

OUTREACH AND ENGAGEMENT ACTIVITIES TO SUPPORT NUCLEAR CONVERSATIONS

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Abstract

The Fedoruk Centre has embarked on a strategic communications and outreach campaign to encourage fact-based discussions about topics related to nuclear technology and sustainability. The objective of the campaign is to position the Fedoruk Centre as a source of factual information and a gateway to expertise about the benefits and risks of nuclear technology for the people of Saskatchewan. It aims to involve publics and stakeholders within Saskatchewan in forms of upstream engagement, providing access to information about common concerns of nuclear development, such as radiation, while also working to challenge and correct misinformation in the public space and the media. It will also inform and be informed by research into societal engagement involving complex technological issues being undertaken by the Johnson-Shoyama Graduate School of Public Policy. This paper discusses the conceptual development of the campaign's strategy, results of initiatives and activities that have been undertaken and future plans.

Keywords: nuclear awareness, education, engagement, outreach, communications, public relations

1. Introduction

Communicating factually with the public about the pros and cons, risks and benefits of nuclear technology has been a core part of the mandate of the Sylvia Fedoruk Canadian Centre for Nuclear Innovation (Fedoruk Centre) since its establishment in late 2011. Since that time, the Fedoruk Centre's communications efforts have evolved, from initially explaining the centre's purpose and mandate to the local public and members of the Saskatchewan and national nuclear research communities, to reporting to the results of supported research, to now working to develop engagement and outreach activities and tools that provide information to the public on nuclear issues. These issues include information about common concerns about nuclear development, such as radiation, and the potential role nuclear power has to play as a sustainable energy source.

The Fedoruk Centre has also recently begun to support research in the social sciences and public policy related to understanding how audiences interpret information related to nuclear issues and risk, investigating best practices for societal engagement and consultation related to complex technological topics, including nuclear energy. The aim of this work is to enable the public, experts and policy makers to engage in conversations related to nuclear development that provide people with the information they feel they require to make informed decisions.

2. Background

2.1 Mandate

The need for communications and engagement related to nuclear research and development in Saskatchewan was recognized by the province's Uranium Development Partnership (UDP) in 2009 and by subsequent public consultations. [1] In particular, this included "enhancing communications and dialogue with the public regarding nuclear issues, sustainability and energy production options, assessing and responding to the need for information and aiding understanding." [2, 3] This was made part of the Fedoruk Centre's mandate when it was established as a centre of excellence to support nuclear research, development and training, and is reflected in one of the centre's four strategic goals.

2.2 Why engagement?

The concept of 'engagement' is a product of the evolution of communication theory related to science and technology, from the so-called "deficit model" of unidirectional communication by experts transmitting the information they believe *should be conveyed* (taught) to the public, to a multidirectional conversation about risks, benefits and potential impacts of technologies.[4] In contrast to deficit model communications, engagement attempts to provide the evidence and factual information the audience *wants to know* so that it can be used to inform decision-making. An important aspect of effective engagement is that it happens 'upstream,' with conversations taking place during the development of a technology (and well before its release into the market place), rather than at a point 'downstream' of its development, such as its imminent deployment. [5]

The Fedoruk Centre is striving to make upstream engagement the *modus operandi* of its outreach and communications efforts, providing Saskatchewan people and others with information related to nuclear technology and related issues that they need to make informed choices should they need to do so. To be effective, this form of engagement must also take into account the biases and concerns of the parties involved, while attempting to address them as part of an effective dialogue.

3. Discussion

3.1 What to engage about?

The Fedoruk Centre's engagement strategy is aimed to provide information and opportunities for discussion on a number of topics that have been identified as issues of public concern related to nuclear energy:

- Radiation;

- Nuclear energy and sustainability, particularly small modular reactors;
- Spent fuel; and
- Safety and accidents.

Priority is currently on the topics of radiation and nuclear energy's role in sustainability, primarily because other agencies are actively involved in communications and engagement related to spent fuel (NWMO) and safety (including the CNSC, CNA, CNS, utilities and others). The topics were selected primarily on anecdotal evidence, supported by qualitative information such as the *Saskatchewan Nuclear Attitudes Survey* which was conducted by researchers at the University of Saskatchewan in 2013 (Figure 1).[6] Emphasis on these topics and others will be further informed by research into energy policy, risk communications and public consultations that will be conducted by the Johnson Shoyama Graduate School of Public Policy and supported by the Fedoruk Centre as a funder and collaborator.



Figure 1. Word clouds based on frequency of words from negative responses (left) and positive responses (right) from the Saskatchewan Nuclear Attitudes Survey to the word ‘nuclear.’

3.2 Engagement and Outreach so Far

***nuclear*FACTS**

The Forum for Accountability and Communities Talking *nuclear* Science is the Fedoruk Centre's longest running engagement activity and has been reported in detail previously. [7,8] The one-day event consists of a peer-to-peer forum for researchers involved in projects funded by the Fedoruk Centre where they report on the progress of their to each other, and a public event where the broader community has an opportunity to interact with researchers and learn more about aspects of nuclear science. After three years, the peer-to-peer forum is considered to be a success in bringing together the research community, particularly among post-doctoral fellows and graduate students. The public event has met with mixed success in terms of attendance and media interest.

Public Events

The staff of the Fedoruk Centre participate in a number of public events including formal lectures, colloquia and science pubs. These are generally well-attended, although opportunities for genuine two-way engagement with the audience are often limited by time.

An experiment in engagement was conducted in ‘informal direct public engagement’ at a local street fair in September, 2015 (Figure 2). A booth was set up among stalls occupied by local artisans and community groups and had staff available to speak with any passers-by and answer any questions they might have about the Fedoruk Centre, nuclear technology or radiation. Informational pamphlets and post cards about the Fedoruk Centre and radiation were made available, and bananas were offered as a giveaway (along with a card discussing the fact that bananas contain the radioisotope potassium-40). A Geiger counter demonstration was also set up, logging background radiation as well as taking readings of samples of potash and a lead-210 pin source.



Figure 2. Fedoruk Centre executive director Neil Alexander speaks with an interested member of the public at the Broadway Street Fair in Saskatoon, September 2015.

Over the course of eight hours, 23 people stopped at the booth. Six of those people engaged in conversation, with three asking about what the Fedoruk Centre does. Three others asked about potassium-40 and where it came from, including one participant stating that green bananas have less potassium-40 than ripe ones; one asking “what is radiation,” and a third asking if radiation from nuclear accidents such as Chernobyl was the same as natural radiation such as the potassium-40 in potash. Given that the street fair’s organizers estimated that in excess of 2000 people visited the event over the course of the day, 23 attendees at the booth is not an

overwhelming turn out. It suggests that upstream engagement is challenged to attract the interest of participants whose attention is focused on more immediate concerns. Ways to overcome this ‘apathy barrier’ is a topic requiring further work informed by marketing, psychology and other social sciences.

Web and Social Media

In addition to its corporate website, the Fedoruk Centre also maintains a Facebook page and Twitter feed where news and popular academic stories related to nuclear development and sustainability are shared. In addition, a secondary website, nuclearfacts.ca, is also under development that will feature topical articles and commentaries related to the Fedoruk Centre’s engagement areas. The corporate site and nuclearfacts.ca will also host the Canadian Radiation Dose Calculator, a Canadian web-based tool whose development is discussed elsewhere in this volume.

While web and social media are generally recognized as tools for promotion and advocacy, their effectiveness as engagement platforms is unclear. Certainly, social media offers followers – both pro and con – opportunities to interact and comment on posted content. However, it has been demonstrated that participants in social media are most likely to self-select and participate in groups that are already compatible with their views, apart from a minority who may occasionally and temporarily engage with a social media community with which they do not agree. Such interactions are rarely respectful, fact-based, constructive or particularly useful.

3.3 Next Steps

The Fedoruk Centre announced in February 2016 that it will support a research program in the Johnson Shoyama Graduate School of Public Policy involving public policy and engagement related to energy and technology, with a focus on nuclear development. Johnson-Shoyama is a joint graduate school of the University of Regina and University of Saskatchewan and the supported program will be one of the first areas of research for the school’s Canadian Institute for Science and Innovation Policy. The research will investigate the societal and policy dimensions of nuclear and other energy production technologies, including looking at international best practices in engagement and public consultation and evaluating how they can be most effectively deployed to enable informed decision-making. The Fedoruk Centre will be an integral partner, working with researchers to develop and evaluate engagement strategies.

The Fedoruk Centre is also working with Natural Resources Canada and researchers associated with the International Centre for Northern Governance and Development at the University of Saskatchewan in a project to better understand the attitudes and opinions of Indigenous and Northern peoples related to nuclear energy development. It is hoped that the knowledge gained and networks built from this work will inform the development of culturally-sensitive engagement practices.

4. To Be Continued

As the Fedoruk Centre continues to build and learn from its engagement experiences it is hoped that it can work with others in the nuclear and broader sustainable energy sectors to apply best practices to support informed decision-making by people around the world.

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