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Supplementary Information Oral Presentation

Supplementary submission from North American Young Generation in Nuclear (NAYGN)

In the Matter of the

BWXT Nuclear Energy Canada Inc., Toronto and Peterborough Facilities

Application for the renewal of the licence for Toronto and Peterborough facilities

Commission Public Hearing

March 2 to 6, 2020

Renseignements supplémentaires Exposé oral

Mémoire supplémentaire de North American Young Generation in Nuclear (NAYGN)

À l'égard de

BWXT Nuclear Energy Canada Inc., installations de Toronto et Peterborough

Demande de renouvellement du permis pour les installations de Toronto et Peterborough

Audience publique de la Commission

Du 2 au 6 mars 2020

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NAYGN-Durham Oral Presentation

BWXT LICENSE RENEWAL PUBLIC HEARING
MARCH 2-6, 2020

Michael Saliba, Veeshesh Sunassy, Owen Marshall-Glew, Dany Awad, and Danil Matachniouk
NORTH AMERICAN YOUNG GENERATION IN NUCLEAR (NAYGN) – DURHAM CHAPTER

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Introduction

Veeshesh Sunassy for the record. I am the current vice-president of the NAYGN Durham Chapter and have been since July 2019. It is a privilege to be part of an organization whose mission is to provide opportunities for a young generation of nuclear enthusiasts to develop leadership and professional skills, create life-long connections, engage and inform the public, and inspire today's nuclear technology professionals to meet the challenges of the 21st century.

Today we are here to support BWXT Nuclear Energy Canada's application to the Canadian Nuclear Safety Commission (CNSC) to renew its Class 1B Nuclear Fuel Facility Operating Licence (FFOL) for a period of 10 years.

I joined OPG Darlington Refurbishment team as a co-op student in October 2016 around the same time Unit 2 was shut down for Refurbishment. I witnessed the defueling of Unit 2 as all 480 fuel channels were removed by January 15, 2016 before returning to my studies. I re-joined OPG in May 2018, this time as a temporary employee, and witnessed the refuelling of Unit 2. By November 22, 2019, Unit 2 Refurbishment reached a major evolution as new fuel load was completed. These new fuel bundles were supplied by BWXT. This shows the key role BWXT played in the refurbishment project. As future units undergo refurbishment, both at Darlington and at the Bruce, we have a need for new fuel pellets and bundles which BWXT can supply with quality.

Through our intervention, we will be addressing the 3 main concerns that people have about extending BWXT's license: safety, environment and the community impact.

Safety

Since the 1950's, BWXT has supplied the CANDU nuclear fleet with reliable fuel and demonstrated their commitment to the industry, community, environment, and public safety.

BWXT is licenced by the CNSC to produce natural and depleted uranium dioxide (UO2) pellets, as well as to produce and test fuel bundles in their Toronto and Peterborough facilities, respectively. In order to maintain this license BWXT must meet the requirements of the Nuclear Safety Control Act and Class 1B Nuclear Fuel Facility Operating Licence FFOL-3620.01/2020 [3]. BWXT has shown that they are able to obtain and maintain this licence as listed in the CNSC's annual regulatory oversight reports [2].

In particular, CNSC staff has consistently rated BWXT's performance as satisfactory in all safety and control areas with zero lost time incidents (LTIs) for the latest reporting period at its Toronto and Peterborough facilities [2] [3].

BWXT continues to improve their already strong health and safety program by including improvements in the Workplace Hazardous Material Information System (WHMIS) and reviewing their practices and policies through three separate committees under its conventional health and safety program: the Health and Safety Policy Committee, the WSC, and the Ergonomics Committee.

Furthermore, BWXT has demonstrated its social responsibility through regular self-reporting. Examples include two reported false fire alarms (2015 & 2017) and one extended power outage in which no health or safety risk was posed to the public or their employees [2].

My colleagues and I were able to tour both the Toronto and Peterborough BWXT facilities this year and have seen, first hand, that their trained and competent staff have safety in the forefront of their minds. From their multiple environmental release safeguards to the general cleanliness of their production facilities, we were impressed on all accounts. For this reason, among the others to be discussed by my colleagues, I strongly believe the BWXT has earned the opportunity to continue being a pillar of safety in the growing Peterborough and Toronto communities.

Environment

Dany Awad for the record. I am the current professional development chair of the NAYGN Durham Chapter. BWXT contributes to the continuous efforts of preserving the environment as they implement a comprehensive environmental protection program geared towards monitoring and controlling radioactive and hazardous substances emitted from the facility. The program is meant to identify concentrations in the environment and to assess exposure to the public.

During our facility tour the level of rigor in terms of the facility's waste management was visible. Ensuring complete Isolation between the clean and dirty zones in terms of facility design and procedural adherence. The implementation of the safety culture was evident with pre-job briefs/safety moments, ensuring the correct PPE was on and the hand rails were used through out the tour. Clean floors/rooms with no clutter and appropriate safety signage present where needed. The use of negative pressure in rooms where uranium powder might be airborne. Additionally there is water treatment facility on site used to treat all the irradiated water used in the fuel pellet manufacturing process.

The efficacy pf the program is reflected in the 2014, 2016, 2018 and 2019 results of the Independent Environmental Monitoring Program (IEMP). This along with conclusions of available health studies for Uranium processing facilities confirm that the public and the environment in the vicinity of the BWXT Toronto facility are protected and that there are no expected health impacts.

That addresses the environmental impact of the facility itself however by being one of the main suppliers of uranium fuel pellets BWXT also plays a key role in minimizing carbon production and generating emission free electricity. Uranium is an abundant natural resource with considerable energy density—one uranium fuel pellet is capable of creating as much energy as 400 kg of coal, 41- litres of oil or 350 cubic meters of natural gas [5]. Shifting away from fossil fuel and to renewable and emission free sources of energy factors heavily into sustaining a clean and eco-friendly environment.

Community Impact

Danil Matachniouk for the record. I am the current communications chair of the NAYGN Durham Chapter. BWXT Nuclear Energy Canada has supplied fuel and fuelling technologies to CANDU power stations for over 60 years and provides 400 highly skilled positions across Peterborough, Arnprior, and Toronto [1]. Having had colleagues work on the NRU reactor in Chalk River not far from Arnprior I can personally attest to the far-reaching opportunities that the nuclear industry can provide in a smaller town. In the wake of the refurbishments at Darlington and Bruce, these contributions are unlikely to increase.

As an automotive engineer who volunteers his time with organizations such as NAYGN, I have devoted years of my life to the pursuit of a safe, reliable, and clean energy future for this province, this country, and its citizens. It is particularly gratifying to me to know, then, that with 60 years of safe operating experience BWXT shares my values and like me has the best interests of Canadians at heart. I have also spoken to the nuclear professionals at BWXT during my site visit at their Toronto location and know first hand their devotion to quality, safety, and professionalism.

We discussed their public information initiatives and I was pleased to find out about their 24/7 toll-free telephone line, local newsletter and postcard distributions, yearly community bbq's, public tours and much more. BWXT's transparency and desire to educate the public on their business is a quality other business should strive for that goes above and beyond their requirements through the public disclosure protocol.

Furthermore, given the inter-provincial announcements regarding the next generation of reactors, BWXT NEC is uniquely positioned to support the Canadian nuclear industry as it leads the world in the development of these technologies. I also feel it is healthy to have competition in fuel production as one corporation cannot have a monopoly on the industry. Currently Cameco and BWXT are the sole manufactures of nuclear fuel for all CANDU Nuclear reactors in Canada. If BWXT were to not renew their license, Cameco would be the sole producers of nuclear fuel making them a single point vulnerability.

I'm confident that that BWXT will continue to reprise its role as a safe and responsible supplier of nuclear fuel and fuelling expertise for the nuclear industry.

Conclusion

In summary we believe BWXT is qualified and competent to continue to run their facilities in a safe, clean and transparent manner. We believe BWXT represents the ideal model of an outstanding corporate citizen. We believe BWXT can continue to deliver low cost, clean, dependable fuel and engineering solutions to our nuclear fleet. On behalf of North American Young Generation in Nuclear, I strongly support the continued operation of the BWXT Nuclear Fuel Processing Facilities in Toronto and Peterborough and the renewal of their Nuclear Fuel Facility Operating Licence.

Thank you.

References

[1] BWXT Site License Renewal: file:///C:/Users/marshalo/Downloads/BWXT%20NEC%20License%20Renewal%202019%20-%20Web.pdf

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[5] *The Canadian Nuclear Factbook 2020, 2020*. Ottawa: CNA

[6] Case Study-*The End of Coal*, 2017: https://www.ontario.ca/page/end-coal