Nuclear Industry Further Views on Meeting Ontario's GHG Targets through a Cap and Trade Program

Our perspective

The Canadian Nuclear Association's approximately 100 member organizations are very diverse: labour unions, universities, laboratories and testing facilities, construction and engineering firms, publicly and privately owned utility operators, an international mining firm, and regulatory interests. We represent a cross-section of organizations that are at the heart of Ontario's society and its environmental management capability.

Effects of various cap and trade program options on these organizations, and their perspectives on those options, will be similarly diverse. This, plus the unavoidable complexity of a cap and trade program, means that much of the analysis of program design options must fall to our individual member organizations. That being said, we can offer some advice on meeting Ontario's GHG emission targets, as well as some observations on cap and trade program design.

Recap of nuclear industry views

On October 1 we submitted a 10-page document, "Nuclear Industry Views on Meeting Ontario's GHG Targets" (attachment C). That document emphasized the following points:

- To build an electricity system that supports a holistically low-carbon Ontario, objective professional modeling efforts are indispensable as a planning tool, not just for cap and trade but for other aspects of energy policy.
- There is a compelling need for holistic thinking about the energy system. Over-focusing on one program or a single dimension of the carbon challenge is sure to lead to unforeseen problems and inefficient policy.
- Ontario must build an electric power system in the next few decades that can efficiently support low-carbon transport systems and (eventually) low-carbon buildings. Low-carbon generation of electric power is essential, but the economy of the future will also require power to be very reliable and affordable. If our electricity does not meet these criteria, conversion to low-carbon electric systems will be slower, fossil fuels' relative attractiveness will last longer, and the government's aspirations will be harder to reach.

- Ontario is growing slowly (2-3% annually or less), so infrastructure can only be renewed slowly (over a matter of several decades). To change our major systems in timeframe required by emission targets based on a two- or three-degree world, building the infrastructure of those major systems has to begin now. This implies that the technologies applied have to be those that are substantially available today.
- Research into entirely new energy technologies relies on a very slow and uncertain innovation chain that might bear fruit several decades from now, only *after* which it might be built into new infrastructure. Funding for such research is desirable, but for the most part its results are so slow and uncertain that it cannot be the basis for an emission reduction strategy that will address climate change effectively.
- For assured results, therefore, we Ontarians must begin building our future energy systems today with technologies that are *already* proven to be minimal- or zero-emitting, and that have *already passed* the necessary hurdles of demonstration, verification, standardization and safety. These technologies include nuclear energy.

Observations on cap & trade program design

CNA strongly agrees with the government on the desirability of early implementation – as early as is consistent with sound program design.

"Clean technology" is discussed quantitatively in Ontario government documents (e.g. in the November 24 news releases) and elsewhere as though it has been defined. Without a definition, nearly any product or process can be presented to be "clean" (e.g. "clean coal," "clean diesel"). Ultimately, this undefined adjective weakens program credibility and poses a risk for abuse. We urge a shift of language toward "low carbon," and this should be defined using objective and technically sound criteria. Such criteria would allow the inclusion of nuclear energy.

The Program Design Options discuss reinvesting auction proceeds in "complementary measures." We recommend committing to a principle that reinvestments will be allocated in a way that is commensurate with objective estimates of expected GHG emission reductions. Otherwise, any expenditure could be presented as being "complementary" to the program, and there is little assurance that proceeds will be used to support decarbonization. Again, this poses a risk to program credibility. Our industry will have difficulty supporting a program that fails to deploy the cap and trade auction proceeds fully toward realizing a low-carbon society.

We recommend committing not to arbitrarily promote one technology over another. Rather, the program should set objective, technically sound low-carbon criteria for allowances and reinvestment. Similarly, there should be a commitment *not* to arbitrarily exclude any

technology. Again, objective, technically sound low-carbon criteria must rule. If our emission reduction targets are to be achieved, we need "all of the above" approach to reduce emissions, and all demonstrably low-carbon technologies should be seen to be legitimate tools for achieving targets. Nuclear energy is one of the most powerful, scaleable, safe and affordable low-carbon technologies currently available.

Ontario has demonstrated competence in integrating diverse low-carbon energy technologies, from hydro to nuclear to wind to solar, to ensure the reliable provision of electricity while reducing emissions. The model works, and it offers opportunities for the future. The Ontarians represented by the Canadian Nuclear Association want to continue working with the government to develop inclusive strategies that deliver a holistically low-carbon future on the short time frame that the planet requires. We urge you to deliver a program design that meets this test, one that does not exclude any low-carbon technology, and particularly not nuclear

Decarbonizing Ontario: Lighting the way

Since making our initial submission, CNA has consulted with other key players interested in finding pragmatic paths to decarbonization.

An attached one-page document (attachment B) presents a concept for a multi-stakeholder forum to produce technologically realistic scenarios for our energy system well into the future.