

Loss of isotope supply will hurt in long run

JATIN NATHWANI

The shutdown of the NRU reactor at Chalk River has again brought into sharp focus the critical need for a consistent supply of isotopes to our hospitals. The most compelling and difficult issue is the reliability and safe operation of a single aging reactor on which the well-being of so many depends, both in Canada and globally.

To outside observers, the realization of such extreme dependency on a single source is shocking.

How did we get into this corner? And what will happen next? A robust and dependable supply of isotopes will remain a critical need.

The government's recent decision to exit from the supply side of isotope production by 2016 would make us dependent on sources outside of Canada. For a resource this critical to the health of Canadians, the exit strategy is not prudent. The provision of a reliable supply of medical isotopes is far too important to have the terms and conditions determined by others.

If frustration with current costs is the primary concern, what of the higher costs later when we have conceded all control of our own supply? Upon exit, we simply become a minor player with no influence.

Having enjoyed a reasonable degree of success in global markets, what is the compelling case for jeopardizing our own security of supply? And if we take the long view, could the exit strategy not compromise our ability to control health-care costs if the use of isotopes continues to become more widespread in medical practice?

It is worth noting that Canada has played a leadership role in the development and application of the innovations in nuclear medicine and nuclear technology over the

last 50 years. Our global share of the business has allowed us to enjoy relative stability for our own use. Why would we simply walk away from nurturing our own strengths and not put in place the solutions for realizing the benefits of this technology into the future?

One option is a combination of short-term fixes for the NRU reactor. That would allow us to muddle along until 2016 or so. Given the age of the reactor, this is the best that can be done in the short term but it is not a sustainable solution for the long term. If we accept that the need for medical isotopes is not about to disappear, then a more robust solution is necessary.

In light of our current difficulties,

We have to frame this as an important national problem

it makes sense to revisit the decision to cancel the already built MAPLE reactors. I understand there are technical issues that need to be resolved and there is a regulatory dimension to this as well. A strong commitment by the government of Canada backed by adequate resources would be necessary to bring the reactors into service. Whatever the business model, whether it is a public-private partnership, sole government ownership or some other, the goal is to ensure that the national interest is taken into account.

We have to frame this as an important national problem, bring a sense of urgency to its resolution and enlist the vast expertise within our regulatory bodies, industry and the academic world. This will re-

quire an enormous amount of goodwill, coupled with problem solving and rigorous measurement of progress against goals.

Repairs to the NRU reactor, when completed, can only be viewed as short-term relief. It is an old reactor and reliance on it for too long would not be appropriate. A parallel path, followed with urgency, can bring the MAPLEs to an operating state over the next six to 18 months. Such a strategy offers the best prospect for putting Canada on a firm footing for assurance of supply.

For long-term sustainability, we also need to address aspects of governance, regulatory policies and public acceptance. How we set up the governance of institutions responsible for nuclear matters does have an impact on the quality of day-to-day decisions. There is a need for an amendment to the Nuclear Safety and Control Act to require a test of "net benefit" to Canada. If such a test were to be embedded in legislation, it would provide a stronger framework and guidance to the regulatory function, clarity of direction to industry and help establish broad public support for coherent decisions in the public interest.

We cannot allow ourselves to be stymied by the perceived risks of reactor operation, which place undue weight on hypothetical fears and end up denying patients the healing benefits of the reactor technology.

Beyond specific aspects of governance and regulatory policies, there is a deeper and more fundamental problem of public acceptance that can only be addressed in the political arena. In simple terms, there is a small but strong anti-nuclear sentiment that dominates public discourse.



FRED CHARTRAND/THE CANADIAN PRESS

The Chalk River reactor, which produces a large portion of the world's medical isotopes, has been shut down due to a heavy water leak.

Even though the safety risks are generally very low, the social amplification of risk through the media gives rise to a political and cultural climate that makes it difficult for policy-makers and politicians to take a strictly rational approach. It reduces their comfort space of operation and forces the easier way out: witness the exit strategy proposed by the government.

The time has come to shift the terms of debate around nuclear issues and help reduce the social friction. Then, all parties will have to begin to articulate clearly the benefits of nuclear technologies.

The current crisis is but the simplest and clearest example of how we effectively ignore the benefits that nuclear technology provides

because the political space is too narrow to allow for a more balanced and nuanced response.

We create a cultural straitjacket that leads directly to an exit strategy: an easier and a quicker response to a problem. What it does not do, however, is take into account the full consequences of decisions over the long term.

For Canada, it would be truly unfortunate to walk away from having built and led a reasonably successful enterprise around the production of isotopes without a determined effort to fix the short-term problems.

Jatin Nathwani is a professor and Ontario Research Chair in Public Policy for Sustainable Energy Management at the University of Waterloo.