FORM A

Proceeding:.....

ACKNOWLEDGMENT OF EXPERT'S DUTY

1. My name is Jeffrey W. Cummings (*name*). I live at Naperville (*city*), in the state (*province/state*) of Illinois .

2. I have been engaged by or on behalf of Tonys LLP (*name of party/parties)* to provide evidence in relation to the above-noted proceeding before the Ontario Energy Board.

3. I acknowledge that it is my duty to provide evidence in relation to this proceeding as follows:
   (a) to provide opinion evidence that is fair, objective and non-partisan;
   (b) to provide opinion evidence that is related only to matters that are within my area of expertise; and
   (c) to provide such additional assistance as the Board may reasonably require, to determine a matter in issue.

4. I acknowledge that the duty referred to above prevails over any obligation which I may owe to any party by whom or on whose behalf I am engaged.

Date 6/17/2019

Signature

Jeff Cummings

SUMMARY AND BACKGROUND

Mr. Cummings has over 39 years of professional consulting experience, with an extensive background in engineering, strategic and operational planning for vertically integrated investor-owned utilities and municipalities in North America and Asia Pacific. His most recent engagements include projects for Portland General Electric, AES-Indianapolis Power and Light Company, Pacific Gas and Electric, FirstEnergy (Ohio, West Virginia, Maryland, New Jersey and Pennsylvania), NIPSCO (Gas), ATCO Electric, Lansing Board of Water and Light, Saskatchewan Power, Ameren (Illinois and Missouri), Ergon Energy, Toronto Hydro (THESL), and Public Service Electric and Gas Company. He has supported the industry in addressing (1) key strategic and operational challenges related to T&D network modernization, (2) electric system cost and service level performance through comparative analyses (benchmarks) and the integration of industry best practices, (3) project and portfolio management, (4) reliability and risk mitigation, (5) energy efficiency, (6) fleet optimization, (7) capital investment planning and prioritization, (8) asset risk strategy and plan development, (9) organizational transformation, and (10) regulatory strategy. When called upon, he has offered expert testimony and/or opinion, most recently for a Canadian Provincial Utility, one Mideast Utility and for four US Investor-owned utilities operating in Kansas, New Jersey, Ohio, and Pennsylvania.

Earlier in his career, he held a series of engineering leadership positions at Vectra Technologies (formerly Pacific Nuclear and a publicly traded nuclear services company) and ultimately became Vice President of Nuclear Engineering. In that capacity, he served as the profit/loss manager for over 425 professional engineers across five regional offices in the U.S. In performing this role, he actively engaged in formulating strategies for customer development, product/service expansion, business consolidation, and oversaw the management of over 500 projects annually for approximately 75 percent of the U.S. nuclear utilities. Prior to his tenure with Vectra Technologies, Stone and Webster Engineering Corporation employed Mr. Cummings where he assumed increasing levels of responsibility in the management of large Lignite and Nuclear Power engineering and construction projects, culminating as Project Controls Manager for the completion of the last U.S. commercial nuclear power generating station (Clinton Power Station).

Mr. Cummings holds an M.S. degree in Operations Research from the U.S. Naval Postgraduate School and a B.S. degree from the U.S. Naval Academy at Annapolis, Maryland

HIGHLIGHTS OF EXPERIENCE

Conducted an enterprise-wide review of a mid-western utility to corporate organization structure considering pre-established strategic goals and six major initiatives, all geared towards its vision as a Utility of the Future. Included was the establishment of a Project Office for a new CCGT plant, the planned retirement of a coal-fired station, four major IT / OT initiatives, considerations regarding aging workforce and the attending opportunities to retool its staff, a mandate to reduce O&M spending by 15 percent, all within the construct of managing risk during a major industry transformation. His efforts included detailed analyses of staffing levels, worker productivity, O&M program execution, and capital efficiency, benchmarking cost and service level performance, and identifying industry best practices to close identified performance gaps, The recommendations were presented and accepted by the utility (with minor adjustments) and is in the process of extending the contract to include implementation support.

Worked with a west coast electric utility in establishing a Project and Portfolio Management function. Starting with defining criteria for evaluating and selecting projects for execution, the process framework put in place provided the governance and operating guidelines to manage a portfolio and specific projects throughout the fiscal year, establishing the concepts of "contingent" projects, the capture of value, risk mitigation and transparency in comparing the value of electric production and energy delivery investments.

Provided expert opinion regarding a northeast utility's restoration performance during a major storm event in October 2017. Filed with the courts, his opinion addressed the utility's comparable position in restoration time,

restoration rate, immediate response, restoration practices deployed, and overall prudence of its decisions in the events leading up and during the storm. He not only provided incontrovertible proof of prudence, but through comparisons (benchmarks) with other major storm events in North America and Europe, he presented a compelling argument that the utility excelled in its performance, effectively managing the trade-offs between performance, cost and operational risk.

Supported a mid-western electric utility's rate case, testifying to the veracity of its asset, risk, and performance management programs and efforts underway to address significant challenges with its central business district underground network system. Consistent with Mr. Cummings' recommendations, he participated in a collaborative effort to define an oversight process that focuses on a comprehensive performance dashboard of KPIs, and monitoring progress towards an Industry Leading Asset Management process.

Spearheaded efforts to provide third party assessments of a mid-Atlantic electric utility's capital investment, O&M spending levels and service level performance in support of a base rate filing; and later assessed the prudence of decisions made in the events leading up and during three extraordinary storm events during the 2011 - 2012 time-frame. He led a comprehensive benchmarking effort, focused on productivity (unit cost), reliability, and storm restoration performance. In both instances, he provided written direct and oral testimony during cross-examination demonstrating the utility's effectiveness in balancing operational performance, cost and risk mitigation.

Assisted a mid-western electric utility in developing a Grid Revitalization Program for submittal to its Board of Directors and State Regulator. The proposed plan provided profiles of projected capital and O&M cash flows, the capture of utility and customer benefits and risks, and an industry context around which to justify such a program. The results of this effort were entered testimony in support of the utility's filing for a capital rider, for which it received sufficient funds to support the initial 18 months of a 10-year program.

Assisted a Canadian electric utility in offering an independent third-party assessment of a recent PBR filing performing high-level comparative analyses (benchmarks) of proposed growth and capital investments geared towards infrastructure renewal over a 5-year period; and assessing the risk of returning to previously established lower capital investment plans. This effort included providing testimony as part of a formal hearing with the Provincial Utility Commission.

Served as Project Director for a full-scale business renewal effort, establishing a plan to improve the efficiency of capital investments, and decrease O&M spending by $50 million annually without any noted decrease in system performance or increase in operational risk. Conducted across the entire enterprise with a focus on worker productivity (O&M program unit costs), capital efficiency (capital investment portfolio and unit cost management), this effort launched a series of initiatives that over 10 years will decrease spending levels by a cumulative $500 million and set the stage for transitioning to the Utility of the Future. Areas of focus included comparative cost and service level analyses, work planning and execution, performance dashboards, transmission and distribution reliability, capital portfolio optimization, and business value/risk tolerance frameworks; and addressed the necessary infrastructure to construct a "first-of-its-kind" carbon capture generating facility.

Served as Project Director of four comprehensive assessments for separate Transmission and Distribution operating companies of a large US-based electric holding company.

- Three involved a review of practices and processes related to electric system reliability as measured by SAIFI, CAIDI and SAIDI with a thorough review of historical results (as reported in their outage management systems) and supporting reliability programs. Specifically, these assessments analyzed, trended and benchmarked service interruptions, service restoration, organization and staffing, and capital/operating spending patterns with the objective immediately and sustainably improving performance; and included formal presentations to Commission staff across 2 regulatory jurisdictions, and
- Another assessment involved a thorough review of the electric distribution infrastructure from both asset condition and energy efficiency viewpoints, resulting in a long-term strategy and plan to transform the network to 21st century standard. This involved identification of key technical and financial legacy issues, incorporation of several constraints and factors (e.g. financial, technology and social equity), and a holistic portrayal of costs, benefits and risks from both a portfolio and individual circuit/substations perspectives;

and the articulation of the plan tailored for each external stakeholder (e.g. commission staff/regulator, legislators, environmentalists, shareholders and customers).

Assisted a large Northeastern utility in identifying over $80 million of O&M cost reduction initiatives without impacting service level (e.g. customer service, availability, system reliability or safety). Areas of focus included benchmarking and practices review of the electric transmission and distribution, customer operations, gas distribution and asset management functions. The outcome has been incorporated into a long-range plan to improve earnings despite an unfavorable outcome is a recent rate case filing.

Performed a capital and O&M spending and risk mitigation diagnostic for a mid-level Midwest utility in support of an overall business case to infuse more capital into its transmission and distribution infrastructure. The case was compelling enough to present to the Board of Directors and the Commission State and will be a cornerstone for subsequent strategic planning and future rate filings.

Supported a mid-level Midwest utility in its energy efficiency/demand response filing with the state regulatory and governing entities. Applied industry comparative analyses in demonstrating value capture / risk avoidance for all stakeholders (investors, customers and utility), and validated that the proposed program met the intent and letter of the legislative mandate.

Conducted an enterprise-wide capital efficiency assessment for a Canadian Utility spanning electric transmission and distribution and electric generation. In reviewing their planned capital expenditures over a 10-year period, Mr. Cummings led the analyses of worker productivity (unit cost) and capital project execution, and developed a plan to (1) reduce the current planned capital expenditures by 25 percent and (2) optimize the allocation of capital over the 10-year planning horizon with due consideration to optimizing the trade-offs between value and asset risk.

Strategic advisor for a major transformation effort within a U.S. Midwest municipality, that included conducting performance diagnostics (benchmarks) of its engineering and production divisions, development of a work planning and outage management program (and support processes), and several initiatives focused on achieving organizational alignment. Supporting efforts included oversight of the completion of a CCGT Plant (including supporting negotiations with GE for a LTSA), establishing criteria and process for the converging IT/OT, and the creation of an Organizational Efficiency and Effectiveness model.

Assisted a large Australian electricity distribution utility in optimizing the size and mix of its fleet of vehicles and attached equipment, factoring in financial constraints, environmental requirements, and the aligning of work level, staffing and specific task descriptions. The process of arriving at a plan to reduce capital investments by as much as $20.0 million and operating expenses by $1.2 to $2.0 million involved the active participation of the company's internal customers (i.e. users of the fleet assets), resulting in organizational acceptance of the outcome. Mr. Cummings extended this effort to a large Western U.S. electric municipality, developing a strategy and plan to achieve comparative results.

Led the implementation of a process (and supporting software) to optimize the capital spending profile across three operating companies within a large US-based electric and gas company (electric transmission and distribution, gas transmission, distribution and storage, fleet, and electric generation); as well as one of the largest gas utilities in the US Midwest. In performing these projects, Mr. Cummings facilitated the linkage of a proposed investment's value and its contribution to overall corporate strategy as well as the risk should a specific investment be deferred; and equally important, implemented the process in a manner that garnered organizational support for change.

Oversaw the implementation of an industry forum to identify trends and perform causal analyses on the failure of critical transmission equipment and components. In pooling industry equipment/component performance data, the goal was to apply statistically relevant data to predict failure patterns establish optimum replacement vs. refurbishment criteria. In parallel with the initial formation of this forum, Mr. Cummings also performed the following:

- Comprehensive performance diagnostic across all functions of one of the largest electric municipalities within the US Southwest. In so doing, he provided a plan of action to maintain service levels yet reduce operating costs by as much as 25 percent. The utility adopted the recommendations and integrated them with the municipality's five-year operating plan.

- Development of a preventive and corrective fleet (vehicle and attached equipment) maintenance program, adopting may of the best practices from the petroleum and U.S. Naval programs, and tailoring them to application in a gas municipality environment. The project team, led by Mr. Cummings, provided a detailed process manual (with supporting process maps), an implementation plan (i.e. process/procedure changes and additions, technology enhancements and organization adjustments), and a series of key measures to assist the utility in adopting the recommendations. The municipality and city government officials embraced the program as submitted.

Participated in a task force and subsequently joined the implementation team in developing and executing a five-year plan to revamp the electric transmission and distribution infrastructure for the Chicago business district. This effort involved the translation of highly technical specifications and detailed budgeting information into terms easily understood by commission staff, city government, and the utility's customers. All external stakeholders (i.e.; Board of Directors, City of Chicago, Commission Staff and State Regulator accepted the plan.

While supporting implementation, Mr. Cummings developed the strategies and plans for initially routing, certifying, designing, and installing 135kV and 345kV transmission to meet projected load growth and system reliability requirements. He played a key role in shortening the certification period by as much as 50 percent. This required effective liaison and communication with the Illinois Commerce Commission and Army Corps of Engineers as well as coordination of Commonwealth Edison's engineering and construction organizations and their assigned "contractors of choice."

Provided consulting services to several technology-based enterprises including gas and electric utilities, engineering and architectural firms and manufacturers of electric components. The projects included:

- Strategic and Operational Planning and Integration (Linkage of Business Vision, Core Values, Financial Goals and Core Business Processes, maintaining a balance between long-range sustainability of the business and short-range stakeholder expectations).
- Organizational Development (Competency-based Performance Management System Development and Implementation, Business Culture Assessments, Employee 360-degree Evaluations, Leadership Development, Recruiting and Employee Selection).
- Marketing and Sales Support (Branding Strategy Development, Customer Satisfaction Surveys, Product/Service Positioning and Pricing Strategies, and Sales Training).
- Technical and Commercial Management (Ensuring a proper balance between achieving profit/loss targets and meeting the quality standards as specified by the customer)
- Merger and Acquisition Assessment and Implementation

Worked in a variety of capacities for a nuclear engineering consulting company, serving initially as a Project Manager and ultimately as the Vice President of Nuclear Engineering. Over this 11-year period, he played a major role in growing annual revenues from $5.0 million to $50.0 million while increasing market penetration to approximately 75 percent of the US nuclear utilities. He developed many of the skills and competencies used in his roles as management consultant (summarized above) through his hands-on experience in managing over 425 engineering professionals and overseeing the management of over 500 projects annually.

Worked in a variety of capacities for Stone and Webster Corporation, primarily assigned to major nuclear power plant design and construction projects. Specific assignments included:

- Assignment to the Beaver Valley Power Station project, establishing a projects control process and system within the Duquesne Light Company to manage the installation of Three Mile Island modifications in support the second refueling outage, improving actual performance in terms of work performed and schedule duration from the initial refueling outage by a factor of three. Following this effort, Mr. Cummings shifted his focus to the unit under construction (unit no. 2) where he installed a process to facilitate the final turnover of the systems (and accompanying documentation) to plant operations over an 18-months period.

- Assignment to Clinton Power Station, where he acted as Project Controls Manager for the contractor, facilitating the lifting of 12 Nuclear Regulatory Commission (NRC) imposed stop work orders and subsequent construction and turnover of the plant to the Illinois Power Company (IPC). Key activities over a two-year period included a successful Fuel Load Caseload presentation to the NRC, rate case preparation, an information system installation to track the turnover of all systems, and instituting an integrated cost and schedule process and system to support weekly and monthly reporting to project and IPC executive management. His role in integrating the construction and system turnover schedules (and subsequent development of computerized detailed system turnover punch lists) served as a primary catalyst for successful completion of the Clinton Power Station project.

Served in the U.S. Navy in increasingly responsible roles culminating as a Weapons Officer on a destroyer, USS Robert E. Peary (FF-1073). In this capacity, he managed and led three divisions totaling 100 sailors, responsible for the maintenance and operation of all weapon and detection systems, the major equipment necessary to support basic seamanship evolutions, and daily consumables for the entire ship's force. He left the U.S. Navy in 1980, having earned the Navy Achievement Medal for his efforts during two extended deployments and extraordinary performance in the areas of Anti-Submarine Warfare and Naval Gunfire Support.

RECENT ARTICLES AND SPEECHES

- *"Integrated Risk Management-Application to Pipeline Safety*," a white paper written in collaboration with a utility executive in October 2017.
- "*Driving Reliability Improvements-Regulatory Oversight",* presentation given to the EEI Transmission, Distribution and Metering Conference, New Orleans, LA, April 7, 2009.
- *"A Paradox of Thrift: Economic Barriers to T&D Network Modernization",* an article written in January 2009.
- *"Grid Modernization: A Roadmap to Tomorrow's Infrastructure…Don't Get Lost on the Way to AMI,"* a white paper written in April 2009.