Society Interrogatory #15

Interrogatory

Reference:
Exhibit F2-01-01: Business Planning p21 ln12 – p22 ln30

> *The Right Work, Right Time, Right Value ("RWRTRV") initiative focusses [sic] on improving plant reliability by improving maintenance productivity. Another key area of focus is on improving work management performance by transitioning to the use of digital work management tools and artificial intelligence in work management and outage planning processes. Key improvement actions and anticipated results for this initiative are …. Utilizing the Monitoring and Diagnostic Center ("M&D Center") to develop predictive failure models and transitioning components of its time-based maintenance program to condition- based maintenance. The objective of condition-based maintenance is to establish continuous equipment condition monitoring through the use of high performance diagnostic tools that can combine the power of on-line process and equipment performance data acquisition with advanced diagnostic methodologies, including advanced pattern recognition technology (a form of artificial intelligence ("AI")), to avoid operations and 4 maintenance costs and improve plant performance. … Along with the AI modelling in the M&D Centre, OPG will continue to explore opportunities for using AI to improve work management. The use of AI for work management is a new concept for the nuclear industry and is enabling both Pickering and Darlington to continually drive improvements to their work management programs. OPG is leveraging new technologies and processes as they are adopted in the nuclear industry and applying successes to future work. This includes using AI to maximize maintenance resources by effectively coordinating on-line and outage shift schedules, assisting in the assessment of work packages, and logging and monitoring of foreign material exclusion. OPG has already realized improvements in the outage scoping process with batch work assessing capabilities that reduce human performance issues as errors are automatically corrected. OPG will continue to seek further opportunities to apply AI to support planning of outage scope and the efficient execution of outage work*.

a) With the increase in digitization how does OPG propose to increase its cybersecurity systems and what impact will that have on cost and staff numbers?

b) OPG is replacing human decision makers with AI within its nuclear stations. Explain how doing so does not jeopardize the safe operation of the plant.

Response

a) Cyber security is a key focus area for OPG. Investments in the cyber security portfolio are currently allocated over $40M of the Chief Information Office overall portfolio spend during 2022-2026, with the CSA N290.7 program expected to be one of the largest such investments (see Ex. D2-1-2 Table 1(b); Ex. L-D3-01-SEC-113). In addition, all IT projects have a cyber security component to ensure compliance with OPG's cyber security standards. OPG has also established a centralized Cyber Security office, with the goal of delivering services and solutions that reduce cyber risk and promote cyber awareness across the company.

During the IR term, the Cyber Security office has a total forecasted headcount of 18 staff. The resource requirements to sustain the cybersecurity program and the security portfolio requirements are continuously reviewed to ensure OPG is able to respond to external or internal threats, as well as manage changes to cyber security regulations. Where possible, OPG will also prioritize investing in automation and Artificial Intelligence (AI) to proactively counter threats and reduce manual effort.

b) Artificial Intelligence does not replace human decision making. Use of AI is focused on automating data gathering and analysis to ensure that human decision makers have enhanced insights into the data, facilitating better-informed decisions with a view to ultimately improve operations and safety. Additionally, OPG's AI solutions are being built such that appropriate human oversight and intervention is incorporated through a review of AI output data and in the final selection and approval of that data's use for work in the plants. OPG also plans to incorporate industry best practices by establishing company-wide policies for responsible use of AI and defining standards related to data and analytics across the company.