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Update on the Safe Storage Project for Units 1 and 4

Community Advisory Council

April 2024



Today's Agenda



01 Background

- Safe Storage Summary
- P058 Refurbishment Impacts

02 Safe Storage Scope

- Reactor Safe Stating
- Systems Safe Stating
- Modifications

03 Questions

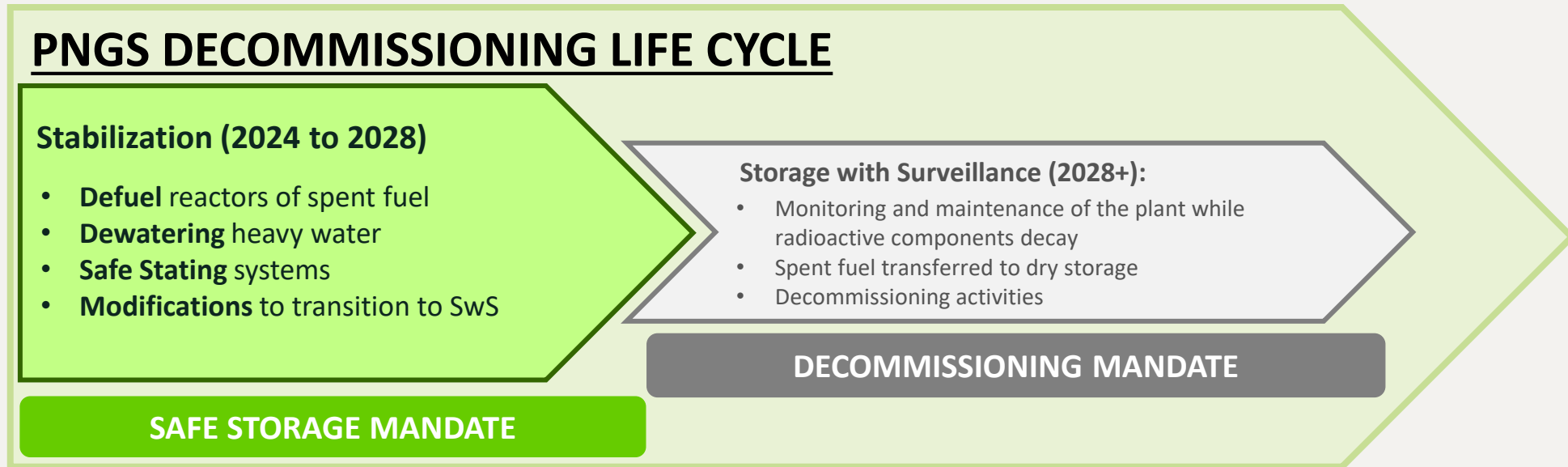
01

Background

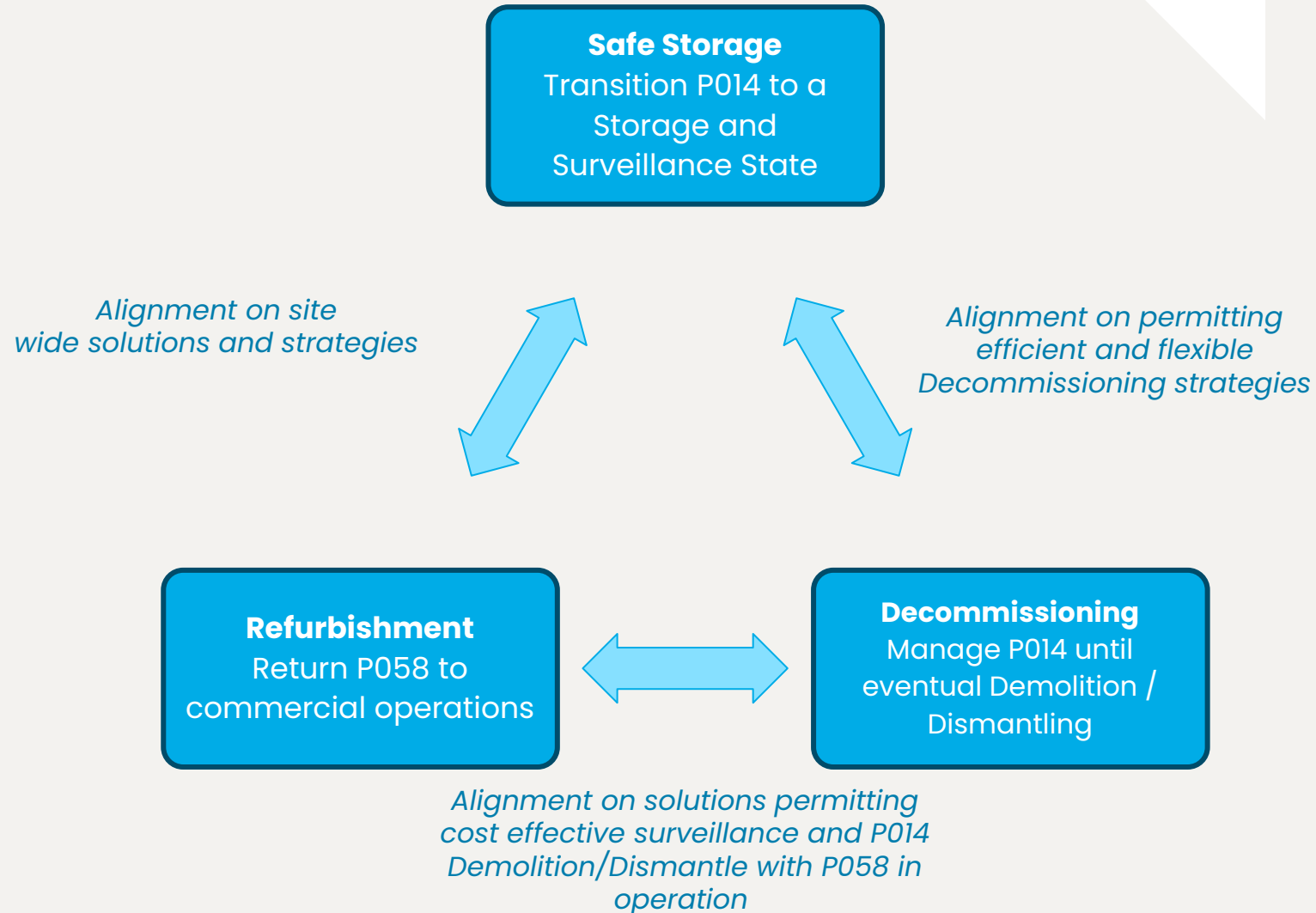


Safe Storage Summary

- Safe Storage consists of planning and executing the transition (or **Stabilization**) of the Pickering station from its current electricity generating state to a Storage with Surveillance (**SwS**) state until dismantling occurs.
- Stabilization is the first phase to support OPG's regulatory obligations for decommissioning the Pickering Nuclear Generating Station (PNGS).



What about P058 Refurbishment?



How does Pickering stay Integrated?

Safe Storage, Decommissioning, and P058 Refurbishment are actively engaged to align planning efforts, focusing on scope, resources and execution schedules integration.

Integration Working Team

Purpose: identify technical and non-technical challenges requiring integrated solutions/assumptions, evaluate options, and propose recommendations

Purpose: to review the options presented by the Working Team and vote on recommendations

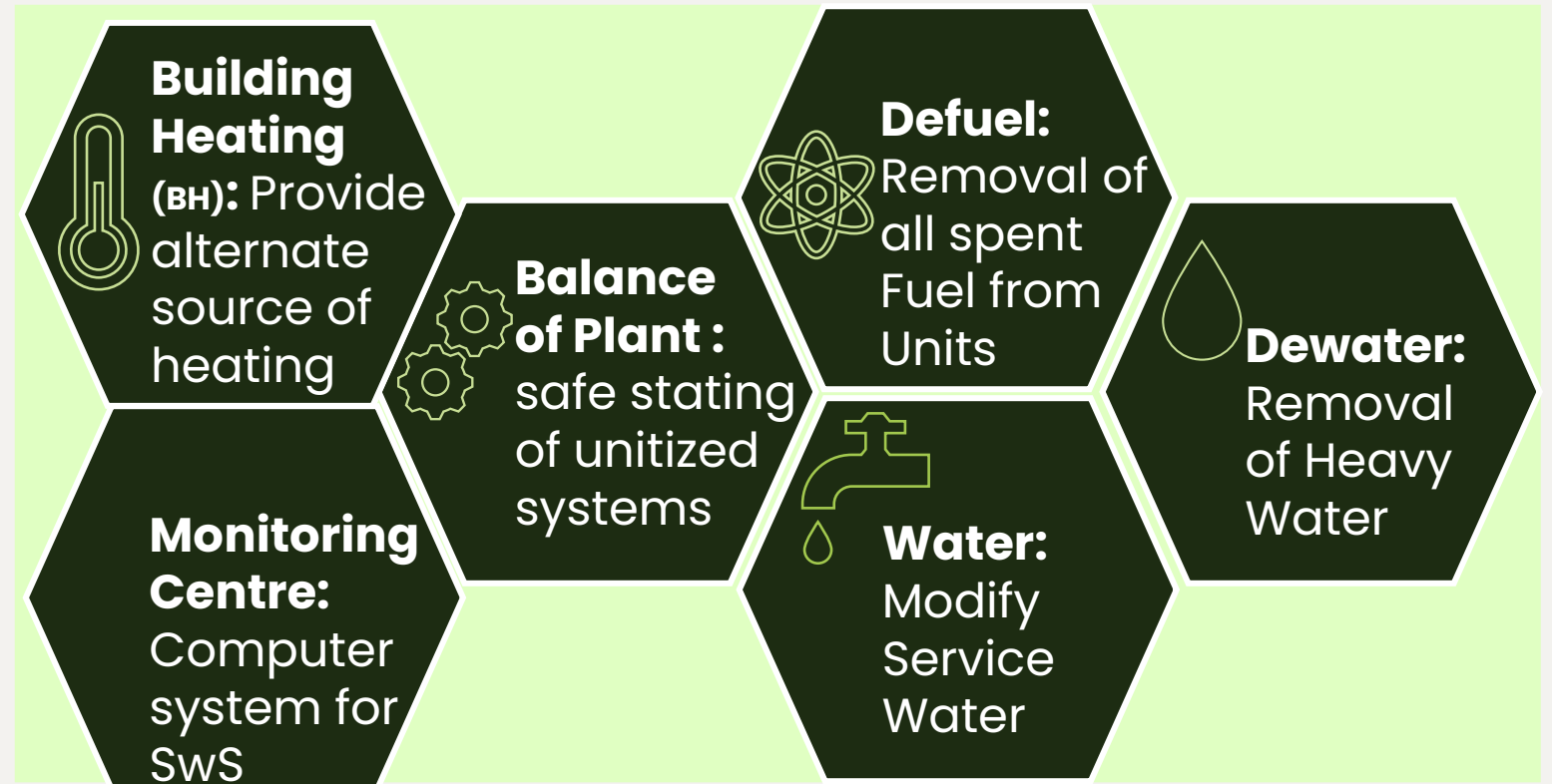
Pickering Refurbishment Integration Team (PRINT)

02

Safe Storage Scope

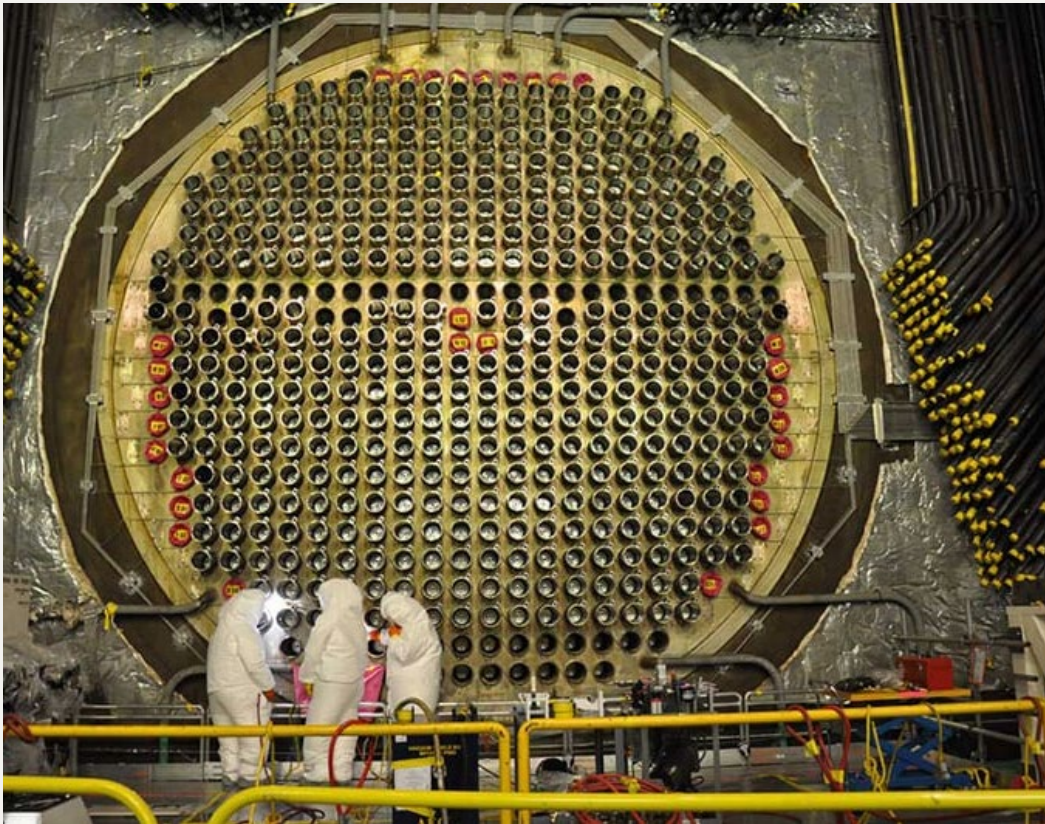


Safe Storage Scope

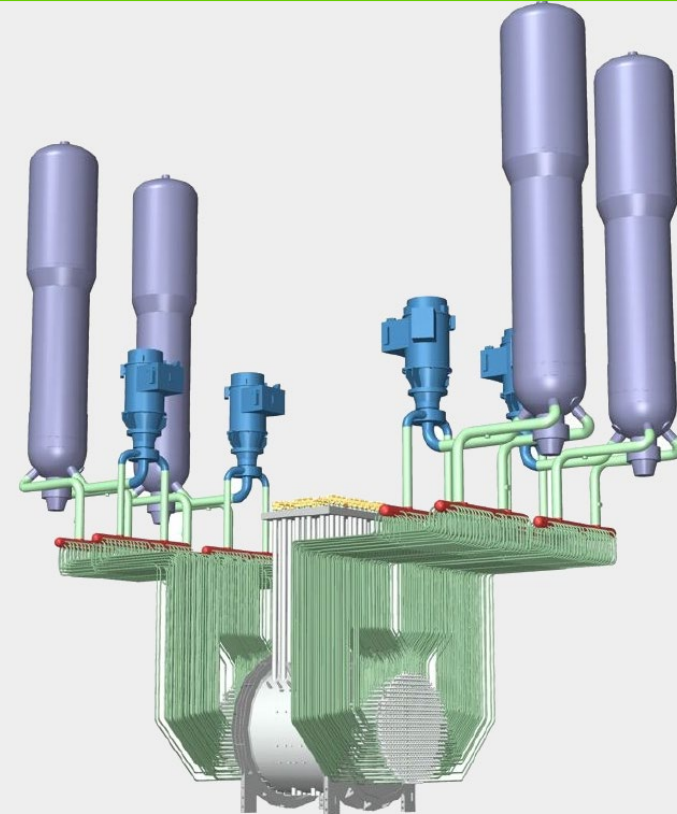


Reactor Safe Stating – Defuel and Dewater

Following the end of commercial operations all spent fuel will be removed from Units 1 and 4 and transferred to the Irradiated Fuel Bay A (IFB-A).



Following the completion of Defueling Units 1 and 4, they will be drained of heavy water (D2O).



Systems Safe Stating – Balance of Plant

Following Shutdown, systems not required to be active during Storage with Surveillance (SwS) will be removed from service or reconfigured to reduce hazards and minimize the station footprint.

Safe Stating primary consists of de-energizing, draining, and isolating systems. This work reduces environmental and fire hazards and risk, as well as reduces the associated operating and maintenance requirements across the site.



Modifications – Building Heating

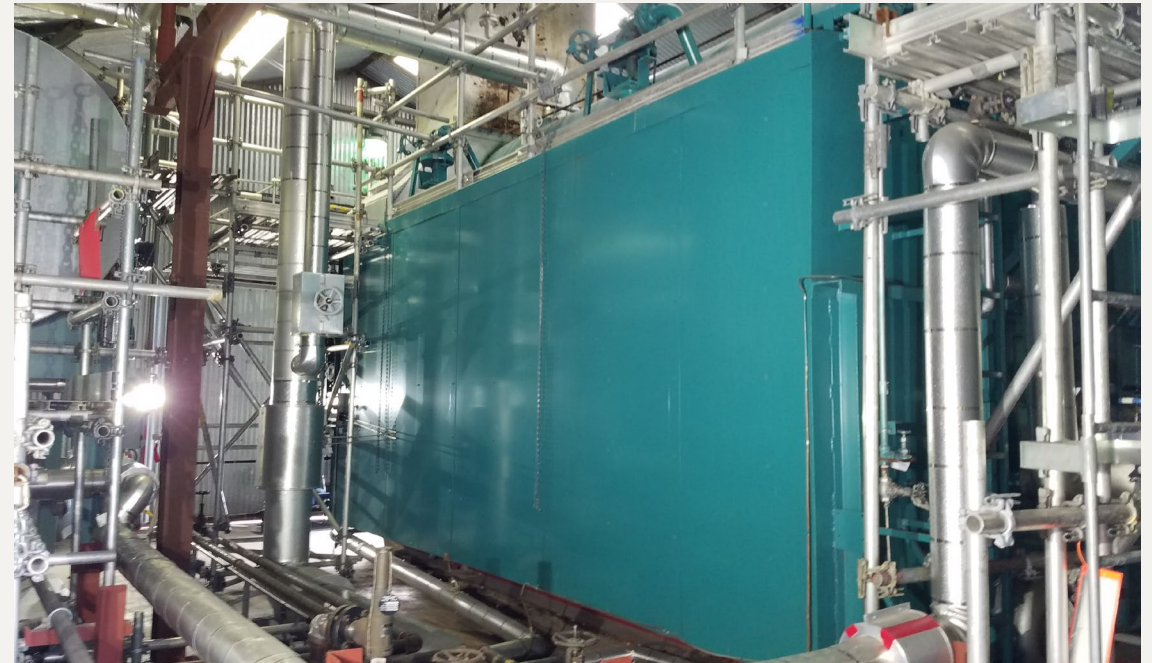
New Electrode Boilers

- New electric-power Boilers to be installed on P014 to be primary supply for site wide steam



Upgraded Standby Boiler

- Source of supplemental steam on colder days
- Upgrades to improve reliability and operability of the existing boiler



Modifications – Monitoring Centre

Alarms Monitoring and Controls



- Installation of new right-sized computer system to replace existing Digital Control Computers for monitoring remaining signals and alarms following the Stabilization period.
- Resets the life of system for reliable operation during Storage with Surveillance
- Monitoring and control of systems required for P058 Operations to be relocated from P014 to the P058 Main Control Room.

Modifications – Water

Water Supply & Discharge



Several current systems will not be required following Stabilization. As Service Water needs reduce, the system will be optimized in support of the reduced loads.

- Unit 1 Service Water to remain partially in-service to supply all P014 loads.
- System to be modified to efficiently accommodate reduced requirements, resulting in a reduction of operating and maintenance needs.

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