July 2017 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
						Borrower Fee	0.021	0.021	0.000	0.000	0.389	0.389	0.749	0.749	0.9375	0.9375	0.914	0.914	0.697	0.697	1.043	1.043	1.103	1.103	0.958	0.958	0.731	0.731		
						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		
10-Year Debentures																					**Refinance**									
Jan 14	16,313	2.14	2.2229	1.76	0.38		N/A	N/A	3.29	N/A	N/A	N/A	4.394	N/A	4.672	5.224	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 14	26,933	1.96	2.0362	1.56	0.40		N/A	N/A	N/A	N/A	N/A	N/A	4.207	4.759	4.484	5.037	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 14	34,831	1.98	2.0570	1.65	0.33		N/A	N/A	N/A	N/A	3.699	N/A	N/A	N/A	4.508	5.06	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 14	21,590	1.98	2.0571	1.62	0.36		N/A	N/A	N/A	N/A	N/A	4.25	4.23	N/A	4.51	5.064	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Sept 14	23,153	2.16	2.2437	1.77	0.39		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.695	5.248	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 14	26,728	2.03	2.1088	1.63	0.40		N/A	N/A	N/A	N/A	N/A	N/A	4.28	N/A	4.555	5.107	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Jan 15	16,216	1.89	1.9638	1.50	0.30		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.416	4.969	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 15	16,574	1.88	1.9532	1.58	0.30		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.401	4.954	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 15	17,472	1.85	1.92236	1.58	0.56		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.374	4.927	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 15	16,171	1.80	1.87073	1.54	0.26		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.326	4.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Sept 15	12,087	1.71	1.77724	1.54	0.17		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.236	4.790	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 15	22,147	1.66	1.72515	1.64	0.02		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.176	4.729	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Jan 16	21,441	1.80	1.87054	1.64	0.16		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.323	4.876	4.288	4.842	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Mar 16	22,005	1.84	1.91202	1.43	0.41		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.368	4.922	4.333	4.887	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
May 16	14,308	1.71	1.77701	1.25	0.46		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.229	4.782	4.194	4.747	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
July 16	18,677	1.63	1.69415	0.99	0.64		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.150	4.704	4.115	4.669	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Sept 16	15,168	1.80	1.87052	1.14	0.66		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.325	4.878	4.290	4.844	N/A	N/A	N/A	N/A	N/A	N/A	4.355	N/A	N/A	N/A		
Nov 16	8,870	2.17	2.25397	1.49	0.68		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.704	5.256	4.669	5.222	N/A	N/A	N/A	N/A	N/A	N/A	4.734	N/A	N/A	N/A		
Jan 17	7,325	2.42	2.51256	1.88	0.54		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	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		
Mar 17	14,862	2.63	2.73012	2.11	0.52		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.170	5.720	5.135	5.685	4.817	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.867	N/A		
May 17	17,713	2.33	2.41974	1.92	0.41		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	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		
July 17	13,552	2.32	2.40909	1.95	0.37		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.850	5.401	4.816	5.366	4.497	5.048	N/A	N/A	N/A	N/A	N/A	5.431	4.547	N/A		
20-Year Debentures																					**Refinance**									
Jan 14	283,660	3.46	3.51651	2.98	0.48		N/A	N/A	N/A	4.86	4.87	N/A	5.31	5.77	5.54	6.00	N/A	N/A	N/A	N/A	N/A	N/A	5.74	N/A	N/A	N/A	N/A	N/A		
Feb 14	251,320	3.23	3.28357	2.69	0.54		N/A	N/A	4.17	4.62	4.64	5.10	5.08	5.54	5.31	5.77	N/A	N/A	N/A	N/A	N/A	N/A	5.51	N/A	N/A	N/A	N/A	N/A		
Mar 14	361,134	3.21	3.26331	2.73	0.48		N/A	N/A	4.15	N/A	4.62	5.08	5.06	5.52	5.29	5.75	N/A	N/A	N/A	N/A	N/A	N/A	5.49	N/A	N/A	N/A	N/A	N/A		
April 14	356,704	3.11	3.16225	2.66	0.45		N/A	N/A	N/A	4.51	4.52	4.98	4.96	5.42	5.19	5.65	N/A	N/A	N/A	N/A	N/A	N/A	5.39	5.852	N/A	N/A	N/A	N/A		
May 14	321,645	3.00	3.05065	2.61	0.39		N/A	N/A	3.935	N/A	4.411	N/A	4.85	5.308	5.08	5.538	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
June 14	224,447	2.99	3.04044	2.60	0.39		N/A	N/A	N/A	N/A	4.399	N/A	4.839	5.296	5.069	5.526	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 14	317,997	2.87	2.91897	2.51	0.36		N/A	N/A	N/A	N/A	4.281	4.739	4.721	5.18	4.952	5.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Aug 14	263,440	2.88	2.92905	2.46	0.42		N/A	N/A	N/A	N/A	N/A	N/A	4.730	5.188	4.96	5.418	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Sept 14	355,242	2.92	2.96968	2.52	0.40		N/A	N/A	N/A	N/A	4.331	N/A	4.772	5.23	5.002	5.461	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Oct 14	224,803	2.74	2.78718	2.32	0.42		N/A	N/A	N/A	N/A	4.150	N/A	4.590	5.049	4.821	5.28	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 14	230,111	2.80	2.84791	2.36	0.44		N/A	N/A	N/A	N/A	4.667	4.209	4.649	N/A	4.879	5.338	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Dec 14	329,518	2.70	2.74666	2.20	0.50		N/A	N/A	N/A	N/A	N/A	N/A	4.551	N/A	4.782	5.242	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Jan 15	232,709	2.52	2.56408	2.01	0.51		N/A	N/A	N/A	N/A	N/A	N/A	4.370	4.829	4.601	5.06	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Feb 15	238,962	2.46	2.51049	1.81	0.65		N/A	N/A	N/A	N/A	N/A	N/A	4.315	4.774	4.546	5.005	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 15	280,740	2.72	2.76680	2.12	0.60		N/A	N/A	N/A	N/A	N/A	N/A	4.568	N/A	4.799	5.257	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
April 15	338,693	2.51	2.55396	1.92	0.59		N/A	N/A	N/A	N/A	N/A	N/A	4.360	4.820	4.591	5.051	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 15	312,757	2.77	2.81760	2.21	0.56		N/A	N/A	N/A	N/A	N/A	N/A	4.619	N/A	4.850	5.309	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
June 15	301,688	2.98	3.03048	2.44	0.54		N/A	N/A	N/A	N/A	N/A	N/A	4.832	N/A	5.062	5.521	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 15	245,659	2.88	2.92906	2.27	0.61		N/A	N/A	N/A	N/A	N/A	N/A	4.731	5.189	4.961	5.419	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Aug 15	283,855	2.82	2.87760	2.23	0.59		N/A	N/A	N/A	N/A	N/A	N/A	4.678	5.136	4.909	5.367	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Sept 15	301,921	2.82	2.86828	2.21	0.61		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.902	5.360	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Oct 15	288,205	2.72	2.76688	2.06	0.66		N/A	N/A	N/A	N/A	N/A	N/A	4.570	N/A	4.801	5.259	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 15	282,747	2.70	2.74652	2.24	0.46		N/A	N/A	N/A	N/A	N/A	N/A	4.548	5.006	4.778	5.237	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Dec 15	267,518	2.82	2.86835	2.22	0.60		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.902	5.361	4.873	5.332	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Jan 16	217,157	2.78	2.82769	2.18	0.60		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.860	5.318	4.831	5.290	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Feb 16	318,257	2.27	2.31051	1.61	0.66		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.352	4.813	4.324	4.784	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Mar 16	295,011	2.50	2.54381	1.91	0.59		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.582	5.042	4.553	5.013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
April 16	266,931	2.26	2.30022	1.71	0.55		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.340	4.800	4.311	4.771	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
May 16	273,418	2.27	2.31036	1.79	0.48		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.349	4.809	4.320	4.780	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
June 16	349,640	2.18	2.21908	1.66	0.52		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.261	4.722	4.232	4.693	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
July 16	260,748	2.04	2.07704	1.42	0.62		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.120	4.581	4.091	4.552	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Aug 16	288,027	2.04	2.07699	1.53	0.51		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.122	4.584	4.093	4.555	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Sept 16	317,920	2.03	2.06674	1.56	0.47		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.110	4.572	4.082	4.543	N/A	N/A	N/A	N/A	N/A	N/A	4.136	4.597	N/A	N/A		
Oct 16	298,584	2.21	2.24946	1.74	0.47		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.289	4.750	4.261	4.721	N/A	N/A	N/A	N/A	N/A	N/A	4.315	N/A	N/A	N/A		
Nov 16	342,876	2.57	2.61479	2.08	0.49		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.652	5.111	4.623	5.083	4.357	N/A	N/A	N/A	N/A	N/A	4.677	5.136	N/A	N/A		
Dec 16	314,132	2.81	2.85811	2.40	0.41		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.890	5.349	4.862	5.320	4.596	5.005	N/A	N/A	N/A	N/A	4.916	5.374	4.638	N/A		
Jan 17	276,384	2.80	2.84789	2.40	0.40		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.879	5.337	4.850	5.308	4.585	5.043	N/A	N/A	N/A	N/A	4.904	5.362	4.626	N/A		
Feb 17	360,199	2.82	2.86826	2.38	0.44		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.901	5.360	4.872	5.331	4.607	5.066	N/A	N/A	N/A	N/A	4.926	5.385	4.649	5.107		
Mar 17	333,267	3.04	3.09120	2.58	0.46		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.121	5.579	5.092	5.550	4.827	5.285	N/A	N/A	N/A	N/A	5.146	N/A	4.869	N/A		
April 17	310,817	2.84	2.88846	2.35	0.49		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.919	5.377	4.891	5.349	4.625	5.084	N/A	N/A	N/A	N/A	4.944	N/A	4.667	N/A		
May 17	361,901	2.88	2.92925	2.39	0.49		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.962	5.421	4.934	5.392	4.668	5.127	N/A	N/A	N/A	N/A	N/A	5.446	4.710	5.168		
June 17	338,673	2.81	2.85812	2.20	0.61		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.891	5.349	4.862	5.320	4.596	5.055	N/A	N/A	N/A	N/A	4.916	N/A	4.638	5.097		
July 17	305,239	2.98	3.03041	2.38	0.60		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.059	5.517	5.031	5.488	4.766	5.223	N/A	N/A	N/A	N/A	N/A	N/A	4.807	5.265		