CBC Radio-Canada

OFFICE OF THE OMBUDSMAN
English Services

Review: Quirks & Quarks interview about nuclear safety

May 13, 2011

REVIEW

The Great East Japan Earthquake, with a 9.0 undersea magnitude, struck in the afternoon of March 11, 2011, its epicenter about 70 kilometres east of the Oshika peninsula of Tohoku. It was the worst earthquake in Japan's history and one of the five worst since recorded measurements began in the 20th century. The overall cost of the natural disaster is expected to reach $300 billion, making it the most expensive such disaster on record.

The resulting tsunami generated waves of more than 38 metres that traveled inland up to 10 kilometres. Loss of life was in the thousands. Among the effects were nuclear accidents, the largest of which was at the Fukushima 1 Nuclear Power Plant, where a Level 7 disaster was declared and an evacuation within 20 kilometres imposed.

CBC News dispatched several reporters for television, radio and online to Japan. Its programming also featured several discussions with experts in Canada and elsewhere on the apprehended risk.

On March 19, CBC Radio's science program, Quirks & Quarks, featured an interview by host Bob McDonald with David Novog, director of the McMaster Institute for Energy Studies and the Natural Sciences and Engineering Council (NSERC) Associate Chair in Nuclear Safety.

The 16-minute segment focused on whether nuclear power can be made safe from such disasters. It examined the safety of the Japanese reactors and compared them to the safety of the so-called CANDU (CANada Deuterium Uranium) reactors of Canadian design. And it speculated on the next generation of reactors and how they will be better suited to natural challenges.

McDonald noted that, even in such disastrous circumstance, the safety measures in reactors must be robust: "We need them not to fail." But in this instance, he noted, some of the systems had failed.

Novog said he expected that the reactors would shut down and the backup systems would take hold following the earthquake and tsunami. A fundamental element of the safety features is the detection system that launches into a chain of events to contain damage. Novog explained the distinct systems in older and more modern reactors.

Novog acknowledged on the program that he was not “100 per cent familiar” with the Japanese reactors’ shutdown system, so he couldn’t compare it to the Canadian system. He said he knew the shutdown systems activated, but that there were later issues when cooling could not be sustained and fuel would gradually heat and would undergo some damage. The bi-products of the fission need to be cooled over several days to contain damage.

The interview examined the nature of safety systems: active, passive and so-called walk-away systems. It looked at the next generation of reactors to provide a greater period before operators need to take action.

McDonald asked if there was any design to contain damage if the cooling system fails. Novog said the injection of sea water appears to have stabilized the reactor core — the material has not turned to liquid and penetrated the containment system, he said. He elaborated on the CANDU containment systems.

He did note the potential problem of gas escaping the reactors when it penetrates the containment sheath in the spent fuel storage pools. He said it will be important to design reactors to secure pools to keep them clear of possible explosions to damage the structure.

The days ahead would be important in understanding the extent of damage, he said. It’s important to plan for the worst and have back-up plans for something that can’t be anticipated, he concluded.

The complainant, Will Gerlach, wrote March 22, 2011, and asserted that Novog was conflicted as an academic and could not present a balanced viewpoint. Gerlach noted the McMaster University institute had several industrial and governmental partners. The program and its producers were “acting as agents of promotion for the Canadian nuclear industry’s profit-based agenda.”

Gerlach, a former technician for a subsidiary of Atomic Energy of Canada Limited, asserted that nuclear energy “will never be safe enough in my opinion.”

Jim Handman, the senior producer for Quirks & Quarks, wrote Gerlach on March 29 to note Novog’s credentials as “one of Canada’s leading experts in nuclear safety,” with a primary research area involving safety analysis methods.

"There are few Canadians more qualified to speak about the safety of nuclear reactors," Handman said. Partnerships are required to conduct the academic research because it is necessary to have access.

"It is impossible to find a nuclear physicist or nuclear engineer who has not, at some point, done research in association with the people who run nuclear reactors," he said.

"That's what makes them experts in the technology, which is what Dr. Novog is. But it certainly does not mean that he is an apologist for the industry."

Handman said the interview did not downplay or denigrate the potential dangers of the Japan accident, but that it was not the focus of the interview. Instead, the program was attempting to answer questions about cooling systems, shutdown systems and safety systems and how they compared to the CANDU reactors' systems. He added that the program was one of many to tackle the issue and Novog was one of many experts to appear.

Gerlach said it is hard to believe Novog is not an apologist when his funds come from industry. He said the threats of nuclear disaster require protections from warfare and natural disasters. He suggested a more in-depth discussion and asserted that a one-sided presentation had been made.

CBC Journalistic Standards and Practices call for accurate, fair and balanced reporting. *"On issues of controversy, we ensure that divergent views are reflected respectfully, taking into account their relevance to the debate and how widely held these views are. We also ensured that they are represented over a reasonable period of time."*

It has particular policies applicable to natural disaster coverage, noting that *"we will sometimes receive conflicting information from credible sources. We may choose to report this, making clear the circumstances of the situation and citing the sources while we work to reconcile the information in light of the reality on the ground."*

It has a policy involving sponsorship of scientific research: *"When the information is available, we generally identify to the audience the sponsors of a scientific study whose results we are reporting."* There is no similar policy to identify academic connections to industry.

CONCLUSION

The complainant raises an important issue: Conflicts and perceived conflicts among guests can give rise to concerns about the fairness of journalism.

It is true that academic partnerships are often necessary for researchers, but when those partnerships are not declared, the audience insufficiently understands the viewpoints of those discussing controversial issues.

Just as in some instances it is helpful to point out the sponsorship source of scientific research, it can be helpful to point out the financial underwriting of university/industry partnerships.

In this instance I am satisfied that Novog presented balanced information about the safety systems of nuclear reactors. He was clear in his concerns about the potential hazard ahead in Japan and about the design of its reactors. He also made clear that Japan reactor was not his field of expertise and, in addressing one of the complainant's criticisms, he actually identified the need for reactor designers to anticipate the unanticipated.

Novog is a regularly cited media source on nuclear energy. His field of endeavour includes the development of models to understand and mitigate accident scenarios. In recent weeks he has been blogging to provide updates on the Japan accident, with one blog on updates and one on the safety systems.

In reviewing other media sources at the time, I found his program discussion well within a reasonable balance of caution and confidence. While the situation evolved, his views were accurate and sound in the context of the moment.

The interview was one of several CBC News conducted in the days before and since, and its journalism included those expressing deep concerns about the hazards of nuclear energy and those who believe it offers one of the safer, affordable and more environmentally sustainable forms of energy. It has found balance in the course of its several stories and discussions.

I did not find a violation of CBC Journalistic Standards and Practices.

That said, I believe it makes sense to remind programmers to present relevant background on guests when it might bear on the subject for discussion. It should not be assumed that the audience understands, much less accepts, all of the subtleties of partnerships and sponsorships. Transparency helps the audience make a better decision about the context of interviews.

Kirk LaPointe
CBC Ombudsman