

# Our isotopes advantage

SOIC continues to **secure meaningful partnerships** with public and private entities. Driving awareness and advocacy efforts, the Coalition will also **leverage innovation to support the region's isotope ecosystem** for years to come.

### **Jessica Linthorne**

President & CEO, Nuclear Innovation Institute



## Our logistical advantages

This region can help build out the isotopes value chain because of:

- Bruce Power site
- Isotope production system
- Supportive municipal governments
- Existing isotope ecosystem



**ISOTOPE COALITION** 

## Key infrastructure









## Our logistical advantages

- Local packaging and logistics expertise
- Regional and international airports
- Less than three-hour drive from Toronto



LONDON

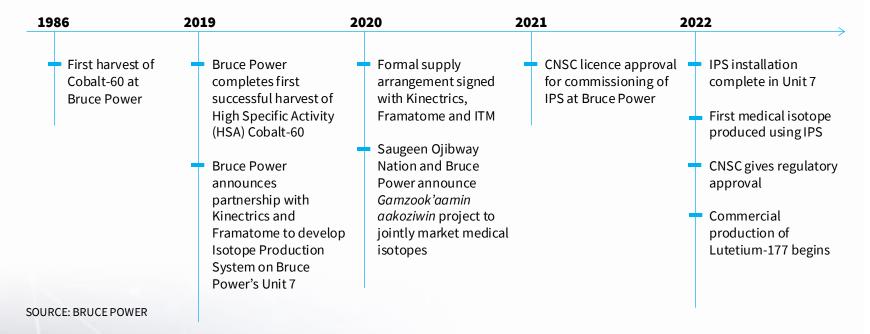
## By the numbers: isotopes in Southwestern Ontario

4.0%
of global single-use medical equipment sterilized with Bruce Power Cobalt-60

Lutetium-177 production started in 2024 to treat diseases like prostate cancer 28
SOIC regional partners...
and growing!



## Timeline of our isotope production





As isotope demand grows, Canada is **on the verge of a transformative opportunity**. By uniting through initiatives like SOIC, our communities can position themselves not just as contributors to isotope production but as **drivers of Canada's growing role as an isotopes powerhouse**.

James Scongack

Chief Operating Officer & Executive VP, Bruce Power



## **Isotope production chain: Cobalt-60**



























#### MINE

#### **MANUFACTURER**

Plant manufactures Cobalt-59 pellets and slugs

### **MANUFACTURER**

Plant assembles the source elements and adjusters, and then delivers them to the reactors

#### **NUCLEAR REACTOR**

Cobalt-59 adjuster rods are installed in the reactor and the Cobalt-59 is activated to be Cobalt-60

#### SHIPPING VEHICLE

Cobalt-60 is removed from the reactor and shipped to the processing facility

#### **ISOTOPE PROCESSORS**

At the facility, the Cobalt-60 is processed into sources for industrial or medical use

## The sources are

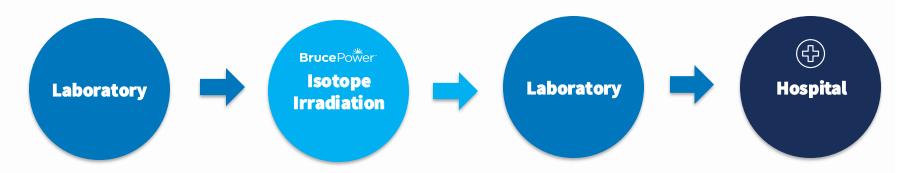
SHIPPING VEHICLE

The sources are shipped to the customer

SOURCE: BRUCE POWER



## **Isotope production chain: Lutetium-177**



Fresh targets sent to Bruce Power

Irradiated targets sent to laboratory

There is no incremental long-term radioactive waste generated by the radio-isotope production.

Pharmaceutical Lu-177 sent to hospitals



## **Southwestern Ontario isotope ecosystem**





## **SOIC** partner spotlight

























































The *Gamzook'aamin aakoziwin* partnership represents an opportunity for us to **not only help our own people**, but all people across the globe. We're teaming up on the sickness so that **the next seven generations** may enjoy a cancer-free future.

### **Theron Solomon**

Councillor, Chippewas Of Nawash Unceded First Nation



## **SOIC** partner spotlight

### Collingwood

Isowater

### Goderich

- Gateway Centre of Excellence in Rural Health
- Huron County
- Huron Health System

### **Hanover**

Town of Hanover

### Kincardine

- Framatome
- Town of Kincardine

### London

Western University

### **Oakville**

Promation

### **Owen Sound**

- A.I. VALI INC.
- Brightshores Health Systems
- BWXT Medical
- City of Owen Sound
- Georgian College
- Grey County
- STEVCON Packaging & Logistics Ltd.
- Township of Georgian Bluffs

### **Port Elgin**

- Nuclear Innovation Institute
- Town of Saugeen Shores
- Fermi Solutions

### **Saugeen Ojibway Nation**

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### **Tiverton**

- Bruce Power
- Kinectrics

#### **Toronto**

Canadian Nuclear Isotope Council

### Walkerton

- Bruce County
- Municipality of Brockton

### **Western Ontario**

Western Ontario Wardens Caucus Inc.

### Wingham

• Township of North Huron



## **SOIC** partner spotlight





By leveraging our region's potential in isotope production and development, we position ourselves as **a leader in innovation and global health**. We aim to attract **key isotope initiatives** for a healthier, sustainable future for people in our region and around the world.

**Ian Boddy**Mayor, City of Owen Sound



## **Questions?**









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