff that goes in the other direction from, say, 0.00 percent to 3.50 percent.

Another potential overfunding issue exists if a UAAL were to reemerge, and the current minimums remain in place. Under current law, the contribution rate for the Plans 1 UAAL is collected over applicable open and closed plan payroll[2]. Over time and in general, liabilities of a closed plan will continue to decrease, while payroll of an open plan will continue to increase. In other words, as time progresses the contributions from the same rate would become larger, while the liabilities being paid would shrink. In fact, even a smaller percentage applied over a large enough payroll could have this result. Thus, the amount in contributions collected to fund a reemergent UAAL may increasingly lead to excess contributions under current minimum rates.

Funding Future Benefit Improvements

Under current law, benefit improvements are funded separately from any Base UAAL funding. The additional liability from a benefit improvement is funded over a fixed ten-year period over the applicable open and closed plan payroll.

This funding approach provides clarity regarding the cost of a benefit improvement and provides balance between all the funding goals. The ten-year fixed amortization ensures solvency over a finite period while also making it more affordable than, for example, funding it in full with a one-time payment. The set amortization payment also supports budget stability with a known, fixed rate.

If, however, a benefit improvement occurs several years in the future, it might be more appropriate to have a shorter amortization period. For example, if the expected future lifetime of the covered population is less than ten years, a shorter funding horizon may be best.

Summary

Overall, the current funding policy achieves the goal of fully funding the plans. However, due to the rate-setting process and the time lag from the measurement date to the date when rates

[2]*All PERS, SERS, and PSERS employers contribute toward the PERS 1 UAAL. All TRS employers contribute toward the TRS 1 UAAL.*

are enacted, it is expected that the plans will be overfunded. Thus, the current policy puts the most weight on the goal of plan solvency while limiting the weight given to affordability.

In addition, the minimum rates under current law create large rate cliffs that may not support budget stability. For example, the TRS 1 minimum rate of 5.75 percent will be in place until full funding occurs at which time the rate becomes 0.00 percent. If a Base UAAL reemerges in the future and the current minimums are considered still in place, the Base UAAL rate would jump back up to 5.75 percent.

In summary, OSA has assessed the current Plans 1 funding policy as heavily weighted towards solvency with less weight given to affordability or budget stability. This weighting may have been necessary to bring the chronically underfunded Plans 1 to their current, projected status. However, it may no longer be necessary as the plans approach and ultimately reach full funding.

Policy Goals			
	Affordability	Solvency	Budget Stability
Current Law			

Goal Assessment Legend: Red (Weak); Green (Strong).

IV. NEW FUNDING POLICY IDEAS

Since the funding policy under current law is heavily weighted toward solvency, OSA developed possible policy changes that more evenly distribute the weight between all three goals: solvency, affordability, and budget stability. While a rebalancing may be preferred, it's important to note how these goals interact with each other. For example, improving short-term affordability is achieved by collecting fewer contributions which increases the chance that a UAAL may reemerge under adverse experience. In other words, more weight placed on affordability means less weight is placed on solvency.

Reaching Full Funding

We considered three main policy alternatives that if enacted prior to full funding would shift the weight placed on each funding goal when compared to current law. One important note for this section is that any policy alternative that impacts the 2023-25 contribution rates would require a law change since those rates have already been adopted by the PFC.

Reaching Full Funding Idea #1: *Modification to Minimum Rates (Glide Path to Zero)*

This policy idea creates new minimum rates that step down gradually from current law rates to zero. The examples provided here are hypothetical but structured to maintain the same full funding date and final biennium of contribution rate collection as under current law, but without the rate cliffs. Different rates could be developed to achieve the same (or different) goals.

PERS Projections — Reaching Full Funding Idea #1

Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030	2031
Base UAAL Rates	3.50%	3.00%	2.50%	2.00%	1.50%	1.00%	0.50%	0.00%	0.00%
Funded Status	85%	90%	96%	102%	107%	112%	115%	117%	120%

TRS Projections — Reaching Full Funding Idea #1

Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030	2031
Base UAAL Rates	5.75%	3.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Funded Status	101%	107%	111%	115%	118%	122%	125%	128%	132%

Note: Includes $800 million lump sum payment on 6/30/2023.

When compared to current law, this idea would:

- ❖ Improve short-term affordability due to lower contribution rates.
- ❖ Worsen solvency risk (or reemergence of a UAAL) due to lower "excess funding."
- ❖ Improve budget stability by reducing rate cliffs.

Policy Goals			
	Affordability	Solvency	Budget Stability
Current Law			
Glide Path Approach			

Goal Assessment Legend: Red (Weak); Yellow (Moderate); Green (Strong).
Note: Assessment of the alternative policy reflects the change in policy goals when compared to current law.

Reaching Full Funding Idea #2: *Recognition of Delay Period Contributions*

This policy idea would recognize the expected contributions collected between rate-setting cycles, which we're calling the "delay period." More specifically, the contributions collected between the rate-setting valuation measurement date and when the corresponding adopted contribution rates take effect. This policy alternative wouldn't require any changes to statute but rather a method change in how OSA calculates the Base UAAL contribution rate. The outcome of this method change may result in earlier recognition of full funding of the plans.

PERS Projections — Reaching Full Funding Idea #2									
Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030	2031
Base UAAL Rates	3.50%	3.50%	3.50%	3.50%	3.50%	0.00%	0.00%	0.00%	0.00%
Funded Status	85%	91%	99%	108%	120%	124%	127%	130%	134%

When compared to current law, this idea will:

- Improve short-term affordability.
- Worsen solvency risk (or reemergence of a UAAL).
- Remain consistent as far as budget stability since the rate cliffs remain.

There is no impact on the TRS projections under this idea since the expected full funding date doesn't change.

Policy Goals			
	Affordability	Solvency	Budget Stability
Current Law			
Recognition of Delay Period Contributions			

Goal Assessment Legend: Red (Weak); Yellow (Moderate); Green (Strong).
Note: Assessment of the alternative policy reflects the change in policy goals when compared to current law.

Reaching Full Funding Idea #3: *Combine Idea #1 and Idea #2*

The third policy idea would combine the prior two modifications, providing both a glide path and recognition of delay period contributions.

PERS Projections — Reaching Full Funding Idea #3									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	3.50%	3.00%	2.50%	2.00%	1.50%	0.00%	0.00%	0.00%	0.00%
Funded Status	85%	90%	96%	102%	107%	110%	111%	112%	114%

TRS Projections — Reaching Full Funding Idea #3									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	5.75%	3.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Funded Status	101%	107%	111%	115%	118%	122%	125%	128%	132%

Note: Includes $800 million lump sum payment on 6/30/2023.

Compared to current law, this idea will:

- ❖ Improve short-term affordability.
- ❖ Worsen solvency risk (or reemergence of a UAAL).
- ❖ Improve budget stability by reducing rate cliffs.

Please see **Appendix C** for sensitivity analysis that shows how the expected results can vary if the FY 2023 investment returns fall short of the 7.0 percent assumption.

Policy Goals			
	Affordability	**Solvency**	**Budget Stability**
Current Law			
Glide Path with Contribution Recognition			

Goal Assessment Legend: Red (Weak); Yellow (Moderate); Green (Strong).
Note: Assessment of the alternative policy reflects the change in policy goals when compared to current law.

Other Policy Ideas

While our focus was on the three main ideas above, we did consider other ideas as well.

First, the PFC rate adoption process could be moved to an annual basis in the short-term for Plan 1 UAAL purposes. This would allow the possibility of earlier recognition of the full funding date and earlier adoption of zero UAAL rates when full funding has been achieved. It's unclear to OSA whether this idea would require any changes to current statutes. This idea would have similar impacts to the goals discussed under **Reaching Full Funding Idea #2** when compared to current law.

Another idea raised in the meetings with the WG is to remove current minimum rates. Under this policy idea, the required contributions for the plans to reach full funding would be determined by the Base UAAL rates. Given the current financial status of the plans, the results for this policy idea are similar to the glide path ideas shown earlier in this section. The plans are expected to reach full funding if experience matches the assumptions because the plans currently have deferred asset gains that work to increase the funded status at future measurement dates as those asset gains are realized. If, however, the plans experience poor investment returns in the next few years, there is an increased chance that the Plans 1 don't reach full funding and the calculated Base UAAL rates, without minimums, could result in extended periods of required contributions. Please see **Appendix A** for projection results for this idea.

Maintaining Full Funding

Once the Plans 1 have first achieved full funding, future adverse experience could cause a UAAL to reemerge. Since current law is unclear on how to fund a reemergence of a UAAL, OSA considered two policy ideas that could be added to the current funding statutes.

Under either idea, language could be added to the applicable Revised Code of Washington (RCW) statute to trigger a UAAL contribution rate-setting process when the funded status is below X percent. For example, X could be 100 percent or 95 percent, depending on how quickly one wants to address any underfunding.

Maintaining Full Funding Idea #1: *Flexible Adoption of Base UAAL Rates*

Add language to the applicable RCW that would include direction regarding what rates should be adopted. Two examples:

1. "If the funded status drops below X, the rate of Y will be in effect for the next fiscal year."
2. "If the funded status drops below X, OSA is instructed to recommend Base UAAL contribution rates to the PFC based on the following funding goals … [insert specific goals in the statute]."

This type of approach may be more timeless and flexible given the size of the liabilities and covered payroll at the time of a reemergence, which may require a smaller rate collection than the level of the minimum rates under current law.

Maintaining Full Funding Idea #2: *Defined Policy*

Add language to the applicable RCW defining an amortization policy for the Base UAAL, which could be a fixed or rolling amortization period and could include minimum rates.

Funding Future Benefit Improvements

Current law provides a good balance of the three policy goals regarding how future benefit improvements are funded. However, to ensure we fully responded to the PFC's request, OSA considered other ideas that would address this funding differently.

Funding Future Benefit Improvements Idea #1: *Review Benefit Improvement Rates at Rate-Setting Process*

Under this policy idea, the PFC would review any outstanding benefit improvement contribution rates to assess whether they continue to be necessary given the overall funding of the plan. It's unclear whether the PFC has authority under current law to adjust existing supplemental rates in real time. The Plans 1 benefit improvement rates have not specifically been discussed with the PFC during prior rate-setting adoptions. However, it could be considered in the future with the opportunity for the PFC to adjust the benefit improvement rates.

This may be a favorable idea if, for example, the plans become overfunded in the future and collecting benefit improvement rates is expected to lead to additional overfunding. This idea could improve affordability but increase solvency risk when compared to the policy under current law.

Funding Future Benefit Improvements Idea #2: *Include Future Benefit Improvements in the Base UAAL and Base UAAL Rate Calculation*

Current law could be changed to add the liabilities of benefit improvements to the Base liabilities to determine a single UAAL rate for all plan benefits combined. With this change, the impacts to affordability, solvency, and budget stability vary based on the funding policy chosen for the combined UAAL rate. For example, would new minimum rates be in place? What is the funding policy after the plans have first reached full funding?

In addition, this approach may not be transparent about the cost of a particular benefit improvement if all liabilities are rolled in together. For example, could a benefit improvement appear more or less expensive depending on the current funded status of the Base plan benefits?

Summary

OSA identified two specific policy ideas for **Reaching Full Funding** that, in our opinion, provide a better balance between the goals of affordability, solvency, and budget stability:

1. Set minimum UAAL rates in statute that vary by fiscal year with recognition of delay period contributions (**Reaching Full Funding Idea #3**). The minimum contribution rates would be structured to allow a glide path, or gradual decline, in contributions.
2. Eliminate minimum UAAL contribution rates in statute (**Appendix A, Remove Minimum Contribution Rates in Statute**). Future UAAL contribution rates would continue to be calculated using a ten-year rolling amortization period under current law.

Each of the above ideas are expected to result in full funding of the plans, eliminate significant volatility in contribution rates, and allow for a modest surplus of assets to protect against future adverse experience. However, these policy ideas may not be appropriate under different policy goals. Additionally, under adverse experience, elimination of minimum UAAL contribution rates may not result in full funding. This outcome could be alleviated by including some smaller level of minimum rates.

Policy Goals			
	Affordability	Solvency	Budget Stability
Current Law			
Glide Path Approach			
Recognition of Delay Period Contributions			
Glide Path with Contribution Recognition			

Goal Assessment Legend: Red (Weak); Yellow (Moderate); Green (Strong).
Note: Assessment of the alternative policy reflects the change in policy goals when compared to current law.

If a bill is introduced to change current funding statutes, OSA would suggest that language is added to clarify what new funding goals and contribution rates, if any, would be calculated and collected should a UAAL reemerge after full funding has occurred.

ACTUARIAL CERTIFICATION LETTER

Plans 1 Funding Policy Review

As requested by the Pension Funding Council, this report documents the results of the Office of the State Actuary's review of the appropriateness of the Unfunded Actuarial Accrued Liability (UAAL) funding policy, including the provisions of 41.45.150 of the Revised Code of Washington. The primary purpose of this review is to assess current law funding policy for the Public Employee's Retirement System Plan 1 and the Teachers' Retirement System Plan 1 and provide policy change ideas that attempt to reduce the risk of underfunding or overfunding and work to achieve employer rate and budget stability and predictability. The review also considers modification to the minimum UAAL rates including when the UAAL rates would cease and be reinstated, if necessary. This report should not be used for other purposes.

The analysis summarized in this report requires assumptions about future economic and demographic events. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; changes in plan provisions or applicable law. Please replace the analysis in this report with any updated analysis as it becomes available.

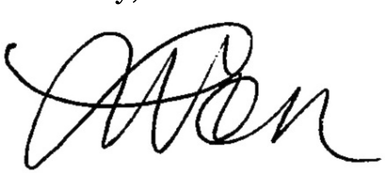
We relied on the ProVal® software developed by Winklevoss Technologies and Microsoft Excel to perform the projections presented in this report. Please see our Actuarial Certification letter in our most recent *Actuarial Valuation Report* (AVR) plus our Projections Model disclosure on our website for further information regarding the models we relied on. The use of these models for this analysis is appropriate given their intended purpose.

Unless noted otherwise in this report, we relied on the data, methods, and assumptions from our most recent AVR, June 30, 2021, plus our Projections Model disclosed on our webpage. The use of another set of data, methods, and assumptions, however, could also be reasonable and could produce materially different results. Another actuary may review the results of this analysis and reach different conclusions.

In my opinion, the data, methods, and assumptions used are reasonable, appropriate for the primary purpose stated above, and conform to generally accepted actuarial principles and standards of practice as of the date of this publication.

The undersigned, with actuarial credentials, meets the Qualifications Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. While this report is intended to be complete, I am available to provide extra advice and explanations as needed.

Sincerely,



Lisa A. Won, ASA, FCA, MAAA
Deputy State Actuary

APPENDIX A

PFC WG Input

As requested by the PFC, OSA consulted with the WG as part of our review of the current UAAL funding policy and any possible funding policy recommendations. We convened three meetings from October through December of 2022. OSA shared our review and analysis of current law, possible funding policy changes, and any other considerations in regard to current statutes governing the Plans 1 funding. During these meetings, the following goals were identified and discussed:

1. Balance plan affordability, plan solvency, and budget stability.
2. Achieve 100 percent funded status and limit overfunding.
3. Reduce contribution "rate cliffs."
4. Disclose costs of benefit improvements and fund those costs through supplemental rates that may be adjusted by the PFC.

Reaching Full Funding

In addition to the **New Funding Policy Ideas**, OSA was asked to prepare analysis for the following scenarios:

1. Remove Base UAAL contribution rates after FY 2023.
2. Remove minimum contribution rates in statute.
3. Remove the $800 million payment towards the TRS 1 UAAL that is scheduled to occur on June 30, 2023.

OSA prepared and shared the following analysis with the WG:

Remove Base UAAL Contribution Rates after FY 2023

PERS Projections — Remove Base UAAL Rate									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	3.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Funded Status	85%	85%	85%	85%	85%	84%	82%	80%	77%

TRS Projections — Remove Base UAAL Rate									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	5.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Funded Status	101%	103%	106%	108%	111%	114%	116%	118%	120%

Note: Includes $800 million lump sum payment on 6/30/2023.

Removal of the Base UAAL contributions after FY 2023 results in PERS 1 not expected to reach full funding. TRS 1 is still expected to reach full funding largely due to the $800 million payment expected on June 30, 2023, but adverse experience could lead to a projected UAAL remaining in TRS 1.

Remove Minimum Contribution Rates in Statute

Removing the minimum contribution rates means the Base UAAL rates will be calculated using the funding policy in RCW 41.45.060. That funding policy amortizes any UAAL amount over a rolling ten-year period over applicable open and closed plan payroll.

PERS Projections — Remove Minimum UAAL Rate

Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030	2031
Base UAAL Rates	3.50%	2.04%	2.04%	1.02%	1.02%	0.39%	0.39%	0.00%	0.00%
Funded Status	85%	89%	93%	96%	100%	103%	104%	105%	105%

TRS Projections — Remove Minimum UAAL Rate

Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030	2031
Base UAAL Rates	5.75%	2.72%	2.72%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Funded Status	101%	107%	113%	117%	121%	125%	128%	132%	136%

Note: Includes $800 million lump sum payment on 6/30/2023.

Compared to current law, this scenario would extend the full funding date for PERS 1 by one year, but the contributions would be collected over the same number of years for both plans. In addition, the contribution rates would be lower than under current law leading to less overfunding in both plans.

With lower expected funding under this scenario, it's important to consider the sensitivity of these results if investment returns are lower than expected. We used the same sensitivity test that we used throughout this report – we lowered the expected return in FY 2023 to match the return earned in FY 2022 (0.19 percent).

PERS Projections — Remove Minimum UAAL Rate Sensitivity

Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	…	2059
Base UAAL Rates	3.50%	2.04%	2.04%	1.08%	1.08%	0.61%	0.61%	0.35%	0.35%	…	0.01%
Funded Status	84%	86%	89%	91%	93%	94%	94%	94%	94%	…	94%

TRS Projections — Remove Minimum UAAL Rate Sensitivity

Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030	2031
Base UAAL Rates	5.75%	2.72%	2.72%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Funded Status	100%	104%	109%	111%	113%	115%	115%	117%	119%

Note: Includes $800 million lump sum payment on 6/30/2023.

If we experience poor investment returns, PERS 1 may never reach full funding and thus end up with ongoing contribution commitments. TRS 1 is still expected to reach full funding under this sensitivity scenario, in large part due to the $800 million payment on June 30, 2023.

Remove the $800 Million Payment Towards the TRS 1 UAAL That Is Scheduled to Occur on June 30, 2023

TRS Projections — Remove $800 Million Payment									
Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030	2031
Base UAAL Rates	5.75%	5.75%	5.75%	5.75%	5.75%	0.00%	0.00%	0.00%	0.00%
Funded Status	90%	98%	108%	119%	133%	139%	143%	149%	155%

Note: Excludes $800 million lump sum payment on 6/30/2023.

Compared to current law, if the scheduled $800 million payment is not made to the TRS 1 trust fund, we expect the full funding date will be extended by one full biennium and Base UAAL contributions will continue through FY 2027. If any adverse experience occurs, such as lower than expected investment returns, the full funding date and collection of Base UAAL contributions could be extended further.

Maintaining Full Funding

The WG discussed other scenarios that could replace and clarify current law statutes. The options include a different funded status trigger for calculating and collecting contribution rates if a UAAL reemerges and the possibility of having lower minimum rates in place if this occurs.

Funding Future Benefit Improvements

Regarding funding benefit improvements, the primary scenario discussed by the WG was to include an opportunity for the PFC to modify the benefit improvement rates in the future if the funding of all plan benefits is above 100 percent.

Summary

When reviewing the analysis for the additional scenarios, in comparison to current law, OSA concluded the following:

- Removing the Base UAAL rates after FY 2023 improved affordability to a great degree and budget stability slightly. Putting more weight on those policy goals comes at the expense of plan solvency, meaning there's a higher chance that a UAAL may reemerge under this idea.
- Removing minimum rates has a large positive impact on affordability and budget stability but increases the chance that a UAAL may reemerge.

Policy Goals			
	Affordability	Solvency	Budget Stability
Current Law			
Remove Base UAAL Rates			
Remove Minimum Rates			

Goal Assessment Legend: Red (Weak); Yellow (Moderate); Green (Strong).
Note: Assessment of the alternative policy reflects the change in policy goals when compared to current law.

APPENDIX B

Current Law Statutes

OSA relied on the following statutes when preparing the analysis in this report. We provide a link to the statute plus a high-level summary of the key components of each.

RCW 41.45.060

- UAAL funding requirements based on modified entry age normal cost method with a rolling ten-year period.
  - Subject to any minimum contribution rates.
  - Uses projected future salary growth and growth in system membership.
- Benefit improvement funding requirements are in addition to the UAAL funding requirements above.
  - Rate is developed under the same cost method but over a fixed ten-year period.

RCW 41.45.150

- Current minimum contributions rates are used for the sole purpose of amortizing that portion of the UAAL in the Plans 1 that excludes any amounts required to amortize Plan 1 benefit improvements effective after June 30, 2009.
  - 3.50 percent for PERS 1.
  - 5.75 percent for TRS 1.
- Minimum rates remain effective until the actuarial value of assets equals 100 percent of the AAL as measured by a rate-setting AVR.

RCW 41.45.070

- Supplemental rates are charged to fund benefit increases over a fixed ten-year period.
- The fixed ten-year supplemental rate period for prior benefit improvements may exceed the Base UAAL payoff date.

APPENDIX C

Sensitivity Analysis for Policy Alternatives

Similar to the sensitivity analysis we performed for the **Current Law Projections**, we also considered the sensitivity of the glide path with recognition of delay period contributions policy (**Reaching Full Funding Idea #3**). We used the same sensitivity test that we used throughout this report – we lowered the expected return in FY 2023 to match the return earned in FY 2022 (0.19 percent).

PERS Projections — Reaching Full Funding Idea #3 Sensitivity									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	3.50%	3.00%	2.50%	2.00%	1.50%	1.00%	0.50%	0.00%	0.00%
Funded Status	84%	88%	92%	96%	100%	103%	103%	104%	104%

TRS Projections — Reaching Full Funding Idea #3 Sensitivity									
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Base UAAL Rates	5.75%	3.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Funded Status	100%	105%	107%	109%	110%	112%	112%	114%	115%

Note: Includes $800 million lump sum payment on 6/30/2023.