

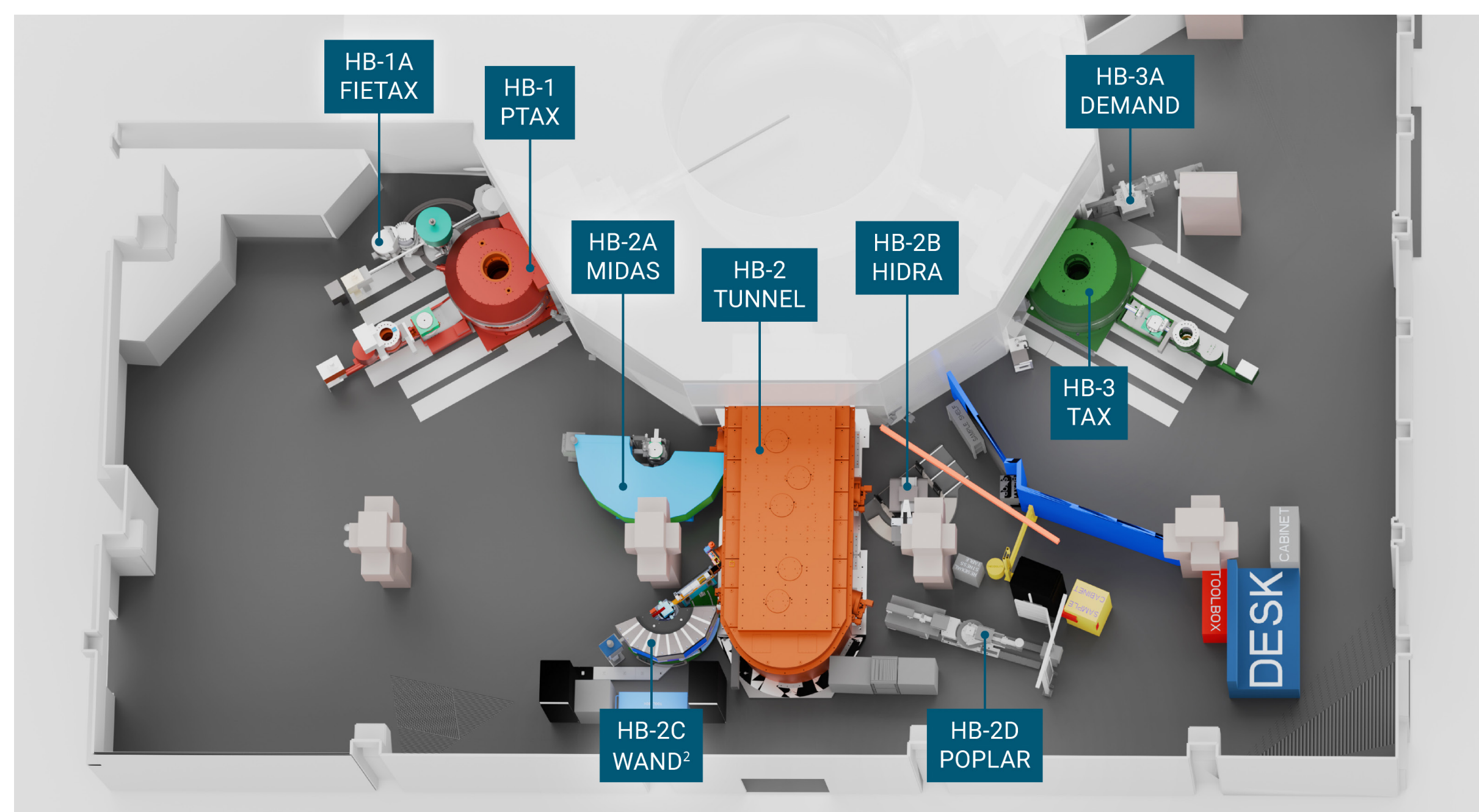
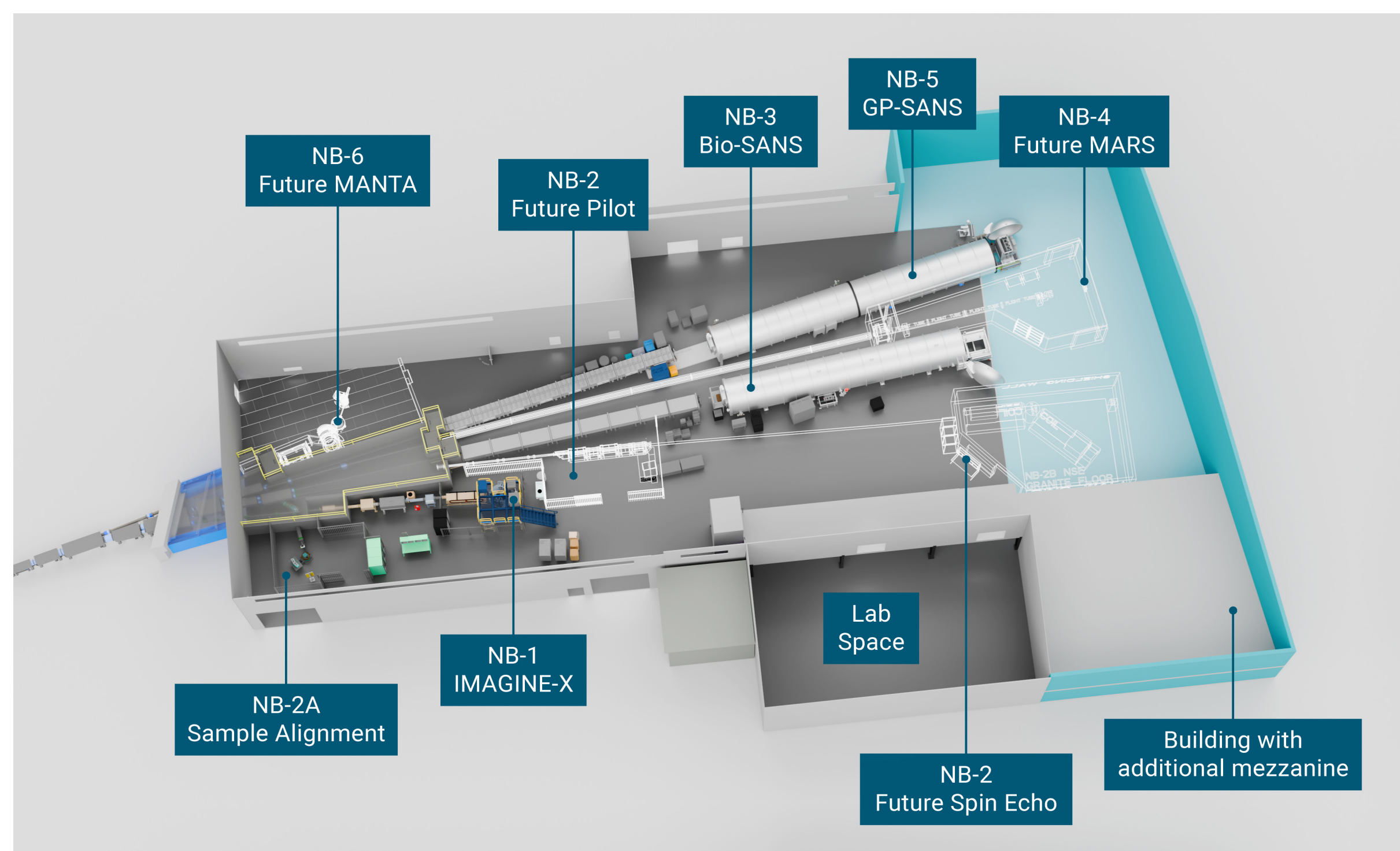
Securing the Next Century of Science at the High Flux Isotope Reactor

High Flux Isotope Reactor Beryllium Reflector Replacement (HBRR)

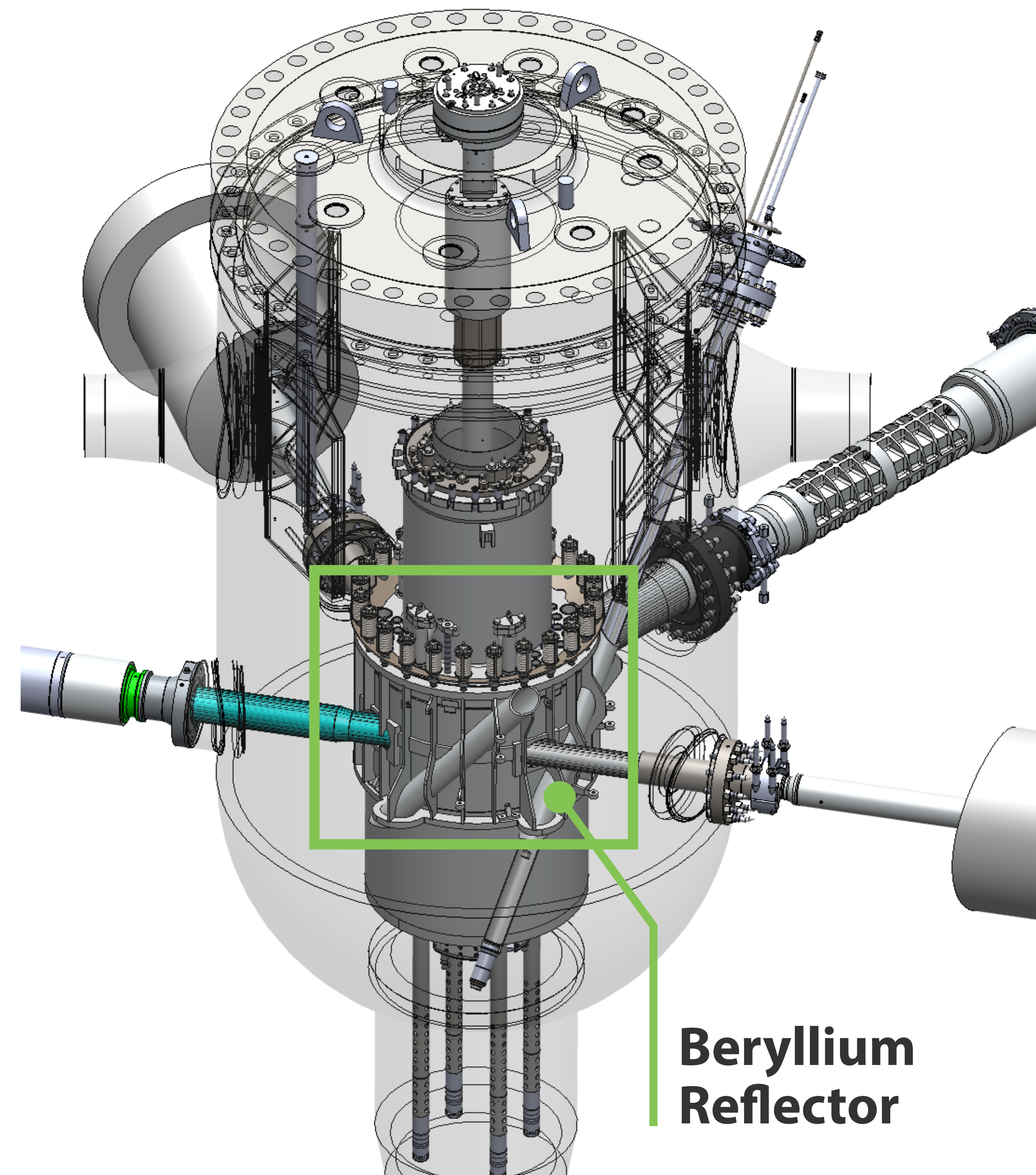
Beryllium (Be) Reflector: Helps drive neutron production by reflecting neutrons back into the fuel core.

SCOPE:

- Redesign and replace the reflector and key reactor core components
- Remove and replace 4 beam tubes
- Disassemble and reinstall Beam Room instruments
- Replace the cold neutron guide network
- Make opportunistic infrastructure and instrument enhancements
- Extend the Cold Guide Hall, plus reconfigure and optimize cold neutron instruments to improve performance and make room for future new instruments and capabilities



HFIR Pressure Vessel



HFIR Pressure Vessel Replacement (PVR)

Pressure Vessel: Contains the reactor, which runs at 85 megawatts thermal power and is cooled with a flow of 16,000 gallons of water per minute.

SCOPE:

- Redesign the reactor vessel to withstand the harsh radiation environment and enable operations at 100 MW through the turn of the century
- Redesign the vessel to enable future mission enhancements
- Remove the current reactor vessel
- Install new reactor vessel and new vessel core components