

## Interest Rates Used in Appropriations, Including PECO Executive Summary

July 22, 2022

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 adopted a long-term interest rate of 5.00%, 100 basis points higher than the rate adopted in December 2021, 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 3.89% plus a spread of 126 basis points for volatility for an interest rate of 5.15% on the low end and a benchmark rate of 3.89% plus a spread of 206 basis points for volatility for an interest rate of 5.95% on the high end. The 5.00% adopted rate has a spread of 111 basis points over the benchmark rate.

### Long-Term Interest Rate

Fiscal Year	2023-24	2024-25	2025-26	2026-27	2027-28
Interest Rate	5.00%	5.00%	5.00%	5.00%	5.00%

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 2022 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 an increase in interest rates, especially in the short term. The Conference increased the December rates in each fiscal year to maintain a spread of at least 50 basis points above the new Bond Buyer 20-Bond Index. This increased the rate by 50 basis points in Fiscal Years 2023-24, 2024-25, and 2025-26, and by 25 basis points in Fiscal Years 2026-27, 2027-28, and 2028-29.

### PECO Bonds Interest Rate

Fiscal Year	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Interest Rate - December 2021	3.50%	3.75%	3.75%	4.00%	4.00%	4.00%
<b>Interest Rate - July 2022</b>	<b>4.00%</b>	<b>4.25%</b>	<b>4.25%</b>	<b>4.25%</b>	<b>4.25%</b>	<b>4.25%</b>

**Division of Bond Finance  
Interest Rate Calculations**

July 22, 2022

## Division of Bond Finance

### Calculation of Long-Term Interest Rate

<b>Long-Term Interest Rate Information*</b>		
	<u>Low End</u>	<u>High End</u>
Current Long-Term Interest Rate <sup>1</sup>	3.89%	3.89%
Plus: Volatility Spread <sup>2</sup>	1.26%	2.06%
<b>Long-Term Interest Rate Range</b>	<b>5.15%</b>	<b>5.95%</b>

<sup>1</sup> Interest rate estimate for a 30-year bond issue based on 5% coupons and estimated yields and credit spreads as of July 19, 2022. 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.

<sup>2</sup> Used two measures to calculate interest rate volatility; (1) Bond Buyer 11 GO Bond Index maximum annual change over the last 20 years of 126 basis points and (2) TM3 Municipal Market Data ("MMD") 30-year benchmark yield high-low range over the prior 12 months of 206 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, 2022, the Division's methodology produces a range of 5.15% to 5.95% for the long-term interest rate.

Since the last conference in December 2021, fixed income markets have faced significant headwinds. Tax-exempt interest rates rose sharply in the first six months of the year as market participants reacted to persistently high inflation and the resulting increase in expectations regarding the pace of future rate hikes by the Federal Reserve. Volatility has also increased as investors responded to a frequently shifting macroeconomic outlook. The uncertainty regarding the broader economic environment and the corresponding volatility has resulted in reduced demand in the municipal market, with municipal bond funds seeing significant outflows since the start of the year (year-to-date fund outflows totaled approximately \$80 billion as of July 13, 2022).

#### **Short-Term Interest Rate:**

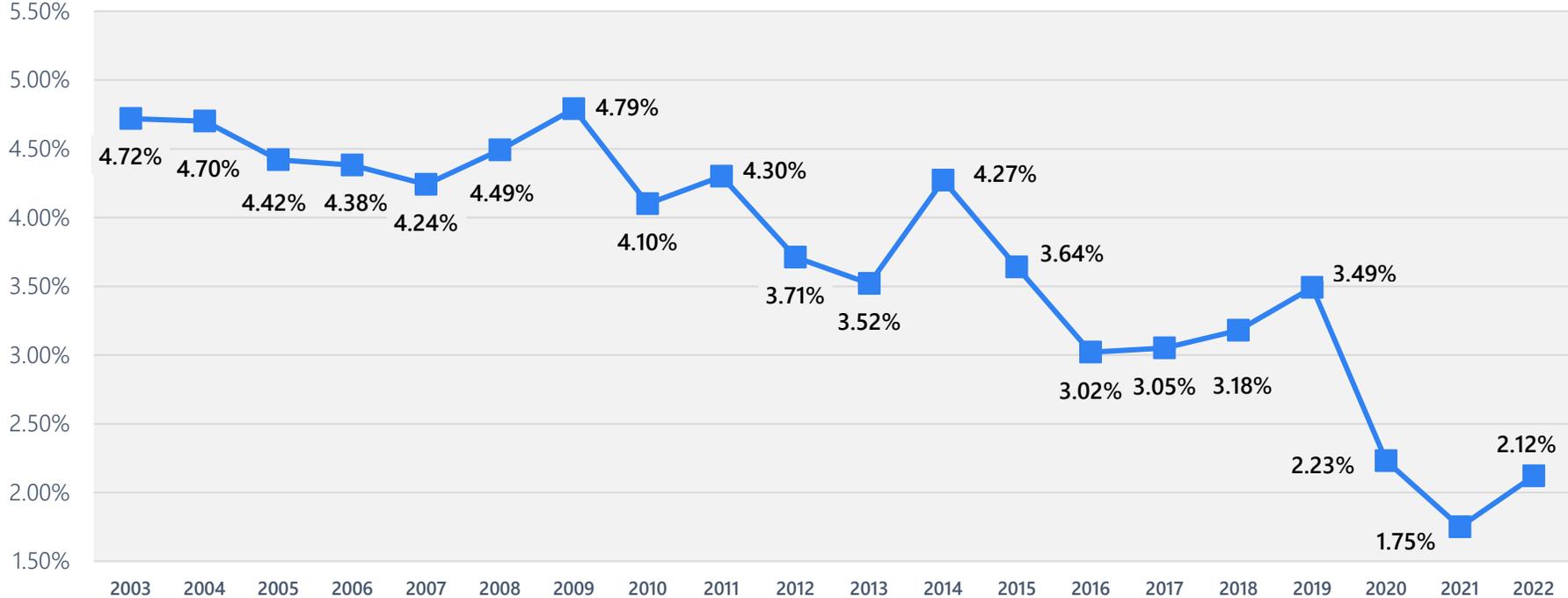
The State does not have any outstanding variable rate debt and there are no current plans for the issuance of additional variable rate debt. As a result, the Division has not produced a short-term interest rate analysis for this conference.

\* 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 years is 126 basis points.



Fiscal Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
BB 11 GO Avg	4.72%	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%	3.71%
YOY Change		(0.37)%	(0.02)%	(0.28)%	(0.04)%	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%	0.38%*

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

# Long-Term Interest Rate Volatility

## Change in Benchmark 30-Year MMD AAA Rates

### Last 12 Months

The benchmark 30-year MMD AAA interest rate ranged from a low of 1.32% to a high of 3.38% over the last 12 months, a difference of 206 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 2023 FY23-24	Series 2024 FY24-25	Series 2025 FY25-26	Series 2026 FY26-27	Series 2027 FY27-28	Series 2028 FY28-29
	Dec 2021	Jul 2022						
2023 Q3	2.82%	<b>3.45%</b>	<b>4.00% Jul 2022</b> 3.50% Dec 2021					
2023 Q4	2.89%	<b>3.48%</b>						
2024 Q1	2.95%	<b>3.51%</b>						
2024 Q2	3.01%	<b>3.53%</b>						
2024 Q3	3.07%	<b>3.54%</b>		<b>4.25% Jul 2022</b> 3.75% Dec 2021				
2024 Q4	3.12%	<b>3.54%</b>						
2025 Q1	3.17%	<b>3.55%</b>						
2025 Q2	3.21%	<b>3.56%</b>						
2025 Q3	3.25%	<b>3.56%</b>			<b>4.25% Jul 2022</b> 3.75% Dec 2021			
2025 Q4	3.28%	<b>3.57%</b>						
2026 Q1	3.31%	<b>3.58%</b>						
2026 Q2	3.34%	<b>3.59%</b>						
2026 Q3	3.36%	<b>3.60%</b>				<b>4.25% Jul 2022</b> 4.00% Dec 2021		
2026 Q4	3.38%	<b>3.61%</b>						
2027 Q1	3.40%	<b>3.62%</b>						
2027 Q2	3.42%	<b>3.62%</b>						
2027 Q3	3.43%	<b>3.63%</b>					<b>4.25% Jul 2022</b> 4.00% Dec 2021	
2027 Q4	3.44%	<b>3.63%</b>						
2028 Q1	3.46%	<b>3.63%</b>						
2028 Q2	3.47%	<b>3.64%</b>						
2028 Q3	3.48%	<b>3.64%</b>						<b>4.25% Jul 2022</b> 4.00% Dec 2021
2028 Q4	3.49%	<b>3.64%</b>						
2029 Q1	3.51%	<b>3.64%</b>						
2029 Q2	3.52%	<b>3.65%</b>						
<b>ADOPTED PECO BOND RATES, July 2022</b>			<b>4.00%</b>	<b>4.25%</b>	<b>4.25%</b>	<b>4.25%</b>	<b>4.25%</b>	<b>4.25%</b>