PICKERING NUCLEAR PROVIDES STEADY SUPPLY OF LIFE-SAVING COBALT-60

For decades, OPG's nuclear generating stations have been the source of a product that keeps millions of Ontarians healthy and safe.

Aside from producing the clean, reliable energy we benefit from every day, Pickering Nuclear has been a vital source of life-saving Cobalt-60, a radioactive isotope. Together, OPG and Bruce Power work with Ottawa-based health science company Nordion to supply 70 per cent of the world's Cobalt-60, which is used to safely sterilize medical equipment and food products.

"OPG has been supplying Cobalt-60 to Nordion on an exclusive basis since 1971 starting with Pickering A, which was the first Ontario generating station to produce Cobalt-60, later joined by the Bruce B and Pickering B stations in the early 1980s," said Alfred Mo, Director, Commercial Services, at OPG. Today, Cobalt-60 is harvested from three units at Pickering B and at Bruce B station, which has been leased to and operated by Bruce Power since 2001.

In November, Bruce Power and OPG signed a Memorandum of Understanding that will see the companies work together to ensure a steady long-term supply of Cobalt-60 as operations at Pickering wind down in seven years. This includes setting up a joint working group to look at expanding Cobalt-60 production to OPG's Darlington Nuclear Generating Station and Bruce Power's Bruce A facilities.

A product of the nuclear fission that takes place inside a CANDU reactor, Cobalt-60 is produced by irradiating Cobalt-59 adjuster rods from one scheduled maintenance outage to the next. During this process, a good portion of the Cobalt-59 inserts absorbs a neutron and change at the atomic level to become radioactive Cobalt-60. At each planned maintenance outage, the Cobalt-60 adjuster rods are removed, processed and safely loaded for shipment to Nordion.

As Cobalt-60 emits gamma radiation, it is an ideal isotope for medical and industrial applications. In the medical field, Cobalt-60 is used to sterilize surgical pre-packaged medical instruments, implantable devices, syringes, and medical gowns. The isotope is also used to safely irradiate food products after they've been packaged, ridding them of insects and harmful bacteria, like E.coli.