December 2021 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	0.625	1.000
						Borrower Fee	0.9375	0.9375	0.914	0.914	0.697	0.697	0.642	0.642	0.368	0.368	0.3205	0.3205	0.4517	0.4517	0.2475	0.2475	0.958	0.958	0.731	0.731	0.682	0.682	0.395	0.395	0.3220	0.3220	0.4865	0.4865	0.2590	0.2590		
						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	0.100	0.100		
10-Year Debentures																													**Refinance**								
Jan 20	10,182	2.18	2.26433	1.68	0.50		N/A	N/A	N/A	N/A	4.359	N/A	4.278	4.830	3.874	4.426	3.804	4.356	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.914	4.466	N/A	N/A	N/A	N/A	N/A	N/A
Mar 20	11,504	1.25	1.29979	0.68	0.57		N/A	N/A	3.726	N/A	N/A	N/A	3.324	3.879	2.918	N/A	2.847	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.958	N/A	N/A	N/A	N/A	N/A	N/A	N/A
May 20	17,195	1.06	1.10255	0.35	0.71		N/A	N/A	N/A	N/A	3.213	N/A	3.132	N/A	2.725	3.282	2.654	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	N/A	N/A	N/A
July 20	18,005	0.81	0.84288	0.29	0.52		N/A	N/A	N/A	N/A	N/A	N/A	2.878	3.437	2.470	3.029	2.400	2.958	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.402	N/A	N/A	N/A	N/A	N/A
Sept 20	39,162	0.70	0.72851	0.29	0.41		N/A	N/A	3.173	N/A	2.849	N/A	2.767	3.326	2.358	2.918	2.288	2.847	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.290	N/A	N/A	N/A	N/A	N/A
Nov 20	10,998	0.65	0.67647	0.33	0.32		N/A	N/A	N/A	N/A	N/A	N/A	2.709	3.267	2.302	2.859	2.231	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	2.233	2.791	N/A	N/A	N/A	N/A
Jan 21	4,135	0.67	0.69727	0.46	0.21		N/A	N/A	N/A	N/A	N/A	N/A	2.733	N/A	2.325	2.883	2.254	N/A	2.450	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.256	N/A	N/A	N/A	N/A	N/A
Mar 21	9,478	0.91	0.94684	0.79	0.12		N/A	N/A	N/A	N/A	N/A	N/A	2.983	N/A	2.575	N/A	2.504	3.063	2.700	3.258	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
May 21	12,001	0.84	0.87394	0.79	0.05		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.056	2.428	2.985	2.623	3.180	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.674	N/A	N/A	N/A
July 21	9,501	0.82	0.85320	0.74	0.08		N/A	N/A	N/A	N/A	N/A	N/A	2.887	N/A	2.480	N/A	2.409	2.967	2.604	3.162	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.656	3.214	N/A	N/A
Sept 21	12,821	0.90	0.93642	0.81	0.09		N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.528	2.563	N/A	2.492	3.050	2.687	3.245	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.739	3.297	N/A	N/A
Nov 21	16,778	1.31	1.36226	1.18	0.13		N/A	N/A	N/A	N/A	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
20-Year Debentures																													**Refinance**								
Jan 20	113,379	2.32	2.36123	1.89	0.43		4.402	N/A	4.373	N/A	4.106	4.567	4.039	4.499	3.703	4.163	3.644	4.105	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.646	N/A	N/A	N/A	N/A	N/A
Feb 20	87,102	2.07	2.10736	1.66	0.41		N/A	N/A	4.121	N/A	3.854	4.315	3.787	4.247	3.450	3.911	3.392	3.852	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.483	3.944	3.394	N/A	N/A	N/A	N/A	N/A
Mar 20	111,375	1.49	1.51808	0.94	0.55		3.569	N/A	3.540	4.002	3.272	3.735	3.204	3.667	2.866	3.329	2.808	3.270	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.900	N/A	2.810	N/A	N/A	N/A	N/A	N/A
April 20	141,823	1.64	1.67056	0.75	0.89		3.721	4.184	3.692	4.155	3.425	3.887	3.357	3.819	3.019	3.481	2.960	3.423	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.515	2.962	N/A	N/A	N/A	N/A	N/A
May 20	127,470	1.37	1.39601	0.69	0.68		3.450	3.913	3.421	3.884	3.153	N/A	3.085	3.548	2.746	3.209	2.688	3.151	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.780	N/A	2.689	N/A	N/A	N/A	N/A	N/A
June 20	162,340	1.21	1.23325	0.67	0.54		3.292	N/A	3.263	3.727	2.994	3.458	2.926	3.390	2.587	3.051	2.528	2.992	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.530	2.994	N/A	N/A	N/A	N/A
July 20	121,029	1.03	1.05033	0.64	0.39		N/A	N/A	3.081	3.546	2.812	3.277	2.744	3.209	2.405	2.869	2.346	2.810	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	N/A	N/A
Aug 20	101,964	0.90	0.91764	0.51	0.39		N/A	N/A	2.949	3.414	2.680	3.145	2.612	3.077	2.272	2.737	2.214	2.678	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.215	N/A	N/A	N/A	N/A	N/A
Sept 20	344,162	1.05	1.07039	0.71	0.34		N/A	N/A	3.102	N/A	2.833	3.298	2.765	3.229	2.425	2.890	2.366	2.831	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.368	2.833	N/A	N/A	N/A	N/A
Oct 20	23,902	1.08	1.10090	0.78	0.30		N/A	N/A	3.131	N/A	N/A	3.326	2.794	3.258	2.454	2.919	2.396	2.860	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.398	N/A	N/A	N/A	N/A	N/A
Nov 20	46,133	1.05	1.07034	0.77	0.28		N/A	N/A	N/A	N/A	N/A	3.294	2.762	3.226	2.423	2.887	2.364	2.828	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.366	2.830	N/A	N/A	N/A	N/A
Dec 20	79,404	1.11	1.13145	0.94	0.17		3.191	N/A	N/A	N/A	2.893	N/A	2.825	3.290	2.485	2.950	2.427	2.891	2.589	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.428	N/A	2.632	N/A	N/A	N/A
Jan 21	50,211	1.18	1.20277	1.08	0.10		N/A	N/A	3.230	N/A	2.962	3.426	2.894	3.358	2.555	3.019	2.496	2.960	2.658	3.122	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.498	N/A	2.702	N/A	N/A	N/A
Feb 21	60,207	1.24	1.26377	1.15	0.09		N/A	N/A	N/A	N/A	3.024	N/A	2.956	3.420	2.617	3.081	2.558	3.022	2.720	3.185	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.560	3.024	2.764	N/A	N/A	N/A
Mar 21	57,071	1.52	1.54858	1.54	-0.02		N/A	N/A	3.573	4.036	3.305	3.768	3.237	3.700	2.899	3.362	2.840	N/A	3.002	3.465	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.045	N/A	N/A	N/A
April 21	59,703	1.54	1.56902	1.64	-0.10		N/A	N/A	N/A	N/A	3.324	3.787	3.256	3.719	2.918	3.381	2.859	3.322	3.021	3.484	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.861	N/A	3.064	3.527	N/A	N/A
May 21	63,539	1.37	1.39601	1.56	-0.19		N/A	N/A	N/A	N/A	3.152	N/A	3.084	3.547	2.746	3.209	2.687	3.150	2.849	3.312	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.689	N/A	2.892	N/A	N/A	N/A
June 21	70,555	1.29	1.31461	1.49	-0.20		N/A	N/A	3.342	N/A	3.074	3.538	3.006	3.470	2.667	3.131	2.608	3.072	2.770	3.234	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.813	N/A	N/A	N/A
July 21	90,067	1.22	1.24338	1.29	-0.07		N/A	N/A	3.271	N/A	3.003	N/A	2.934	3.398	2.596	3.059	2.537	3.001	2.699	3.163	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.742	3.206	N/A	N/A
Aug 21	68,384	1.27	1.29425	1.20	0.07		N/A	N/A	N/A	N/A	N/A	3.515	2.983	N/A	2.645	3.108	2.586	3.049	2.748	3.211	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.791	3.255	N/A	N/A
Sept 21	83,523	1.38	1.40620	1.33	0.05		N/A	N/A	N/A	N/A	3.164	3.627	3.096	N/A	2.757	N/A	2.698	3.162	2.860	3.324	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.903	3.367	N/A	N/A
Oct 21	71,529	1.54	1.56884	1.56	-0.02		N/A	N/A	N/A	N/A	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
Nov 21	96,582	1.55	1.57906	1.50	0.05		N/A	N/A	N/A	N/A	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
Dec 21	68,395	1.65	1.68071	1.48	0.17		N/A	N/A	N/A	N/A	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
25-Year Debentures																													**Refinance**								
Jan 20	207,215	2.45	2.48308	1.89	0.56		N/A	N/A	N/A	N/A	N/A	N/A	4.093	4.535	3.770	4.212	3.714	4.156	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.802	N/A	3.716	4.158	N/A	N/A	N/A	N/A
Feb 20	192,791	2.20	2.23024	1.66	0.54		N/A	N/A	N/A	N/A	N/A	N/A	3.842	4.284	3.519	3.961	3.463	3.905	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.551	3.993	3.465	N/A	N/A	N/A	N/A	N/A
Mar 20	256,694	1.62	1.64346	0.94	0.68		N/A	N/A	N/A	N/A	N/A	N/A	3.261	3.705	2.937	3.381	2.881	3.325	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.969	N/A	2.883	3.326	N/A	N/A	N/A	N/A
April 20	279,385	1.77	1.79534	0.75	1.02		N/A	N/A	N/A	N/A	N/A	N/A	3.413	3.857	3.089	3.532	3.032	3.476	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.121	N/A	3.034	3.478	N/A	N/A	N/A	N/A
May 20	265, 265	1.50	1.52196	0.69	0.81		N/A	N/A	N/A	N/A	N/A	N/A	3.142	3.586	2.817	3.262	2.761	3.205	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.849	N/A	2.763	3.207	N/A	N/A	N/A	N/A
June 20	331,334	1.34	1.35995	0.67	0.67		N/A	N/A	N/A	N/A	N/A	N/A	2.983	3.429	2.658	3.103	2.602	3.047	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.603	3.049	N/A	N/A	N/A	N/A
July 20	258,237	1.15	1.16740	0.64	0.51		N/A	N/A	N/A	N/A	N/A	N/A	2.792	3.238	2.467	2.913	2.410	2.856	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.412	2.858	N/A	N/A	N/A	N/A
Aug 20	272,805	1.01	1.02546	0.51	0.50		N/A	N/A	N/A	N/A	N/A	N/A	2.651	3.097	2.325	2.771	2.269	2.715	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.271	2.717	N/A	N/A	N/A	N/A
Sept 20	900,950	1.15	1.16739	0.71	0.44		N/A	N/A	N/A	N/A	N/A	N/A	2.793	3.239	2.467	2.913	2.410	2.856	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.499	N/A	2.412	2.858	N/A	N/A	N/A	N/A
Oct 20	106,646	1.17	1.18764	0.78	0.39		N/A	N/A	N/A	N/A	N/A	N/A	2.812	N/A	2.486	2.932	2.430	2.876	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.432	2.877	N/A	N/A	N/A	N/A
Nov 20	188,435	1.14	1.15721	0.77	0.37		N/A	N/A	N/A	N/A	N/A	N/A	2.781	N/A	2.455	2.901	2.399	2.844	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.401	2.846	N/A	N/A	N/A	N/A
Dec 20	274,688	1.21	1.22819	0.94	0.27		N/A	N/A	N/A	N/A	N/A	N/A	2.853	3.299	2.527	2.973	2.471	2.916	2.627	3.072	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.473	2.918	2.668	N/A	N/A	N/A
Jan 21	239,266	1.28	1.29911	1.08	0.20		N/A	N/A	N/A	N/A	N/A	N/A	2.922	3.367	2.597	3.042	2.540	2.985	2.696	3.141	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.542	2.987	2.737	3.182	N/A	N/A
Feb 21	355,019	1.34	1.36001	1.15	0.19		N/A	N/A	N/A	N/A	N/A	N/A	2.983	3.429	2.658	3.103	2.602	3.047	2.757	3.203	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.603	3.049	2.799	3.244	N/A	N/A
Mar 21	287,904	1.63	1.65364	1.54	0.09		N/A	N/A	N/A	N/A	N/A	N/A	3.274	N/A	2.949	3.393	2.893	3.337	3.048	3.492	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.894	N/A	3.089	N/A	N/A	N/A
April 21	382,679	1.66	1.68402	1.64	0.02		N/A	N/A	N/A	N/A	N/A	N/A	3.303	3.747	2.978	3.422	2.922	3.366	3.077	3.521	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.924	3.368	3.118	3.562	N/A	N/A
May 21	406,692	1.52	1.54221	1.56	-0.04		N/A	N/A	N/A	N/A	N/A	N/A	3.162	N/A	2.837	3.281	2.781	3.225	2.936	3.380	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.783	N/A	2.977	3.422	N/A	N/A
June 21	494,897	1.47	1.49161	1.49	-0.02		N/A	N/A	N/A	N/A	N/A	N/A	3.113	N/A	2.788	3.233	2.732	3.177	2.887	3.332	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.734	N/A	2.929	3.374	N/A	N/A
July 21	392,288	1.40	1.42068	1.29	0.11		N/A	N/A	N/A	N/A	N/A	N/A	3.042	N/A	2.717	3.162	2.661	3.106	2.817	3.261	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.663	N/A	2.858	3.303	N/A	N/A
Aug 21	396,375	1.45	1.47133	1.20	0.25		N/A	N/A	N/A	N/A	N/A	N/A	3.091	3.536	2.767	3.211	2.710	3.155	2.866	3.310	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.712	N/A	2.907	3.351	N/A	N/A
Sept 21	538,794	1.56	1.58273	1.33	0.23		N/A	N/A	N/A	N/A	N/A	N/A	3.203	N/A	2.878	3.323	2.822	3.266	2.977	3.422	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.268	3.019	3.463	N/A	N/A
Oct 21	408,179	1.74	1.76496	1.56	0.18		N/A	N/A	N/A	N/A	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
Nov 21	517,789	1.75	1.77517	1.50	0.25		N/A	N/A	N/A	N/A	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	N/A	N/A	3.015	N/A	3.210	3.654	N/A	N/A
Dec 21	435,708	1.85	1.87631	1.48	0.37		N/A	N/A	N/A	N/A	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	N/A	N/A	3.115	N/A	3.309	3.753	3.040	N/A