

May 2019 Interest Rates

Issue Date	Amount of Debentures (\$0)	Debtenture Rate (%)	Note Rate (%)	Comparable Treasury Market Rate (%)	Spread Over Treasury Rate (%)	CDC Fee Borrower Fee	CDC Fee CSA Fee	May 2019 Interest Rates																																							
								0.625				1.000				0.625				1.000																											
								0.9375				0.9375				0.914				0.914				0.697				0.697				0.642				0.642				0.368				0.368			
								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												
10-Year Debentures																				Refinance																											
Jan 17	7,325	2.42	2.51256	1.88	0.54			4.950	5.500	4.916	N/A	4.598	5.148	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 17	14,862	2.63	2.73012	2.11	0.52			5.170	5.720	5.135	5.685	4.817	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.867	N/A	N/A	N/A	N/A	N/A	N/A																			
May 17	17,713	2.33	2.41974	1.92	0.41			4.868	5.420	4.833	5.385	4.514	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																			
July 17	13,552	2.32	2.40909	1.95	0.37			4.850	5.401	4.816	5.366	4.497	5.048	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.431	4.547	N/A	N/A	N/A	N/A	N/A																			
Sept 17	11,457	1.98	2.05698	1.63	0.35			4.506	5.059	4.471	5.024	4.152	4.704	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.202	N/A	N/A	N/A	N/A	N/A	N/A																			
Nov 17	22,237	2.29	2.37819	2.02	0.27			N/A	5.376	4.790	5.341	4.470	5.022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.520	5.072	N/A	N/A	N/A	N/A	N/A																			
Jan 18	12,628	2.55	2.64746	2.33	0.22			5.091	5.643	5.057	5.608	4.738	5.289	4.657	5.208	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 18	15,380	3.00	3.11270	2.63	0.37			N/A	N/A	5.510	N/A	5.192	5.741	5.112	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.242	N/A	5.171	N/A	N/A	N/A	N/A																			
May 18	22,720	3.18	3.29883	2.81	0.37			5.730	6.278	5.695	6.244	5.378	5.927	5.298	5.847	N/A	N/A	N/A	N/A	N/A	N/A	5.428	N/A	5.356	5.905	N/A	N/A	N/A																			
July 18	9,642	3.19	3.30867	2.73	0.46			5.732	N/A	5.698	6.245	5.382	5.929	5.302	5.848	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.360	5.907	N/A	N/A	N/A																			
Sept 18	14,550	3.14	3.25713	2.76	0.38			N/A	6.230	5.649	6.196	5.332	5.879	5.252	5.799	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																			
Nov 18	7,101	3.47	3.59817	3.07	0.40			N/A	N/A	5.987	N/A	5.670	N/A	5.590	6.137	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.649	N/A	N/A	N/A	N/A																			
Jan 19	11,713	2.95	3.06111	2.54	0.41			5.496	N/A	N/A	N/A	5.144	5.693	5.064	5.613	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 19	11,198	2.92	3.02985	2.45	0.47			N/A	N/A	N/A	N/A	5.110	5.658	5.029	5.578	4.628	5.177					N/A	N/A	N/A	N/A	N/A	N/A	N/A																			
May 19	10,911	2.66	2.76116	2.22	0.44			N/A	N/A	5.166	N/A	4.848	5.398	4.767	5.317	4.365	4.915					N/A	N/A	N/A	N/A	N/A	N/A	4.955																			
20-Year Debentures																				Refinance																											
Jan 17	276,384	2.80	2.84789	2.40	0.40			4.879	5.337	4.850	5.308	4.585	5.043	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.904	5.362	4.626	N/A	N/A	N/A	N/A	N/A																			
Feb 17	360,199	2.82	2.86826	2.38	0.44			4.901	5.360	4.872	5.331	4.607	5.066	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.926	5.385	4.649	5.107	N/A	N/A	N/A	N/A																			
Mar 17	333,267	3.04	3.09120	2.58	0.46			5.121	5.579	5.092	5.550	4.827	5.285	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.146	N/A	4.869	N/A	N/A	N/A	N/A	N/A																			
April 17	310,817	2.84	2.88846	2.35	0.49			4.919	5.377	4.891	5.349	4.625	5.084	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.944	N/A	4.667	N/A	N/A	N/A	N/A	N/A																			
May 17	361,901	2.88	2.92925	2.39	0.49			4.962	5.421	4.934	5.392	4.668	5.127	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.446	4.710	5.168	N/A	N/A	N/A	N/A																			
June 17	338,673	2.81	2.85812	2.20	0.61			4.891	5.349	4.862	5.320	4.596	5.055	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.916	N/A	4.638	5.097	N/A	N/A	N/A	N/A																			
July 17	305,239	2.98	3.03041	2.38	0.60			5.059	5.517	5.031	5.488	4.766	5.223	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.807	5.265	N/A	N/A	N/A	N/A																			
Aug 17	356,964	2.75	2.79734	2.22	0.53			4.832	5.291	4.803	5.262	4.537	4.996	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.579	5.038	N/A	N/A	N/A	N/A																			
Sept 17	333,569	2.59	2.63502	2.05	0.54			4.670	5.129	4.641	5.100	4.376	4.835	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.417	4.876	N/A	N/A	N/A	N/A																			
Oct 17	262,864	2.85	2.89859	2.34	0.51			4.929	5.387	4.900	5.358	4.635	5.093	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.954	N/A	4.676	N/A	N/A	N/A	N/A	N/A																			
Nov 17	351,575	2.79	2.83785	2.34	0.45			4.871	5.330	4.842	5.301	4.577	5.036	4.510	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.618	5.077	N/A	N/A	N/A	N/A																			
Dec 17	275,056	2.78	2.82766	2.33	0.45			4.860	N/A	4.831	5.290	4.566	5.024	4.499	4.957	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.607	5.066	N/A	N/A	N/A	N/A																			
Jan 18	265,812	2.92	2.96978	2.56	0.36			5.002	5.461	4.974	5.432	4.708	5.167	4.641	5.100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.750	N/A	4.690	5.148	N/A	N/A																			
Feb 18	324,595	3.22	3.27350	2.87	0.35			5.300	5.757	5.272	5.729	5.007	5.464	4.940	5.397	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.048	5.506	4.989	5.446	N/A	N/A																			
Mar 18	282,611	3.20	3.25328	2.85	0.35			5.281	5.738	5.252	5.709	4.987	5.445	4.920	5.378	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.029	N/A	4.969	N/A	N/A	N/A																			
April 18	329,067	3.31	3.36454	2.82	0.49			5.389	5.845	5.360	5.817	5.096	5.552	5.029	5.486	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.137	N/A	5.078	N/A	N/A	N/A																			
May 18	375,113	3.50	3.55703	2.96	0.54			5.582	6.038	5.553	6.010	5.289	5.745	5.222	5.678	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.330	5.787	5.270	5.727	N/A	N/A																			
June 18	307,029	3.60	3.65812	2.97	0.63			5.680	6.136	5.651	6.107	5.387	5.843	5.320	5.776	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.369	5.825	N/A	N/A	N/A																			
July 18	263,122	3.54	3.59736	2.83	0.71			5.618	6.074	5.590	6.046	5.326	5.782	5.259	5.715	N/A	N/A	N/A	N/A	N/A	5.643	N/A	N/A	N/A	5.308	5.764	N/A	N/A																			
Aug 18	344,334	3.58	3.63801	2.94	0.64			5.661	N/A	5.632	6.089	5.368	5.824	5.301	5.758	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.410	N/A	5.350	N/A	N/A	N/A																			
Sept 18	278,852	3.53	3.58727	2.89	0.64			5.609	6.065	5.580	6.037	5.317	5.773	5.250	5.706	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.298	5.754	N/A	N/A	N/A																			
Oct 18	259,791	3.77	3.83031	3.18	0.59			5.852	6.308	5.823	6.279	5.559	6.015	5.492	5.948	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.541	5.997	N/A	N/A	N/A																			
Nov 18	248,506	3.87	3.93129	3.22	0.65			5.950	6.405	5.921	6.376	5.658	6.113	5.591	6.046	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.640	6.095	N/A	N/A	N/A																			
Dec 18	244,169	3.54	3.59738	2.84	0.70			5.619	N/A	5.590	6.046	5.327	5.783	5.260	5.716	4.926	5.382				N/A	N/A	N/A	N/A	5.308	N/A	N/A	N/A																			
Jan 19	231,767	3.37	3.42549	2.71	0.66			5.452	5.909	5.423	N/A	5.159	5.616	5.092	5.549	4.758	5.215				N/A	N/A	N/A	N/A	5.140	N/A	4.791	N/A																			
Feb 19	129,980	3.26	3.31400	2.67	0.59			5.340	5.797	5.311	5.768	5.047	5.504	4.980	5.437	4.646	5.103				N/A	N/A	N/A	N/A	5.029	N/A	4.679	N/A																			
Mar 19	177,872	3.20	3.25325	2.65	0.55			5.280	5.737	5.251	N/A	4.987	5.444	4.920	5.377	4.586	5.043				N/A	N/A	5.028	N/A	4.969	N/A	4.619	5.076																			
April 19	199,341	2.98	3.03050	2.49	0.49			5.063	N/A	5.034	5.492	4.769	5.227	4.701	5.160	4.367	4.825				N/A	N/A	N/A	N/A	4.750	5.209	4.400	N/A																			
May 19	196,908	2.88	2.92913	2.43	0.45			4.962	5.420	4.933	5.391	4.668	5.126	4.600	5.059	4.265	4.724				N/A	N/A	N/A	N/A	4.649	N/A	4.298	N/A																			
25-Year Debentures																				Refinance																											
July 18	27,536	3.68	3.72405	2.83	0.85			N/A	N/A	N/A	N/A	N/A	N/A	5.320	5.758	N/A	N/A				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																			
Aug 18	29,238	3.71	3.75439	2.94	0.77			N/A	N/A	N/A	N/A	N/A	N/A	5.351	5.789	N/A	N/A				N/A	N/A	N/A	N/A	5.398	N/A	N/A	N/A																			
Sept 18	58,273	3.65	3.69390	2.89	0.76			N/A	N/A	N/A	N/A	N/A	N/A	5.290	5.728	N/A	N/A				N/A	N/A	N/A	N/A	5.337	N/A	N/A	N/A																			
Oct 18	79,913	3.89	3.93581	3.18	0.71			N/A	N/A	N/A	N/A	N/A	N/A	5.532	5.969	N/A	N/A				N/A	N/A	N/A	N/A	5.578	6.016	N/A	N/A																			
Nov 18	67,600	4.00	4.04654	3.22	0.78			N/A	N/A	N/A	N/A	N/A	N/A	5.640	6.077	N/A	N/A				N/A	N/A	N/A	N/A	5.687	N/A	N/A	N/A																			
Dec 18	80,771	3.67	3.71400	2.84	0.83			N/A	N/A	N/A	N/A	N/A																																			