

Interest Rates Used in Appropriations, Including PECO
Executive Summary
July 21, 2023

The Revenue Estimating Conference adopted a series of interest rates for use in the state budgeting process, including any bonding related to Public Education Capital Outlay (PECO). The adopted interest rates take into consideration current benchmark rates and market volatility.

The long-term interest rate is used for bond issues with maturity structures of 20 years or more. The Conference maintained a long-term interest rate of 5.25%, the same as the rate adopted in February 2023, after considering information provided by the Division of Bond Finance. The Division of Bond Finance recommends a range for the long-term interest rate based on a benchmark rate of 4.06% plus a spread of 133 basis points for volatility for an interest rate of 5.39% on the low end and a benchmark rate of 4.06% plus a spread of 140 basis points for volatility for an interest rate of 5.46% on the high end. The 5.25% adopted rate has a spread of 119 basis points over the benchmark rate.

Long-Term Interest Rate

Fiscal Year	2024-25	2025-26	2026-27	2027-28	2028-29
Interest Rate	5.25%	5.25%	5.25%	5.25%	5.25%

As recommended by the Division of Bond Finance in December 2019, the Conference discontinued the adoption of a short-term or variable interest rate forecast. The adopted short-term interest rate was previously used to calculate debt service on the outstanding Everglades variable rate bonds. Variable rate bonds were initially issued in 2006 and 2007. The last outstanding issue of Everglades VR 2007A&B Bonds has now been refunded with fixed-rate bonds and was called for redemption on December 4, 2019. The Division of Bond Finance has no plans to recommend the issuance of variable rate bonds in the future.

Finally, the Conference adopted interest rates for use by the Revenue Estimating Conference in its calculation of the Maximum Appropriations for Public Education Capital Outlay (PECO). The adopted interest rates take into consideration current benchmark rates and the July 2023 National Economic Estimating Conference forecast for the yield on municipal bonds – the Bond Buyer 20-Bond Index. The July forecast for the Bond Buyer 20-Bond Index indicated a consequential increase in interest rates in FY 2023-24 and FY 2024-25 and smaller increases in the remaining fiscal years. The Conference increased the prior conference’s FY 2024-25 rate and maintained the rates in each remaining fiscal year to maintain a spread of approximately 50 basis points above the new Bond Buyer 20-Bond Index.

PECO Bonds Interest Rate

Fiscal Year	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
Interest Rate - February 2022	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Interest Rate - July 2023	4.25%	4.00%	4.00%	4.00%	4.00%	4.00%

**Division of Bond Finance
Interest Rate Calculations**

July 21, 2023

Division of Bond Finance

Calculation of Long-Term Interest Rate

Long-Term Interest Rate Information*		
	<u>Low End</u>	<u>High End</u>
Current Estimated Long-Term Interest Rate ¹	4.06%	4.06%
Plus: Volatility Spread ²	1.33%	1.40%
Long-Term Interest Rate Range	5.39%	5.46%

¹ Interest rate estimate for a 30-year bond issue based on 5% coupons and estimated yields and credit spreads as of July 19, 2023. Estimate represents the true interest cost, which factors in the cost of call optionality based on the market standard 10-year par call structure. Excludes costs of issuance and underwriter's discount, which would increase the true cost of borrowing.

² Used two measures to calculate interest rate volatility; (1) TM3 Municipal Market Data ("MMD") 30-year AAA benchmark yield high-low range over the prior 12 months of 133 basis points and (2) Bond Buyer 11 GO Bond Index maximum annual change over the last 20 fiscal years of 140 basis points.

Long-Term Interest Rate:

The interest rate range noted above is based on the Division of Bond Finance's historical methodology that analyzes interest rate trends and volatility over the past 20 years and most recent 12-month period. Based on estimated yields and credit spreads as of July 19, 2023, the Division's methodology produces a range of 5.39% to 5.46% for the long-term interest rate.

The macro themes that drove the municipal market last year continue to persist in 2023. Muni bond funds reported outflows in 46 of 52 weeks in 2022, and this trend has continued in the current year with year-to-date outflows totaling \$3.6 billion as of July 12, 2023. This has contributed to an ongoing negative supply/demand dynamic in the municipal market, though this has been partially offset by light new issuance, with volume down approximately 20% year-over-year through June. Much of the decrease in issuance is attributable to a decline in refunding transactions, as higher rates have made the economics of refinancings less attractive to issuers. The Federal Deposit Insurance Corporation's liquidation of the portfolios of Signature Bank and Silicon Valley Bank, which included nearly \$7 billion in municipal securities, added unexpected supply to the market but the effect was less impactful on rates than initially feared. Additionally, while CPI prints have improved in the first half of 2023, inflation remains well above the Fed's target and the path to price stability remains unclear despite ten rate increases since March 2022 (the fastest pace of tightening since the early 1980's).

Short-Term Interest Rate:

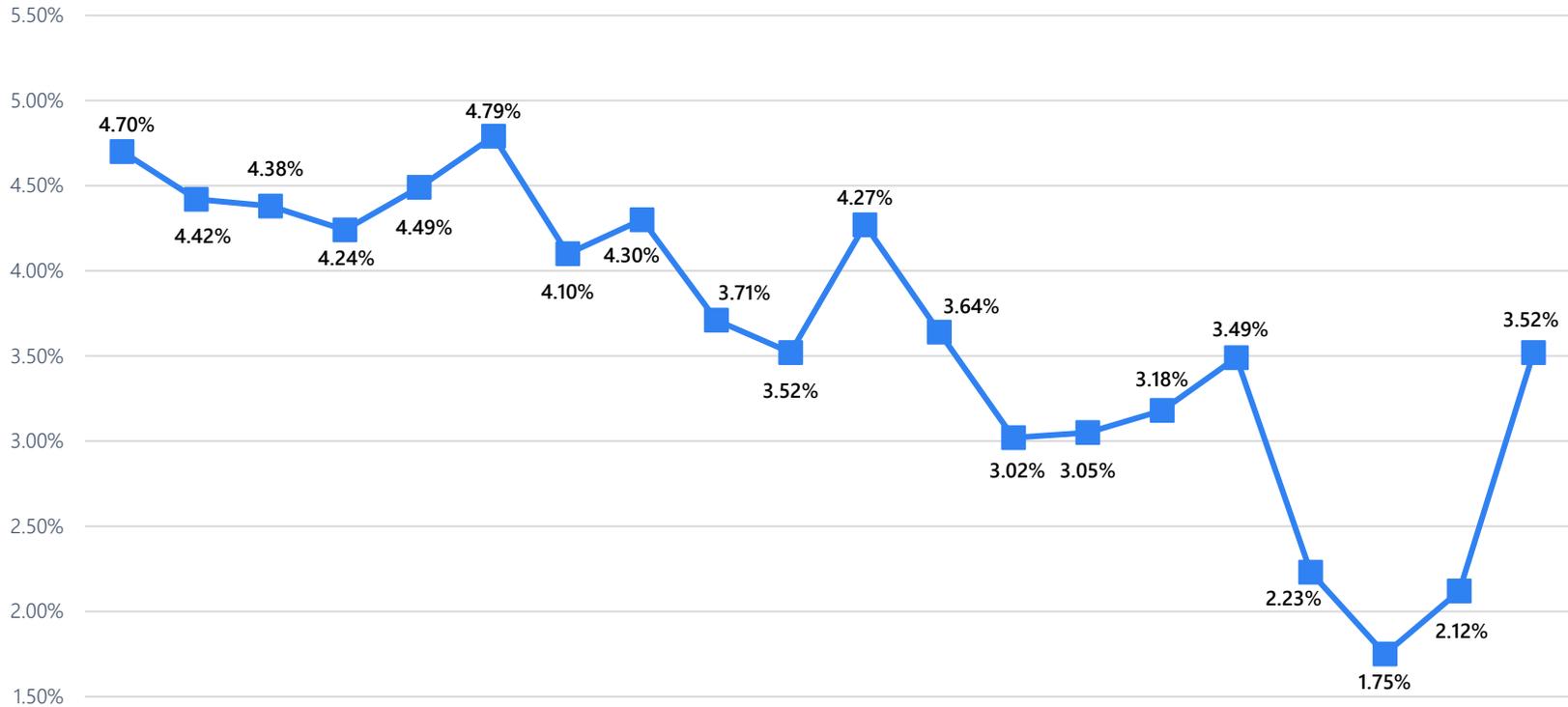
The State does not have any outstanding variable rate debt and there are no current plans for the issuance of additional variable rate debt. As a result, the Division has not produced a short-term interest rate analysis for this conference.

* The Division of Bond Finance has supplied the above interest rates to assist the REC in adopting official rates that would be used by State agencies for planning and budgetary purposes. There can be no assurance that actual interest rates for any particular bond issue will not exceed the rates shown above.

Long-Term Interest Rate Volatility

Change in Bond Buyer 11 GO Bond Average Annual Interest Rates Last 20 Years

The largest year-over-year change in the annual average Bond Buyer GO Bond Index over the last 20 fiscal years is 140 basis points.



Fiscal Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Average
BB 11 GO Avg	4.70%	4.42%	4.38%	4.24%	4.49%	4.79%	4.10%	4.30%	3.71%	3.52%	4.27%	3.64%	3.02%	3.05%	3.18%	3.49%	2.23%	1.75%	2.12%	3.52%	3.70%
YOY Change	(0.02)%	(0.28)%	(0.04)%	(0.14)%	0.25%	0.30%	(0.69)%	0.20%	(0.59)%	(0.19)%	0.75%	(0.63)%	(0.62)%	0.03%	0.13%	0.31%	(1.26)%	(0.48)%	0.37%	1.40%	0.43%*

*Average calculated using absolute values of year-over-year changes.

Long-Term Interest Rate Volatility Change in 30-Year Benchmark AAA MMD Rate Last 12 Months

The 30-year benchmark AAA MMD interest rate ranged from a low of 2.83% to a high of 4.16% over the last 12 months, a difference of 133 basis points. These are stated yields assuming 5% coupons and do not factor in costs of issuance, underwriter's discount, or the effect of call optionality.



PECO BOND SALES AND INTEREST RATES

(BOLD font indicates forecasted values)

YIELD	Bond Buyer 20-Bond Index		Series 2024 FY24-25	Series 2025 FY25-26	Series 2026 FY26-27	Series 2027 FY27-28	Series 2028 FY28-29	Series 2029 FY29-30	Series 2030 FY30-31
	Feb 2023	Jul 2023							
2023 Q3	3.53%	3.88%							
2023 Q4	3.49%	3.83%							
2024 Q1	3.43%	3.75%							
2024 Q2	3.37%	3.71%							
2024 Q3	3.33%	3.67%	4.25% Jul 2023 4.00% Feb 2023						
2024 Q4	3.30%	3.63%							
2025 Q1	3.29%	3.59%							
2025 Q2	3.28%	3.57%							
2025 Q3	3.29%	3.55%		4.00% Jul 2023 4.00% Feb 2023					
2025 Q4	3.29%	3.54%							
2026 Q1	3.29%	3.52%							
2026 Q2	3.29%	3.51%							
2026 Q3	3.29%	3.50%			4.00% Jul 2023 4.00% Feb 2023				
2026 Q4	3.30%	3.50%							
2027 Q1	3.30%	3.49%							
2027 Q2	3.31%	3.49%							
2027 Q3	3.31%	3.48%				4.00% Jul 2023 4.00% Feb 2023			
2027 Q4	3.31%	3.48%							
2028 Q1	3.31%	3.48%							
2028 Q2	3.32%	3.48%							
2028 Q3	3.32%	3.47%					4.00% Jul 2023 4.00% Feb 2023		
2028 Q4	3.32%	3.47%							
2029 Q1	3.33%	3.47%							
2029 Q2	3.33%	3.47%							
2029 Q3	3.34%	3.47%						4.00% Jul 2023 4.00% Feb 2023	
2029 Q4	3.34%	3.47%							
2030 Q1	3.34%	3.47%							
2030 Q2	3.35%	3.48%							
2030 Q3	3.36%	3.49%							4.00% Jul 2023 4.00% Feb 2023
2030 Q4	3.36%	3.49%							
2031 Q1	3.37%	3.49%							
2031 Q2	3.37%	3.50%							

ADOPTED July 2023	4.25%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
--------------------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------