October 2023 Interest Rates

Issue Date	Amount of Debentures ($0)	Debenture Rate (%)	Note Rate (%)	Comparable Treasury Market Rate (%)	Spread Over Treasury Rate (%)	CDC Fee	0.625	1.000	0.625	1.000	0.625	1.000	0.625	1.000	0.625	1.000	0.625	1.000	0.625	1.000	0.625	1.000	0.625	1.000	0.625	1.000	0.625	1.000	0.625	1.000	0.625	1.000	0.625	1.000
						Borrower Fee	0.6970	0.6970	0.6420	0.6420	0.3680	0.3680	0.3205	0.3205	0.4517	0.4517	0.2475	0.2475	0.4405	0.4405	0.7310	0.7310	0.6820	0.6820	0.3950	0.3950	0.3220	0.3220	0.4865	0.4865	0.2590	0.2590	0.4559	0.4559
						CSA Fee	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
10-Year Debentures																																		
Nov 21	16,778	1.31	1.36226	1.18	0.13		N/A	N/A	3.392	N/A	N/A	N/A	2.914	3.471	3.109	3.666	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.161	3.718	N/A	N/A	N/A	N/A
Jan 22	12,092	1.58	1.64224	1.47	0.11		N/A	N/A	N/A	N/A	3.257	N/A	3.187	3.741	3.381	3.935	N/A	3.633	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.432	3.986	3.096	N/A	N/A	N/A
Mar 22	17,227	2.30	2.38859	1.93	0.37		N/A	N/A	4.401	N/A	N/A	N/A	3.928	4.480	4.121	4.673	3.820	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.172	N/A	N/A	N/A	N/A	N/A
May 22	20,358	3.39	3.51524	3.01	0.38		N/A	N/A	N/A	N/A	N/A	N/A	5.037	5.583	5.228	5.774	4.931	5.477	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.948	N/A	N/A	N/A
July 22	19,312	3.43	3.55675	3.01	0.42		N/A	N/A	N/A	N/A	5.149	N/A	N/A	5.626	5.271	5.817	4.974	5.520	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.537	N/A	N/A
Sept 22	15,202	3.78	3.91809	3.38	0.40		N/A	N/A	N/A	N/A	N/A	N/A	5.438	N/A	5.629	6.174	5.332	5.877	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.349	5.894	N/A	N/A
Nov 22	16,930	4.70	4.86652	3.95	0.75		N/A	N/A	N/A	7.385	N/A	N/A	6.378	6.920	6.568	7.110	6.273	6.815	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.289	6.831	N/A	N/A
Jan 23	12,344	4.60	4.76278	3.95	0.65		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.460	7.001	6.166	6.707	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mar 23	11,954	4.93	5.10307	4.28	0.65		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.800	7.341	6.506	7.047	6.784	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
May 23	7,158	4.21	4.36187	3.31	0.90		N/A	N/A	N/A	N/A	N/A	N/A	5.880	N/A	6.070	6.615	5.774	6.318	6.054	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.076	N/A
July 23	8,949	5.22	5.40084	4.42	0.80		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.092	N/A	6.798	7.337	7.076	7.614	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.098	N/A
Sept 23	18,711	5.21	5.39072	4.41	0.80		N/A	N/A	N/A	N/A	6.962	N/A	N/A	N/A	7.083	7.622	6.789	7.328	7.067	7.606	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20-Year Debentures																																		
Oct 21	71,529	1.54	1.56884	1.56	-0.02		3.323	N/A	3.255	3.718	2.917	3.380	2.859	3.321	3.021	3.483	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.063	N/A	N/A	N/A	N/A	N/A
Nov 21	96,582	1.55	1.57906	1.50	0.05		3.335	N/A	3.267	3.730	2.929	3.392	2.870	3.333	3.032	3.495	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.075	3.538	N/A	N/A	N/A	N/A
Dec 21	68,395	1.65	1.68071	1.48	0.17		3.435	N/A	3.367	N/A	3.029	3.491	2.970	3.433	3.132	3.595	2.880	3.343	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.175	3.638	2.894	N/A	N/A	N/A
Jan 22	62,330	1.84	1.87372	1.73	0.11		3.624	N/A	N/A	4.017	N/A	N/A	3.160	3.622	3.322	3.783	3.070	3.532	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.365	N/A	3.085	N/A	N/A	N/A
Feb 22	69,462	2.22	2.25968	1.99	0.23		N/A	N/A	3.939	4.400	3.602	4.063	3.544	4.005	3.705	4.166	3.454	3.915	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.748	N/A	3.469	3.929	N/A	N/A
Mar 22	75,960	2.53	2.57423	2.00	0.53		4.317	N/A	4.250	N/A	3.914	N/A	3.856	N/A	4.017	4.476	3.766	4.226	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.059	N/A	3.780	N/A	N/A	N/A
April 22	94,133	3.38	3.43547	2.65	0.73		N/A	N/A	5.100	5.557	4.766	N/A	4.709	N/A	4.868	5.325	4.620	5.076	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.911	5.367	4.634	N/A	N/A	N/A
May 22	81,487	3.82	3.88065	3.04	0.78		N/A	N/A	5.539	N/A	5.207	5.662	5.149	5.604	5.309	5.764	5.061	5.516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.351	5.806	5.075	N/A	N/A	N/A
June 22	100,238	3.89	3.95163	3.04	0.85		N/A	N/A	5.611	6.067	5.279	N/A	5.221	5.676	5.380	5.836	5.132	5.588	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.423	N/A	5.146	5.602	N/A	N/A
July 22	70,315	3.81	3.87069	2.96	0.85		5.597	N/A	5.530	N/A	5.198	N/A	5.140	5.595	5.299	5.755	5.051	5.507	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.342	N/A	5.065	5.521	N/A	N/A
Aug 22	79,827	3.65	3.70886	2.82	0.83		5.439	N/A	5.372	N/A	5.039	N/A	4.981	5.437	5.141	5.597	4.892	5.349	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.183	N/A	4.906	5.363	N/A	N/A
Sept 22	52,060	4.10	4.16385	3.26	0.84		N/A	N/A	N/A	N/A	5.489	N/A	5.431	N/A	5.590	6.045	5.343	5.797	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.357	5.811	N/A	N/A
Oct 22	50,244	4.89	4.96167	3.84	1.05		N/A	N/A	6.610	N/A	6.279	N/A	6.222	N/A	6.380	6.832	6.134	6.586	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.148	N/A	N/A	N/A
Nov 22	51,598	4.98	5.05266	3.83	1.15		N/A	N/A	6.702	N/A	N/A	N/A	6.314	6.766	6.472	6.925	6.226	6.678	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.240	N/A	N/A	N/A
Dec 22	40,251	4.56	4.62866	3.46	1.10		6.348	N/A	N/A	N/A	5.950	N/A	5.892	N/A	6.051	6.504	5.804	6.258	6.037	6.491	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.818	N/A	N/A	N/A
Jan 23	44,014	4.81	4.88083	3.76	1.05		N/A	N/A	6.529	N/A	6.199	N/A	6.142	N/A	6.300	6.752	6.054	6.506	6.286	6.739	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.067	N/A	N/A	6.757
Feb 23	32,971	4.51	4.57813	3.61	0.90		N/A	N/A	N/A	N/A	N/A	6.354	5.843	6.296	6.001	6.455	5.754	6.208	5.988	6.441	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.768	N/A	N/A	N/A
Mar 23	39,763	4.86	4.93163	3.96	0.90		N/A	N/A	N/A	N/A	6.251	N/A	6.193	N/A	6.352	6.804	6.105	6.558	6.338	6.791	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.119	N/A	N/A	N/A
April 23	31,246	4.48	4.54767	3.28	1.20		N/A	N/A	6.200	N/A	N/A	N/A	5.811	6.265	5.970	6.423	5.723	6.176	5.956	6.410	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.975	N/A
May 23	41,147	4.60	4.66912	3.37	1.23		N/A	N/A	N/A	N/A	N/A	6.445	5.934	N/A	6.092	6.546	5.845	6.299	6.079	6.532	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.097	N/A
June 23	28,602	4.91	4.98196	3.75	1.16		N/A	N/A	N/A	N/A	N/A	N/A	6.243	N/A	6.401	N/A	6.155	6.607	6.388	6.840	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.169	N/A	N/A	N/A
July 23	38,290	5.16	5.23405	4.06	1.10		N/A	N/A	N/A	N/A	N/A	N/A	6.492	N/A	6.650	7.102	6.405	6.856	6.637	7.088	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.655	N/A
Aug 23	26,140	5.13	5.20398	4.00	1.13		N/A	N/A	N/A	N/A	6.521	N/A	6.464	N/A	6.622	N/A	6.376	6.828	6.609	7.061	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.842	6.627	N/A
Sept 23	37,457	5.39	5.46603	4.28	1.11		N/A	N/A	7.110	N/A	6.780	N/A	N/A	N/A	6.881	7.332	6.635	7.086	6.867	7.318	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.886	7.337
Oct 23	20,007	5.80	5.87909	4.72	1.08		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.290	N/A	7.045	7.495	7.276	7.726	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
25-Year Debentures																																		
Oct 21	408,179	1.74	1.76496	1.56	0.18		N/A	N/A	3.382	3.826	3.058	3.502	3.002	3.445	3.157	3.601	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.198	3.642	N/A	N/A	N/A	N/A
Nov 21	517,789	1.75	1.77517	1.50	0.25		N/A	N/A	3.394	3.838	3.069	3.513	3.013	3.457	3.168	3.612	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.015	N/A	3.210	3.654	N/A	N/A	N/A	N/A	N/A	N/A
Dec 21	435,708	1.85	1.87631	1.48	0.37		N/A	N/A	N/A	N/A	3.169	3.612	3.113	3.556	3.268	3.711	3.026	3.470	N/A	N/A	N/A	N/A	N/A	N/A	3.115	N/A	3.309	3.753	3.040	N/A	N/A	N/A	N/A	N/A
Jan 22	376,608	2.04	2.06849	1.73	0.31		N/A	N/A	3.682	4.125	3.358	3.801	3.302	3.745	3.457	3.900	3.216	3.659	N/A	N/A	N/A	N/A	N/A	N/A	3.304	N/A	3.498	3.941	3.230	3.672	N/A	N/A	N/A	N/A
Feb 22	453,820	2.42	2.45266	1.99	0.43		N/A	N/A	4.063	N/A	3.740	4.182	3.684	4.126	3.839	4.281	3.598	4.040	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.880	4.322	3.612	4.054	N/A	N/A
Mar 22	518,023	2.75	2.78601	2.00	0.75		N/A	N/A	N/A	4.834	4.071	4.512	4.015	4.456	4.169	4.610	3.929	4.370	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.210	4.651	3.943	4.384	N/A	N/A
April 22	530,747	3.50	3.54268	2.65	0.85		N/A	N/A	N/A	N/A	4.821	5.259	4.765	5.203	4.918	5.357	4.680	5.118	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.959	5.398	4.693	5.132	N/A	N/A
May 22	582,785	3.94	3.98600	3.04	0.90		N/A	N/A	5.579	N/A	5.260	5.697	5.204	5.642	5.357	5.794	5.119	5.556	N/A	N/A	N/A	N/A	N/A	N/A	5.206	N/A	5.398	N/A	5.133	5.570	N/A	N/A	N/A	N/A
June 22	720,567	4.01	4.05664	3.04	0.97		N/A	N/A	5.651	N/A	5.331	5.768	5.276	5.713	5.429	5.866	5.191	5.628	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.469	5.907	5.204	5.641	N/A	N/A
July 22	507,976	3.93	3.97598	2.96	0.97		N/A	N/A	N/A	N/A	5.250	5.688	5.195	5.632	5.348	5.785	5.110	5.547	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.389	N/A	5.123	5.561	N/A	N/A
Aug 22	612,245	3.80	3.84514	2.82	0.98		N/A	N/A	5.442	N/A	5.122	5.560	5.066	5.504	5.219	5.658	4.981	5.419	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.260	N/A	4.994	5.432	N/A	N/A
Sept 22	468,908	4.26	4.30832	3.26	1.00		N/A	N/A	N/A	N/A	5.581	6.017	5.525	5.962	5.678	6.115	5.440	5.877	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.719	N/A	5.454	5.890	N/A	N/A
Oct 22	409,101	5.04	5.09293	3.84	1.20		N/A	N/A	6.676	N/A	6.359	N/A	6.304	6.738	6.456	6.890	6.219	6.654	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.496	N/A	6.233	6.667	N/A	N/A
Nov 22	571,696	5.13	5.18356	3.83	1.30		N/A	N/A	6.768	N/A	6.450	6.885	6.395	6.830	6.547	6.982	6.311	6.745	6.534	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.324	6.758	N/A	N/A
Dec 22	443,896	4.71	4.76114	3.46	1.25		N/A	N/A	6.348	N/A	6.030	6.466	5.975	N/A	6.127	6.563	5.890	6.326	6.114	6.550	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.904	6.339	6.132	6.568
Jan 23	377,944	4.91	4.96213	3.76	1.15		N/A	N/A	6.546	N/A	6.229	N/A	6.174	6.608	6.326	6.760	6.089	6.524	6.313	6.748	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.103	6.537	6.331	6.765
Feb 23	450,049	4.61	4.66058	3.61	1.00		N/A	N/A	6.249	N/A	5.931	6.366	5.875	6.311	6.028	6.464	5.791	6.226	6.015	6.451	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.804	6.240	6.033	6.468
Mar 23	380,982	4.93	4.98242	3.96	0.97		N/A	N/A	N/A	N/A	6.250	N/A	6.195	6.630	6.347	6.782	6.110	6.545	6.334	6.769	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.124	6.559	6.352	6.787
April 23	374,081	4.48	4.52967	3.28	1.20		N/A	N/A	N/A	N/A	5.800	6.236	5.745	N/A	5.897	6.333	5.660	6.096	5.884	6.320	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.673	6.109	5.902	N/A
May 23	461,381	4.62	4.67075	3.37	1.25		N/A	N/A	N/A	6.696	5.941	6.377	5.886	6.322	6.039	6.474	5.801	6.237	6.026	6.461	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.815	6.250	6.043	6.479
June 23	333,572	4.93	4.98238	3.75	1.18		N/A	N/A	N/A	N/A	6.250	6.685	6.195	N/A	6.347	6.782	6.110	6.545	6.334	6.769	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.123	N/A	6.352	6.787
July 23	313,750	5.18	5.23359	4.06	1.12		N/A	N/A	N/A	N/A	6.499	6.933	6.444	6.878	6.596	7.030	6.359	6.793	6.583	7.017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.373	N/A	6.601	N/A
Aug 23	407,266	5.15	5.20364	4.00	1.15		N/A	N/A	N/A	N/A	6.470	N/A	6.415	N/A	6.567	7.002	6.331	6.765	6.554	6.989	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.344	6.778	6.572	7.007
Sept 23	397,101	5.41	5.46474	4.28	1.13		N/A	N/A	N/A	N/A	6.729	N/A	6.674	N/A	6.825	7.259	6.589	7.023	6.812	7.246	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.603	N/A	6.830	7.264
Oct 23	306,539	5.82	5.87642	4.72	1.10		N/A	N/A	N/A	N/A	7.137	N/A	7.082	N/A	7.234	7.666	6.998	7.431	7.221	7.653	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.011	N/A	7.238	7.671