



Oral Presentation

Exposé oral

**Written submission from
Kinectrics**

**Mémoire de
Kinectrics**

In the Matter of the

À l'égard de

Darlington New Nuclear Project

**Projet de nouvelle centrale nucléaire de
Darlington**

Application to renew the nuclear power
reactor site preparation licence for the
Darlington New Nuclear Project

Demande de renouvellement du permis de
préparation de l'emplacement d'une centrale
nucléaire pour le projet de nouvelle centrale
nucléaire de Darlington

Commission Public Hearing

Audience publique de la Commission

June 10, 2021

10 juin 2021



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May 3rd, 2021

Commission Secretariat
Canadian Nuclear Safety Commission
280 Slater Street
P.O. Box 1046, Station B Ottawa, Ontario
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Commission Public Hearing, Darlington New Nuclear Project Ref. 2021-H-04

Dear Commission Secretariat,

The purpose of this letter is to express Kinectrics' strong support for Ontario Power Generation's (OPG) application for a ten-year renewal of its power reactor site preparation licence for the Darlington New Nuclear Project (DNNP). The current licence which expires in August 2022, authorizes OPG to conduct site preparation activities for the future construction and operation of a new nuclear generating station.

Kinectrics is a proudly Canadian company, committed to sustainable, long-term global growth. We provide complete life cycle management solutions to the electricity industry, working with our customers to fight climate change and save lives through clean electricity and medical isotopes. Our headquarters are in Etobicoke, Ontario with offices in Pickering, downtown Toronto, Bruce County, the United States, Germany, Denmark, Romania, United Kingdom and India. We have over 30 laboratories including CNSC licensed facilities and employ more than 1,200 staff, 70% of whom have technical, science or engineering degrees.

At Kinectrics, we invest in state-of-the-art facilities and tools to provide the best and most comprehensive services to our customers. Our laboratories provide testing facilities for a broad range of areas in support of the nuclear industry, including materials analysis, nuclear radiation safety, and chemical analysis. Our world-class experts deliver services including project management and controls, design engineering and nuclear safety analysis and licensing. We provide the broader electricity industry with electrical transformer testing and renewable energy grid interconnection. In addition to supporting OPG in these areas since its inception, we provide similar services to Bruce Power, Hydro One, other provincial and local utilities, and over 200 clients elsewhere in North America, Europe, the Middle East and Asia.



Kinectrics is committed to the successful deployment of clean energy technologies, including new nuclear technologies in Canada and around the world. We will continue to utilize our expertise to help advance the state of knowledge of these technologies and aid our customers in their deployment and long-term asset management. Kinectrics has made three commitments under Canada's SMR Action Plan intended to materially advance Canada's technological capabilities; workforce and supply chain capacity, facilitate effective community engagement and foster public confidence, and aid in the development, demonstration, and deployment of SMR technologies.

We share OPG's vision that a new SMR on the Darlington site would benefit all Ontarians while positioning Durham Region and Ontario as the clean energy capital of the world. Building on OPG's leadership in this area, Kinectrics is also investing in innovation to support clean energy and to tackle the effects of climate change head on. Kinectrics is supported by over 100 companies and consultants on our Approved Suppliers List. Combined with our suppliers, Kinectrics' support of OPG contributes to the employment of hundreds of high-quality, knowledge-based jobs.

Kinectrics provides a broad range of services to OPG which contribute to continued safe operations. For example:

- Services in the areas of design engineering, project management, project/field engineering and project controls.
- Development and deployment of specialized tools, both manual and robotic, to inspect the reactor core and station infrastructure. These tools inspect various components and structures for signs of fatigue, wear, and/or chemical residue.
- Undertaking of deterministic and probabilistic safety assessments in support of the design and licensing bases for the Stations and their safe operation.
- Provision and qualification of safety-related components where the original equipment manufacturer no longer fabricates to the necessary nuclear quality assurance standards.

In providing these services to OPG, Kinectrics staff interface with OPG staff across their nuclear organization. This includes approximately 50 Kinectrics staff who work directly at OPG sites. Our core principle is: "No task is so important that we cannot make the effort to do it safely". Having extensive experience working closely with OPG, we can confirm they share this principle. OPG's effective management of their facilities provides a safe work environment for our staff. Kinectrics on-site staff are trained in, and adhere to, OPG's rigorous procedures in nuclear, conventional and radiation safety and environmental protection.

OPG's continuous improvement programs, directed at both OPG and vendor staff, ensure high safety standards are maintained. Evidence of OPG's continuous improvement culture is demonstrated through their commitment to self-reflection and awareness, including their frequent participation with Kinectrics in joint quality review and lessons learned meetings. OPG openly shares and seeks operating experience through formal industry forums such as those facilitated by CANDU Owners Group and routinely go beyond formal forums to share project specific experience with other utilities and vendors.



For DNNP, Kinectrics has been involved since the project inception and was selected by OPG in 2009 to act as the Owner's engineer (OE) for the turnkey development, construction, and commissioning of a new nuclear generating station. Kinectrics' role was to provide key project and technical oversight, assist in the review of the design and safety analyses, monitor progress, ensuring that quality procedures and codes were followed. In addition to our role as OE, Kinectrics also assisted in preparing and reviewing various aspects of the site preparation licence and supporting documents. Most recently, Kinectrics supported OPG's site preparation licence renewal efforts through the development of an Aggregate Assessment report which provided a methodology and results of an overall assessment to demonstrate the validity of the existing licensing basis for the next licensing period. Having worked closely with OPG, Kinectrics staff have gained first-hand experience with the high degree of attention and rigor that OPG staff bring to all activities related to the project.

With respect to protection of the environment, Kinectrics provides analytical and environmental services that support environmental assessments and monitoring programs. Through the provision of these services for OPG, we affirm they uphold their mandate to continuously monitor effluents while working to minimize environmental impacts.

At Kinectrics, we take our role as custodians of the environment and our community seriously, and we are proud to be able to collaborate with OPG in community building initiatives such as OPG's Centre for Canadian Nuclear Sustainability (CCNS) which provides a regional hub to integrate collaboration and research to strengthen Ontario's supply chain in the Durham Region.

Kinectrics is a proud member of the Canadian Council for Aboriginal Business (CCAB), which aims to strengthen the relationship between Aboriginal and non-Aboriginal peoples, businesses, and communities. In this regard, we are pleased to work with OPG, which is also a member of the CCAB and has demonstrated a strong commitment to Aboriginal communities. OPG created an Indigenous Opportunities Network (ION) designed to increase the number of indigenous people working in the nuclear industry by placing them in the building trades on some of OPG's most diverse and innovative projects. As an example of OPG's work in this area, in Fall 2018, Kinectrics participated in the OPG Indigenous Procurement event held at the Globe and Mail Centre in Toronto. The event was a collaboration between CCAB and OPG and was a fast paced, dynamic Supply Chain event that brought together about 40+ OPG Vendors and Indigenous Companies. The event was deemed a huge success as it allowed the Indigenous Business Community to showcase their potential to current OPG vendors and establish a platform for future partnerships.

In summary, by working closely with OPG and understanding their principles and safety culture, combined with our personal interaction at all levels from trainees to executives, we are confident OPG is capable of performing the necessary site preparation activities for the future construction and operation of a new nuclear generating station safely and reliably.

On this basis we support OPG's application for a ten-year renewal of the Nuclear Power Reactor Site Preparation Licence for the Darlington New Nuclear Project.



If you have any questions or require clarification, please do not hesitate to contact me at 416.207.6511 or david.harris@kinectrics.com.

Sincerely,

David Harris
President and CEO
Kinectrics Inc