



**WELCOME**

**SLOWPOKE REACTOR DECOMMISSIONING  
PUBLIC INFORMATION MEETING**

**OCTOBER 6, 2016 • 4:00 TO 7:00 PM**

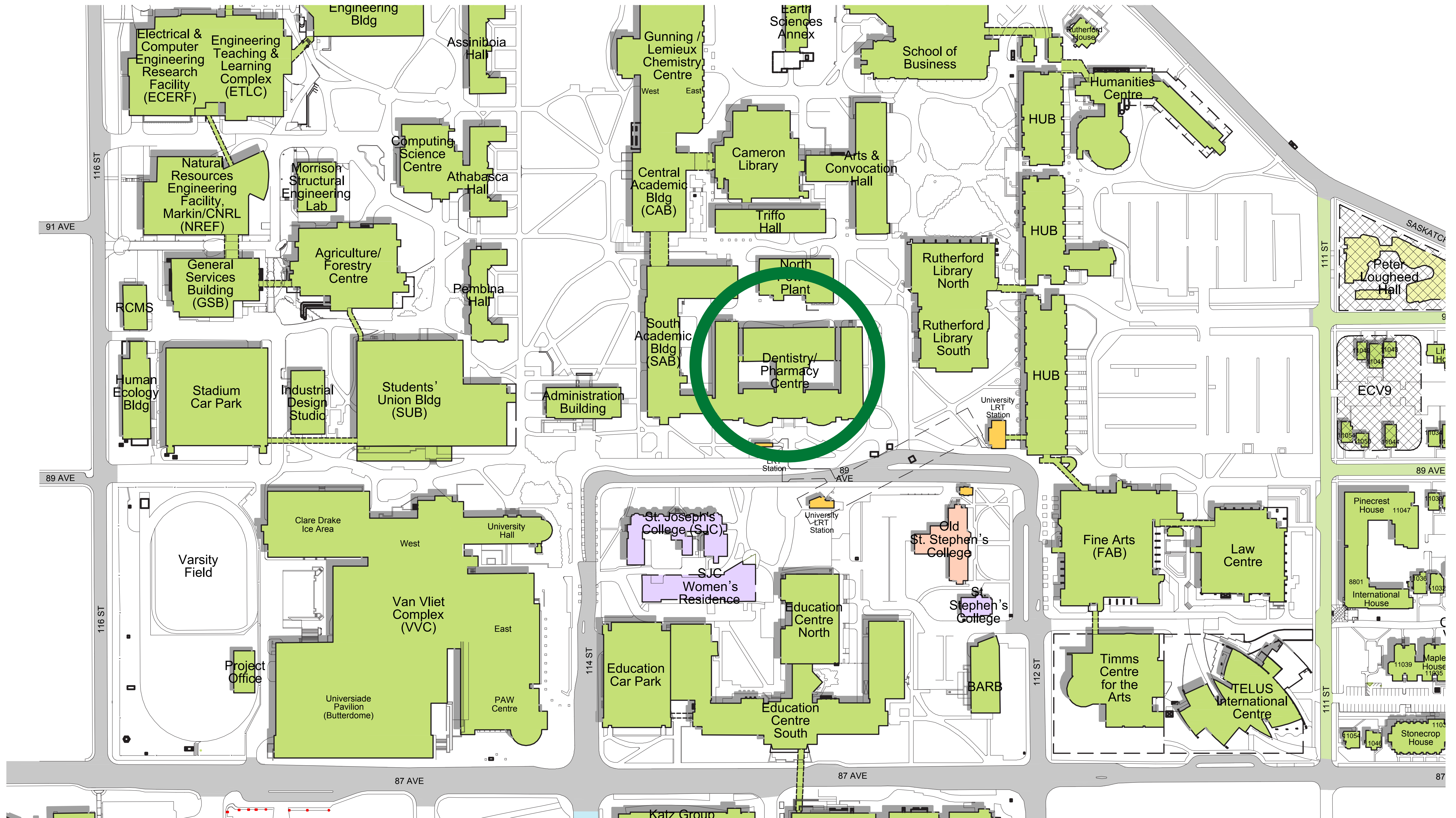
University of Alberta representatives are on hand to answer your questions.  
Please fill out the evaluation form.

# WHY ARE WE HERE?

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- **To have an opportunity to meet with University of Alberta representatives and ask questions about the SLOWPOKE decommissioning process.**
- **To gain a better understanding of why the university is proceeding with the decommissioning of SLOWPOKE.**
- **To learn more about the Canadian Nuclear Safety Commission (CNSC) regulatory requirements.**
- **To answer questions from the public.**

# SLOWPOKE LOCATION



# THE HISTORY AND PURPOSE OF SLOWPOKE

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- In 1977 the University of Alberta opened the doors on its newly commissioned **SLOWPOKE** (**S**afe **LOW P**ower **K**ritical **E**xperiment) Nuclear Reactor Facility - the fourth **SLOWPOKE II** research reactor installed on a Canadian university campus at the time - located on the North campus. The reactor was designed, built and installed by Atomic Energy of Canada Limited (AECL) and was commissioned on April 22, 1977.
- Since that time the reactor has been used as a source of neutrons for radionuclide production and elemental analysis via neutron activation analysis (NAA), in support of research and teaching at the university and as a service to industry and government.
- **SLOWPOKE** is licensed to operate at 20 kW, and generates less heat than that produced by the furnace of a small Alberta house. Much of the work done with the reactor is performed at one-tenth full power, or 2 kW, less than that needed to simultaneously operate an electric kettle and toaster.

# HOW HAS THE UNIVERSITY OF ALBERTA / COMMUNITY BENEFITTED FROM THE SLOWPOKE?

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- **90,000 samples have been irradiated in the SLOWPOKE reactor in support of research, teaching and industry.**
- **Using the very sensitive analytical technique Neutron Activation Analysis (NAA) SLOWPOKE has been used to perform non-destructive, multi-elemental analyses of an extremely broad range of materials (e.g., rocks, soils, meteorites, archaeological artifacts, metals, glasses, hair, bone, blood, urine, catalysts, polymers, food, oils, brines, etc.) for research and industrial purposes.**
- **SLOWPOKE has been used to produce short-lived radioactive tracers for labeling pharmaceuticals and tumor diagnostic agents and for industry to trace and optimize industrial processes, particularly those associated with the upgrading and refining of bitumen and crude oil, for example.**
- **Radionuclides from SLOWPOKE have been used by researchers at the Cross Cancer Institute in the development of several drugs presently used in both the diagnosis and treatment of cancer.**

# HOW HAS THE UNIVERSITY OF ALBERTA / COMMUNITY BENEFITTED FROM THE SLOWPOKE?

- **SLOWPOKE has provided radionuclides for a variety of teaching courses at the University of Alberta in both the undergraduate and graduate programs as well as for an international training course operated through the Department of Oncology and sanctioned by the Canadian Association of Radiopharmaceutical Scientists.**
- **The reactor has been utilized in scores of doctorate and master's degree theses and in hundreds of scholarly papers published utilizing analyses or radionuclides generated using the reactor.**
- **The SLOWPOKE Facility has been used extensively for educational and instructional purposes through formal university courses and through visits to the facility, which involve orientation lectures and demonstrations**
- **Over 3500 visitors have toured the facility in the past 25 years as part of university undergraduates and graduates classes, Physics-30 high school classes (from schools as far away as Drayton Valley, Calmar, and Wetaskiwin), City of Edmonton HAZMAT training, for example, where students learn about radioactivity, its peaceful uses, nuclear power, etc.**

# WHY SLOWPOKE IS BEING DECOMMISSIONED

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- **Canada does not enrich uranium to fuel its nuclear reactors. Consequently, the SLOWPOKE fuel was enriched by the United States. To avoid unknown additional disposal costs the university must return its used SLOWPOKE fuel to the US–Department of Energy (US-DOE) prior to May, 2019.**
- **Cost for decommissioning services has been significantly increasing.**
- **A renewal program for the Dentistry / Pharmacy building has been put in place.**
- **The premium to the renewal program for retention of SLOWPOKE has been identified at approximately \$7M.**

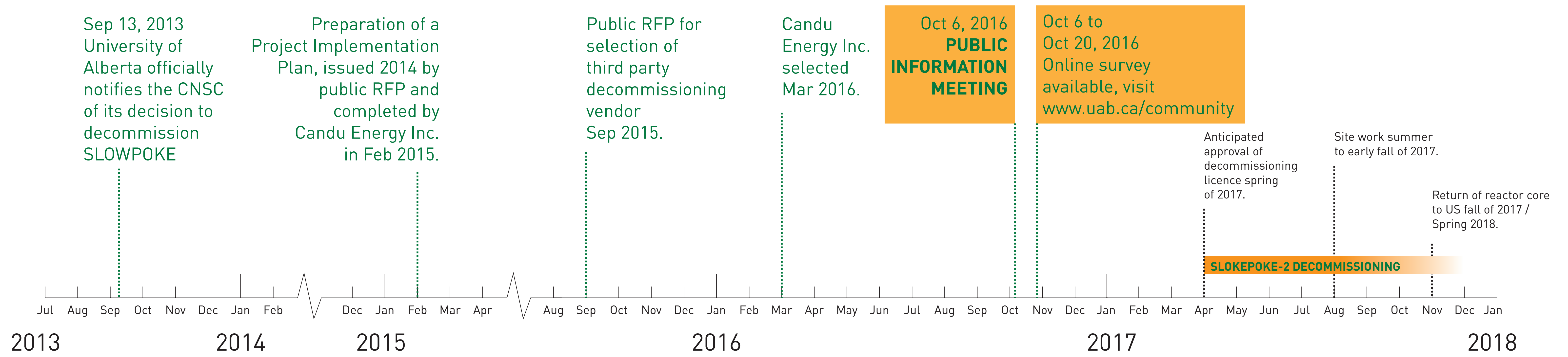
# REGULATORY APPROVALS

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- **The decommissioning is under strict regulatory control and approval through the Canadian Nuclear Safety Commission (CNSC).**
- **A University of Alberta working group has been established and is working closely with the CNSC on all aspects of the decommissioning.**
- **The process consists of 22 separate planning documents / work programs that are submitted for approval by the CNSC.**
- **Prior to granting the decommissioning license each work program has to be approved by the CNSC.**
- **A formal presentation by the university to the CNSC Commission members is required as part of the licensing process.**
- **Monitoring of the site activities by the CNSC will be an on-going activity.**

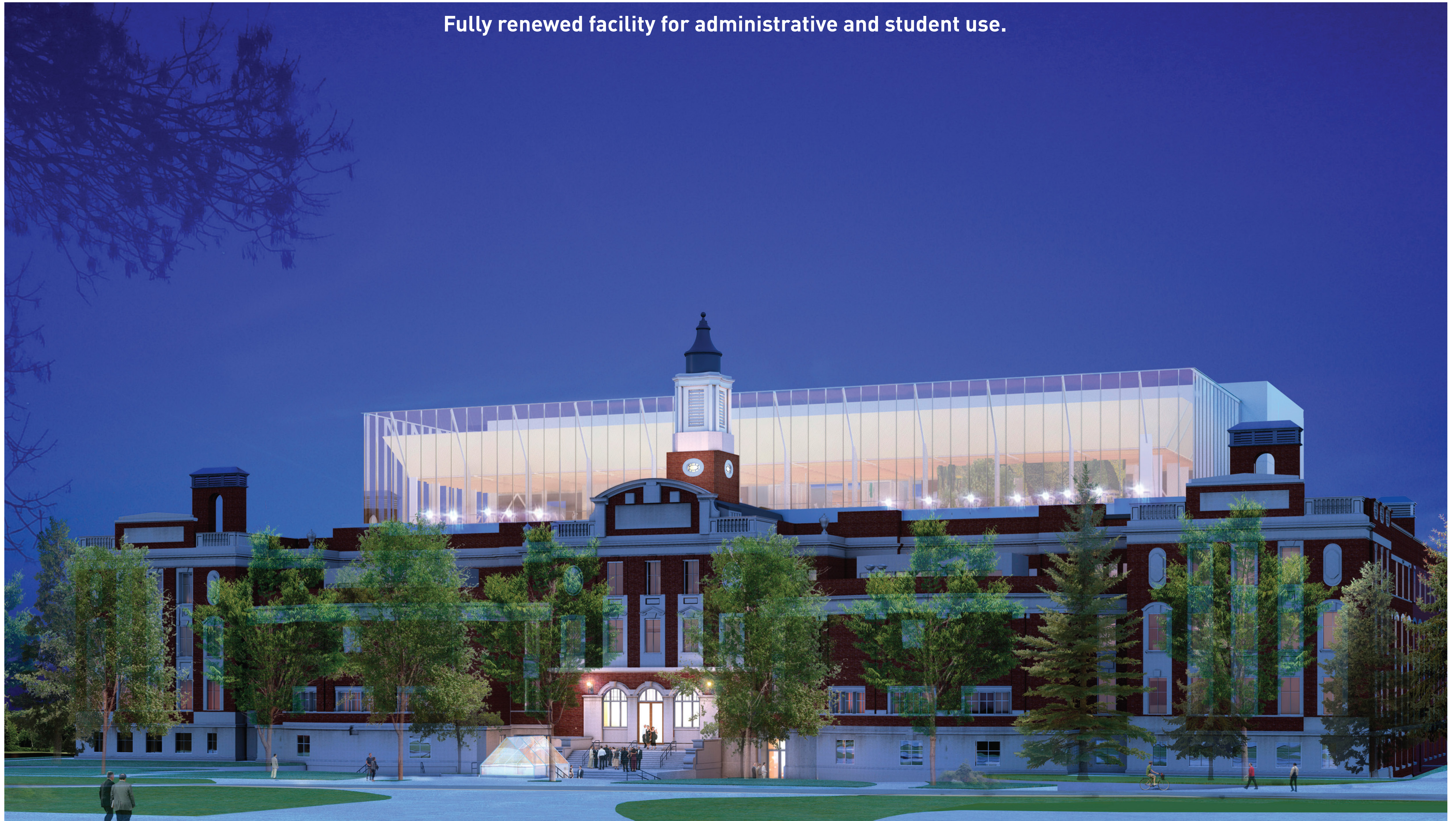


# TIMELINE



# FUTURE OF DENTISTRY / PHARMACY

Fully renewed facility for administrative and student use.



# THANK YOU FOR COMING

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- Please submit your completed evaluations and comments in the box provided.
- Your comments are an important part of the CNSC Public Information Disclosure Program (PIDP) regarding the decommissioning and will be part of the material assessed by the CNSC in the licensing process. Information about the PIDP can be found at [www.uab.ca/slowpoke](http://www.uab.ca/slowpoke).
- Should you have comments/questions to submit after the public information meeting, please visit: [www.uab.ca/community](http://www.uab.ca/community)
- The University of Alberta will receive comments until October 20, 2016.