



Oral Presentation

Exposé oral

**Submission from
Kinectrics Inc.**

**Mémoire de
Kinectrics Inc.**

In the Matter of

À l'égard de

**Bruce Power Inc. – Bruce A and B
Nuclear Generating Station**

**Bruce Power Inc. - Centrale nucléaire de
Bruce A et Bruce B**

Request for a ten-year renewal of its Nuclear Power Reactor Operating Licence for the Bruce A and B Nuclear Generating Station

Demande de renouvellement, pour une période de dix ans, de son permis d'exploitation d'un réacteur nucléaire de puissance à la centrale nucléaire de Bruce A et Bruce B

Commission Public Hearing – Part 2

**Audience publique de la Commission –
Partie 2**

May 28-31, 2018

28-31 mai 2018



KINECTRICS

May 2018



INNOVATING THE FUTURE OF ELECTRICITY

In Support of the Application for Renewal of the Bruce A and B Operating Licence

Statement to the
Canadian Nuclear Safety Commission



Statement of Support

FOR RENEWAL OF THE OPERATING LICENCE FOR BRUCE A & B

- Kinectrics Inc. supports Bruce Power's application for:
 - a 10 year renewal of the Bruce A and B Operating Licence
 - authorization to undertake life extension projects and future major component replacement work

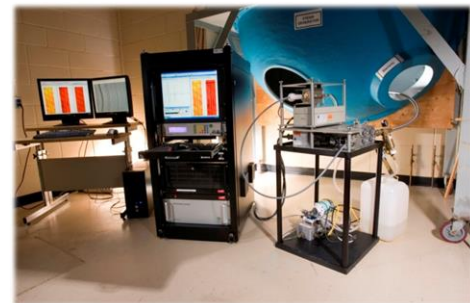


Who we are



KINETRICS IS A WHOLLY CANADIAN-OWNED COMPANY

- More than 1,000 staff providing complete life cycle management solutions to the electricity industry
- We are based in Etobicoke, Ontario, with offices or laboratories in:
 - Kincardine and near the Bruce Site
 - downtown Toronto
 - Pickering
 - United States
 - Europe
 - India



What we do



- Our labs provide testing facilities for a broad range of areas in support of the nuclear industry, including:
 - materials analysis
 - nuclear radiation safety
 - chemical analysis
- We also support the nuclear industry in the areas of:
 - project management and controls
 - design engineering
 - nuclear safety analysis and licensing, including:
 - deterministic safety analysis
 - probabilistic safety assessments



What we do

CONTINUED

- We support the broader electricity industry through electrical transformer testing and renewable energy grid interconnection
- We provide services to:
 - Bruce Power
 - Ontario Power Generation
 - Hydro One
 - other provincial and local utilities
 - over 200 clients elsewhere in North America, Europe, the Middle East and Asia



Our Core Principle



- At Kinectrics, our core principle is:

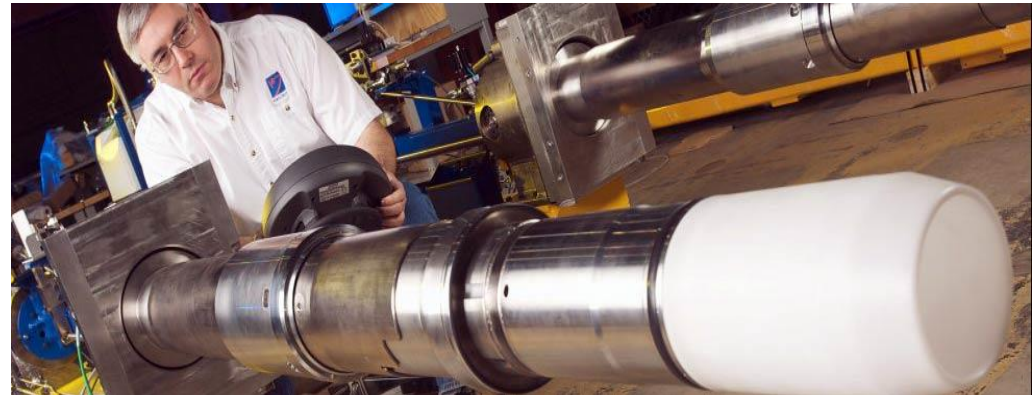
***No task is so important that we cannot
make the effort to do it safely***

- We have extensive experience working closely with Bruce Power and confirm they share our core principle
- Based on our experience, we have confidence in their commitment to maintain and operate Bruce A and B safely and reliably

Our Services to Bruce Power



- Bruce A and B Periodic Safety Reviews in support of major component replacement, asset management and life extension
- Development and deployment of specialized tools to inspect the reactor core and Station infrastructure
- Provision of sensors and sensing apparatus to monitor effluents and discharges from the plant
- Chemical and other analyses of plant data



Our Services to Bruce Power



CONTINUED

- Metallurgical and materials analyses on metal, alloy, concrete and similar structures used in plant operations
- Deterministic and probabilistic safety assessments in support of the design and licensing bases for the Stations
- Provision and qualification of safety-related components where the original equipment manufacturer no longer fabricates to the necessary nuclear quality assurance standards
- Dosimetry and other assessment services to characterize personal radiation safety for Bruce Power staff and the public



Safety at Bruce Power

- Bruce Power’s effective management of their facilities provides a safe work environment for our staff
- Kinectrics staff are trained in Bruce Power’s rigorous safety procedures
- Continuous improvement programs, such as Bruce Power’s “*You can count on me*” initiative, ensure high safety standards are maintained



Bruce Power and the Environment



- Kinectrics provides analytical and environmental services that support environmental assessments and monitoring programs
- Through the provision of these services for Bruce Power, we affirm they uphold their mandate to continuously monitor discharges while working to minimize environmental impacts



Impact on Jobs in Ontario

- Approximately 70% of our staff are engaged in services directly or indirectly contributing to safe operation of the Bruce A and B Stations
- About 110 of our staff work full-time at the Bruce site or in our office in Kincardine
- In 2017, we expanded our local presence in Bruce County with the purchase of a facility in Tiverton and a greenfield site in the town of Teeswater



Impact on Jobs in Ontario

CONTINUED

- Kinectrics is supported by over 100 companies and consultants on our Approved Suppliers List
- Combined with our suppliers, Kinectrics' support of Bruce A and B operation contributes to the employment of well over a thousand high-quality, knowledge-based jobs, infusing the Bruce County and Ontario economies with vigour
- As many other companies also support Bruce Power, the continued operation of the Bruce Stations directly influences the sustainability of tens of thousands of jobs

Summary

- By working closely with Bruce Power and understanding their principles and safety culture, we are confident that Bruce Power is capable of performing the necessary life extension projects while operating its Stations safely over the proposed licence period
- On this basis we support Bruce Power's application for a 10 year renewal of the Bruce A and B Operating Licence





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March 7, 2018

Commission Secretariat
Canadian Nuclear Safety Commission
280 Slater Street
P.O. Box 1046, Station B
Ottawa ON K1P 5S9

Public Hearing Ref. 2018-H-02

Dear Commission Secretariat,

KINETRICS INC.
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The purpose of this letter is to express Kinectrics' strong support for Bruce Power's application for a ten-year renewal of the Nuclear Power Reactor Operating Licence for the Bruce Nuclear Generating Stations A and B. We also support Bruce Power's application for authorization to undertake life extension projects and future major component replacement work.

Kinectrics is a wholly Canadian-owned company providing complete life cycle management solutions to the electricity industry. Our headquarters are in Etobicoke, Ontario with offices near the Bruce site as well as in downtown Toronto, Pickering, the United States and Romania. We employ more than 1,000 engineers and technical staff, with about 90% of our staff located in Canada.

Kinectrics' 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. We also support the nuclear industry in the areas of project management and controls, design engineering and nuclear safety analysis and licensing, including deterministic and probabilistic safety assessments. We support the broader electricity industry through electrical transformer testing and renewable energy grid interconnection. In addition to supporting Bruce Power in these areas since it assumed operation of the Bruce site in 2001, we provide similar services to Ontario Power Generation, Hydro One, other provincial and local utilities, and over 200 clients elsewhere in North America, Europe, the Middle East and Asia.

At Kinectrics, our core principle is: "*No task is so important that we cannot make the effort to do it safely*". We have extensive experience working closely with Bruce Power and confirm they share this principle, and we have confidence in their commitment to maintain and operate the Bruce A and B Stations safely and reliably.

We provide Bruce Power with several key services which contribute to continued safe operation of the Stations. In particular:

- Services in the areas of design engineering, project management, project/field engineering and project controls with about 110 of our staff working full-time at the Bruce site.
- In accordance with CNSC requirements, execution of the Bruce A and B Periodic Safety Reviews in support of major component replacement, asset management and life extension.

- 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.
- Provision of sensors and sensing apparatus to monitor effluents and discharges from the plant, whether through the air, water, or in the soil in the vicinity of the Stations.
- Provision of chemical and other analyses on data collected from the plant using the tools or sensors we or others deploy.
- Provision of metallurgical and materials analyses on metal, alloy, concrete and similar structures that are used in plant operations.
- 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.
- Provision of dosimetry and other assessment services to characterize personal radiation safety both for staff at Bruce Power and for the public in general.

Bruce Power's effective management of their facilities provides a safe work environment for our staff. Kinectrics staff are trained in, and adhere to, Bruce Power's rigorous procedures in nuclear, conventional and radiation safety and environmental protection. Continuous improvement programs, such as Bruce Power's "*You can count on me*" initiative, directed at both Bruce Power and vendor staff, ensure high safety standards are maintained.

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 Bruce Power, we affirm they uphold their mandate to continuously monitor discharges while working to minimize environmental impacts.

We support Bruce Power's vision to support sustainable, quality jobs in Ontario. Approximately 70% of our staff are engaged in services directly or indirectly contributing to safe operation of the Bruce A and B Stations. In 2017 Kinectrics expanded its local presence in Bruce County with the purchase of a 37,000 square foot facility in Tiverton and a nine-acre greenfield site in the town of Teeswater. Together these Kinectrics locations, called KI-North, are expected to create approximately 50 highly skilled jobs in Bruce County.

Kinectrics is supported by over 100 companies and consultants on our Approved Suppliers List. Combined with our suppliers, Kinectrics' support of Bruce A and B operation contributes to the employment of well over a thousand high-quality, knowledge-based jobs, infusing the Bruce County and Ontario economies with vigour. As many other companies also support Bruce Power, the continued operation of the Bruce Stations directly influences the sustainability of tens of thousands of jobs.

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 Bruce Power, which is also a member of the CCAB and has demonstrated a strong commitment to Aboriginal communities. Bruce Power and its supplier partners created

an Indigenous Relations Supplier Network (IRSN) to further strengthen their relationships with local Indigenous communities and, with our expanding presence in Bruce County, Kinectrics has joined the IRSN and has attended several IRSN meetings.

In summary, by working closely with Bruce Power and understanding their principles and safety culture, combined with our personal interaction at all levels from trainees to executives, we are confident Bruce Power is capable of performing the necessary life extension projects while operating its Stations safely over the proposed licence period.

On this basis we support Bruce Power's application for a ten-year renewal of the Nuclear Power Reactor Operating Licence for the Bruce A and B Stations, including life extension projects and future major component replacement work.

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,

A handwritten signature in blue ink, appearing to read "D. R. Harris".

David Harris
President and CEO
Kinectrics Inc.