

## 2017 TD's Ongoing Energy, GHG, and Water Reduction Initiatives

Initiative	Description	Estimated Annual Reduction	Estimated Annual GHG Reduction	Estimated Annual Cost Savings (\$CAD)	Total Estimated Cost to Date (\$CAD)
<b>LED Lighting Retrofit Program</b>	Phase I and II of the US interior and exterior retail LED Lighting Retrofit program was completed across over 1,500 locations in 2017 and generated close to 18.1 million kWh in annual savings. Phase III and IV of the US interior and exterior retail LED Lighting Retrofit, along with 700 branches across Canada will be rolled out in 2018.	18,114,356 kWh	5,944 tCO <sub>2</sub> e	\$ 5,057,635	\$ 19,831,436
<b>On-Site Solar Energy Production</b>	On-site solar energy generation continues to be developed across our retail locations. In 2017, TD added 12 new sites with 152 kW of additional solar capacity, generating a total of 11,953 MWh of solar energy across 147 sites in North America.	2,463,000 kWh	854 tCO <sub>2</sub> e	\$ 411,940	\$ 13,484,845
<b>Retro-Commissioning and US Retail Store Improvements</b>	As part of the US Retail Renovations Process, TD developed and implemented a retro-commissioning program to target major energy consumption sources and to improve the overall performance for close to 450 retail locations to date. The RCx's implementation process follows performance improvement recommendations identified through the individual RCx reports, which include programmable thermostats and occupancy sensors to target energy performance improvements.	3,905,127 kWh	1,281 tCO <sub>2</sub> e	\$ 471,293	\$ 5,142,696
<b>Flex Work Place</b>	Since inception, TD's Flex Work Place program generated a total of 4.6M kWh in annual energy reductions and close to 480 tCO <sub>2</sub> e in annual carbon savings, amounting to over \$ 315,000 in annual cost savings. In 2017, 1,083 new employees were added to the Flex Work Place program that generated added direct savings.	4,620,376 kWh	479 tCO <sub>2</sub> e	\$ 315,677	Not available
<b>Data Centre Efficiency</b>	We improved our server virtualization program to further reduce space occupied and energy usage.	47,270,051 kWh	5,105 tCO <sub>2</sub> e	\$ 5,908,812	Not available
<b>Printer Reduction</b>	TD's Printer reduction program continues to be rolled out throughout the enterprise. In 2017, we wound down the Canadian rollout and ramped up the US rollout. We are moving to multifunction devices and setting duplex printing capabilities as default, which will reduce energy use, and save on printing supplies like toner and paper.	1,592,446 kWh	243 tCO <sub>2</sub> e	\$ 222,942	Not available
<b>Video Conferencing</b>	Telepresence implementation across our US and Canada operations continues. It creates value to our business by reducing travel among our mobile employee population. We have seen substantial cost and carbon savings, while providing a more personal collaboration experience for our employees.	13,296,000 Km	5,185 tCO <sub>2</sub> e	\$ 6,993,000	\$ 2,845,789
<b>Smart Retail Control</b>	In 2017, TD tested an innovative smart building system for select retail locations to provide real-time visibility, control and performance opportunity, along with improving employee comfort within our real estate portfolio. In FY18, the program is targeted to rollout at 290 retail locations across the US and Canada.	144,039 kWh	28.86 tCO <sub>2</sub> e	\$ 33,650	\$ 92,746
<b>Smart Irrigation</b>	TD's ETwater's Smart Irrigation retrofit continues to provide real-time updates based on rainfall forecasting and evapotranspiration to help reduce water consumption. In 2017, the application of the ETwater Smart Irrigation technology helped TD reduce both operational costs and water consumption across a total of 278 sites in North America.	136,758 m <sup>3</sup>	Not applicable	\$ 319,731	\$ 680,042

