



Oral presentation

Exposé oral

**Written submission from the
North American Young
Generation in Nuclear**

**Mémoire de la
North American Young
Generation in Nuclear**

In the Matter of the

À l'égard de

Canadian Light Source Incorporated

**Centre canadien de rayonnement
synchrotron incorporé**

Application by Canadian Light Source
Incorporated for renewal of their Class IB
Particle Accelerator Operating Licence

Demande du Centre canadien de rayonnement
synchrotron incorporé pour le renouvellement
de son permis d'exploitation d'accélérateur de
particules de catégorie IB

Commission Public Hearing

Audience publique de la Commission

March 23, 2022

23 mars 2022



NAYGN Canada Submission

**CANADIAN LIGHT SOURCE INC. PUBLIC HEARING
MARCH 23 OR 24, 2022**

Matthew Mairinger, P. Eng., PMP
NORTH AMERICAN YOUNG GENERATION IN NUCLEAR (NAYGN)

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Matthew Mairinger, for the record.

I would like to start by thanking the Canadian Nuclear Safety Commission (CNSC) for providing an opportunity to speak on the application from Canadian Light Source Inc. (CLSI) for a 10-year renewal of its particle accelerator operating licence for its Class IB synchrotron facility. I have over 8 years of experience working for Ontario Power Generation at both the Pickering and Darlington nuclear sites. I have worked in Project Controls, Minor Modifications, Reactor Safety, Performance Engineering, Stakeholder Relations, and now I work in Nuclear Sustainability Services as a Business Analyst. I earned my Nuclear Engineering degree and Graduate Diploma in Nuclear Technology from Ontario Tech University and I am a Project Management Professional and a Professional Engineer.

I am here representing North America Young Generation in Nuclear (NAYGN) as the NAYGN Canadian Affairs Chair. [NAYGN](#) is an association of young professionals and students passionate about the nuclear industry and is focused on professional development, public relations, networking, and community outreach. There are currently over 120 chapters across North America with 15 active chapters in Canada.

I just want to highlight the importance of this facility – CLS employs over 250 people and since the start of user operations in 2005, CLS has enabled over 4,000 scientists from 171 Canadian academic institutions and from 41 countries, to publish over 6,000 scientific papers highlighting discoveries in a wide variety of fields, in over 874 international scientific collaborations [1]. A synchrotron produces different kinds of light in order to study the structural and chemical properties of materials at the molecular level. Some of the uses for this are to probe matter and analyze many physical, chemical, geological, and biological processes. Just a few examples of what this had led to include new

medications, advances in next-generation technology, more effective product development such as motor oils and medical implants, and also to find innovative ways to combat climate change!

Furthermore the broad research opportunities at the research facility in the University of Saskatchewan provide amazing training experiences to develop the next generation of science and innovation leads – a feature which aligns with the NAYGN mission.

Reading through the written submission from CLS [2] I see that the organization has taken the CNSC feedback and recommendations into consideration and have implemented improvements based on the findings and audits. This transparency and commitment to improvement gives me confidence in the licence renewal for this facility, especially given the societal benefits from the synchrotron.

I am impressed with the interaction CLS has had with the local community. Some examples provided include having 4000 to 5000 tour guests annually and:

- Ag in the City, Science Odyssey/Science Rendezvous after-hour tours, Global Biotech Week, International Day of Light talks, Innovation 150 after-hour tours and Expo, educational light and colour display at the Saskatoon airport, 10th anniversary public open house, CIHR/THRUST open house
- Nuit Blanche Saskatoon is an annual event involving an interactive science and art display that uses 3D images produced at CLS. Approximately 10 000 members of the local community attend annually.

In closing, I encourage the CNSC to grant CLSI a 10-year renewal of its particle accelerator operating licence for its Class IB synchrotron facility.

Thank you,



Matthew Mairinger

References

- [1] Canadian Light Source, "About Us," 4 February 2022. [Online]. Available: <https://www.lightsource.ca/about/about-us.php>.
- [2] Canadian Light Source Incorporated, "Written submission from Canadian Light Source Incorporated," Canadian Nuclear Safety Commission, 2021.