2020 OPG Scorecard Management Discussion and Analysis

("2020 Scorecard MD&A")

Regulated Hydroelectric Facilities Performance Measures

OPG's regulated hydroelectric fleet consists of 54 stations with a combined capacity of 6,420 MW. The objectives of OPG's hydroelectric operations include operating and maintaining the generating facilities in a safe, reliable, efficient and cost-effective manner, while increasing the output from, and pursuing opportunities to increase, the fleet's generating capacity. OPG aims to increase the hydroelectric facilities' output by improving operational flexibility, enhancing reliability, optimizing outage planning and, subject to water conditions, increasing availability to meet electricity system demand.

Given the long-term nature of OPG's hydroelectric fleet, OPG maintains and improves the performance of existing hydroelectric generating stations through multi-year capital and non-capital investments including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers and control systems. Where economical and practical, OPG also pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations. As necessary, OPG also plans for repair, rehabilitation, or replacement of aging civil hydroelectric structures.

During 2019, OPG's hydroelectric operations experienced challenging conditions due to record high water levels and flows as a result of high snow pack and substantial rain across much of Ontario. OPG safely and effectively managed within these conditions. While several hydroelectric measures were lower than 2019 targets, generally performance measures show improved performance in 2019 compared to 2018. This includes Total Recordable Injury Frequency ("TRIF"), Environmental Performance Index ("EPI"), Availability, and OM&A Unit Energy Cost. Equivalent Forced Outage Rates ("EFOR") increased in 2019, largely due to equipment failures associated with the aging hydroelectric fleet. Total Generating Cost per Net MWh ("TGC") for the regulated hydroelectric facilities increased in 2019 due to investment in asset rehabilitation. Performance measures and 2019 program performance results are further detailed below.

Hydroelectric Safety

- **Total Recordable Injury Frequency (per 200k hours)**

TRIF is defined as the average number of fatalities, lost time injuries, medical treatment injuries and restricted work injuries per 200,000 hours worked.

The 2019 TRIF performance (1.32) exceeded the 2019 TRIF target (1.21) by 9%. While this metric exceeded target, the 2019 safety performance is nonetheless very strong, with better results than the preceding 3 years. Notably, the regulated hydroelectric facilities

experienced only one lost time injury in 2019, no restricted work injuries, and no fatalities. This performance is the result of a focus on safety culture improvement, including observation and coaching practices, improved line of sight on safety incidents through modernization of reporting tools, and safety-related initiatives.

- **Environmental Performance Index (%)**

EPI is a weighted distribution of multiple measures, including the number of environmental spills, environmental regulatory infractions and social license initiatives with direct implication to the environment.

In 2019, the regulated hydroelectric facilities' EPI performance (150%) exceeded the 2019 target (100%) and 2018 performance (135%). This performance is due to the avoidance of any category A or B spills, no findings in multiple Environmental Compliance Assessment (ECA) inspections by the Ministry of the Environment, Conservation and Parks, and an ISO14001-certified Environmental Management System.

Hydroelectric Reliability

- **Availability Factor (%)**

The Availability Factor ("Availability") is a measure of the reliability of a generating unit, represented by the percentage of time the unit is capable of providing service considering planned maintenance outages, unplanned outages, and unit derates. The metric is reported on a Maximum Capacity Rating weighted average basis.

The 2019 Availability performance represents a slight increase (0.6%) from 2018 Availability performance. The 2019 Availability performance (86.6%) was less than the 2019 Availability target (88.0%), primarily due to an increase in unplanned outages largely attributable to equipment failures associated with an aging hydroelectric fleet that requires investment to improve reliability.

Availability performance was lower than target largely due to two forced outages at R.H. Saunders GS that each had a duration of approximately six months. The most recent mechanical and electrical overhauls of R.H. Saunders GS' turbines and generators were completed during the 1990s and early 2000s. OPG is planning to refurbish or replace aging turbine and generator equipment at R.H. Saunders through a sixteen year overhaul program. RG is also improving equipment monitoring by investing in the use of Advanced Pattern Recognition software models to predict failures and improve generating units' reliability.

- **Equivalent Forced Outage Rates (%)**

EFOR is an index of generating unit reliability measured by the ratio of time a generating unit is forced out-of-service, including equivalent forced deratings to the time the unit was operating or was forced out-of-service completely or partially. EFOR represents the percentage of time a unit is forced unavailable, as a function of intended service. Planned maintenance time and outages due to external causes are excluded from the denominator in the calculation of EFOR.

EFOR increased from 4.2% in 2018 to 6.4% in 2019, which did not meet the target of 1.80%. The primary driver of the 2019 EFOR performance was increased equipment failures due to an aging hydroelectric fleet that requires investment. Two major contributing factors were two forced outages at R.H. Saunders referred to in the discussion of 2019 Availability. OPG is implementing several initiatives to improve performance, including an asset management approach to maintain reliable operations, while balancing cost, risk and performance as well as investing in monitoring, diagnostics and equipment reliability tools for condition-based maintenance.

Hydroelectric Cost Effectiveness

- **OM&A Unit Energy Cost ($/MWh)**

OM&A Unit Energy Cost ("UEC") is a measure of financial productivity. It measures the Operations, Maintenance and Administrative (OM&A) costs per unit of energy produced (in MWh). OM&A UEC is calculated as the total OM&A expenditures, divided by annual generation.

The 2019 performance ($8.5/MWh) was better than the 2019 performance target ($8.7/MWh). This performance is a result of OPG's work to manage the upward pressure on OM&A costs due to the aging hydroelectric fleet, as well as increased output in 2019.

- **Regulated Facilities Total Generating Cost per Net MWh ($/MWh)**

TGC is defined as the total cost of operating the regulated hydroelectric facilities, which includes OM&A, fuel, sustaining capital, divided by generation. TGC is measured as a 3-year historical average to account for year-over-year fluctuations in capital expenditures.

This performance measure has increased by 3% from $23.4/MWh in 2018 to $24.1/MWh in 2019. The increase is attributed to capital investments to enhance dam safety, address end of life assets, and higher fuel costs, partially offset by increased production. Sustaining capital investments are required to support improving OPG's aging hydroelectric fleet's operation, reliability and safety.

Note to Readers of 2019 Scorecard MD&A

This Scorecard MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "budget", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could" and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks and uncertainties. All forward-looking statements could be inaccurate to a material degree. Some of the factors that could cause such inaccuracies include, but are not limited to, legislative or regulatory developments, financial market conditions, general economic conditions and the weather. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station (GS) performance, availability and operating lives, fuel costs, surplus baseload generation (SBG), fixed asset removal and nuclear waste management and associated funding requirements, refurbishment of existing facilities, development and construction of new facilities, defined benefit pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of electricity industries and markets, the continued application and renewal of energy supply agreements (ESAs), foreign currency exchange rates, commodity prices, wholesale electricity market prices, environmental and other regulatory requirements, operating licence applications to the Canadian Nuclear Safety Commission (CNSC), health, safety and environmental developments, the COVID-19 pandemic, changes in the Company's workforce, renewal of union collective agreements, business continuity events, the weather, climate change, technological change, financing requirements and liquidity, funding sources, applications to the Ontario Energy Board (OEB) for regulated prices, the impact of regulatory decisions by the OEB, forecasts of earnings, cash flow, earnings before interest, income taxes, depreciation and amortization, gross margin, Return on Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), Total Generating Cost (TGC) per megawatt-hour (MWh), operations, maintenance and administration (OM&A) expenses and project and other expenditures, retention of critical talent, and supplier and third party performance. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this Scorecard MD&A are made only as of the date of this Scorecard MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events or otherwise.