

2024 Regulated Hydroelectric Performance Scorecard

Performance Outcomes		Measures	2020	2021	2022	2023	2024		Historical	2025 Target
							Actual	Target	Trend	
Safety & Environment	Total Recordable Injury Frequency (per 200k hours) <sup>1</sup>		1.21	1.02	1.56	0.46	0.77	1.11	●	+
	Environmental Performance Index (%)		100%	83%	100%	94%	99%	80%	●	+
Reliability	Availability Factor (%)		88.8%	88.4%	87.8%	85.4%	85.2%	87.1%	●	N
	Equivalent Forced Outage Rates (%)		5.7%	3.5%	4.1%	2.9%	5.5%	2.7%	●	-
Cost Effectiveness	OM&A Unit Energy Cost (\$/MWh)		8.5	10.0	9.6	10.2	10.0	11.0	●	N
	Regulated Facilities Total Generating Cost per Net MWh (\$/MWh) <sup>2</sup>		25.3	27.6	28.7	31.0	32.0	N/A		-

Notes:

1:Total Recordable Injury Frequency (per 200k hours) is reported on OPG’s Renewable Generation (RG) business which includes regulated and non-regulated facilities.  
2: Per OEB requirements, no target is filed for TGC.

Legend:

5-year Trend

+

Favourable

-

Unfavourable

N

Neutral

Current Year

●

Target met

●

Target not met

# 2024 OPG Scorecard Management Discussion & Analysis

## "2024 Scorecard MD&A"

### Regulated Hydroelectric Facilities Performance Measures

OPG's regulated hydroelectric fleet consists of 54 stations with a combined installed capacity of 6,566 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, 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. OPG pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations. The cornerstone of OPG's project prioritization and maintenance approaches for the hydroelectric assets is that safety, environmental, other regulatory programs and alignment with strategic goals, such as OPG's Climate Action Plan, are of the highest priority.

During 2024, the Environmental Performance Index ("EPI"), Total Recordable Injury Frequency ("TRIF") and OM&A Unit Energy Cost ("UEC") performance measures were better than target while Availability Factor and Equivalent Forced Outage Rates ("EFOR") performance measures were below target. Total Generating Cost per Net MWh ("TGC") for the regulated hydroelectric facilities increased in 2024 when compared to 2023. Performance measures and 2024 performance results are further detailed below.

#### Hydroelectric Safety & Environment

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

Total Recordable Injury Frequency

TRIF is defined as the average number of lost time injuries, medically treated injuries and restricted work injuries (aka recordable injuries) per 200,000 hours worked. A low TRIF numerical value is good.

The 2024 TRIF performance was the second-best performance since OPG's inception (0.77 compared to target of 1.11), with the best TRIF score (0.46) performance in 2023. There was however, an increase in low-energy events caused by hand/finger injuries throughout 2023 and 2024. RG will continue to have an added focus on preventing injuries to hands through a "Glove of the Month" campaign, Dynamic Learning Activities that demonstrate that all tasks can be performed with the right gloves and an added focus on selecting the right gloves in the Safe Work Planning process. Continued focus on supervisory field presence through the Observing & Coaching program, increased efforts to share lessons learned and successes, and enhancing soft skills for more meaningful and engaging pre-job briefs and tailboards will be a focus in 2025 to strengthen H&S culture and reduce recordable events in 2025.

- **Environmental Performance Index (%)**

EPI is a weighted distribution of multiple measures, including the number of environmental spills and environmental regulatory infractions with a target performance of 80%.

In 2024, the regulated hydroelectric facilities' EPI performance score was (99%) which outperformed the 2024 target (80%). This performance is due to robust programs to prevent category A or B spills, to satisfy Environmental Compliance Assessment inspections, track and remove PCB containing equipment and maintain an ISO14001-certified Environmental Management System.

## Hydroelectric Reliability

- **Availability Factor (%)**

The Availability Factor ("Availability") is a measure of the generating unit reliability. It is the percentage of generating potential that could have been provided after considering outages and derates, but it does not consider the availability of fuel. Unit Hours that are not spent in outage states are weighted by the respective unit's Maximum Continuous Rating (MCR). Outages caused by external factors are not considered.

Availability in 2024 was close to 2023 (85.2% in 2024 vs 85.4% in 2023). Availability across the regulated fleet was 1.9% under the 2024 target performance (87.1%). The deviation is mainly attributable to forced outage events.

- **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. Unit hours are weighted by Maximum Capacity Ratings thus EFOR is a measure of generation loss as a function of intended service. Planned maintenance time, states where units are considered available but not operating, and outages due to external causes are not considered when calculating EFOR.

EFOR increased from 2.9% in 2023 to 5.5% in 2024, which was higher than the target performance (2.7%). EFOR in all regions increased from 2023 to 2024, with the Eastern region having the most substantial increase.

## Hydroelectric Cost Effectiveness

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

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

The 2024 UEC (\$10.0/MWh) improved over the 2024 performance target (\$11.0/MWh). This improvement was primarily due to lower project OMA expenses than plan driven by lower costs and higher than plan generation. The 2024 UEC (\$10.0/MWh) was lower than the 2023 UEC (\$10.2/MWh) mainly due to increased generation of 1.1TWh resulting from lower SBG-related foregone production and higher water flows across most of Ontario.

- **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 (water), and sustaining capital, divided by generation. TGC is measured as a 3-year historical average to account for year-over-year fluctuations in capital expenditures.

The TGC increased by 3% from \$31.0/MWh in 2023 to \$32.0/MWh in 2024. The increase is primarily due to higher capital investments in refurbishment programs to address asset end of life offset by higher generation due to higher water flows.

## Note to Readers of 2024 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, 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.