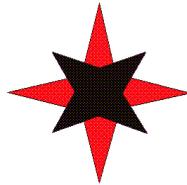


Report to Canadian Yearly Meeting on Uranium Issues Consultations

Prepared by the Friends Uranium and Nuclear Working Group
of the Quaker Peace and Sustainable Communities Committee
of Canadian Friends Service Committee

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Over the past year, there have been three main tasks in which the Uranium Working Group¹, now called the Friends Uranium and Nuclear Working Group, has engaged: (1) a restructuring of the Uranium Working Group, (2) compiling an outline for a minute that is more specifically focused on nuclear fission phaseout, and (3) sending out this outline to Monthly Meetings (MMs) and receiving MM's responses.

1. Restructuring of the Uranium Working Group:

The Uranium Working Group had previously consisted of an email list, established by the Quaker Peace and Sustainable Communities Committee (QPASCC) of CFSC in 2008. A smaller steering committee of three group members volunteered and were appointed by consent by the Uranium Working Group. In order to enhance the discernment process, the relationships between several “organs” within the Working Group have been more clearly defined, and a second invitation was made for people to join the various organs.

Specifically, the e-mail list (currently including about 20 people) will continue for information-sharing and gathering feedback from interested Friends across the country. Secondly, there is a “core group” of 4 or 5 people nominated from the email list members whose role is to decide on recommendations to QPASCC on actions to implement whatever policy is approved by Yearly Meeting this year. The “core group”'s nomination process and appointment are overseen by QPASCC. QPASCC also appoints a QPASCC member to join the core group's conference calls and to at least lurk on their e-mail discussions. The “core group” will also nominate Friends with particular depth of knowledge on the issues to act as an “advisory group”. The core group's term of office will be 2 years, renewable. The first four Friends appointed to the first core group are Sharon Baker (Yarmouth MM), Colin Stuart (Ottawa MM), Marilyn Manzer (Annapolis Valley MM) and David Greenfield (Saskatoon MM). The advisory group members are currently Bill Curry and Dale Dewar (both Prairie MM) and David Polster (Vancouver Island MM).

Friends were invited to join the e-mail list, and to indicate their interest in serving on either the core group or the advisory group if they are so moved. The name of the working group was changed to the Friends Uranium and Nuclear Working Group, or the FUN Working Group.

2. Ten Points for a Proposed Minute:

The working group compiled ten points which were proposed as possible core content of a minute be written for Yearly Meeting to consider. The ten points were circulated in the report sent to MMs and WGs in late January 2011. They are:

1. Uranium mining and milling and processing exposes the environment to toxic and radioactive chemicals virtually forever due to the long decay period for radioactive elements.

¹ *The Friends Uranium and Nuclear Working Group, and its predecessor, is a working group of the Quaker Peace and Sustainable Communities Program Committee of CFSC. This report was signed off by the Clerk and Program Coordinator of QPASC as well as the Clerk and General Secretary of CFSC.*

2. After two-thirds of a century of effort, there is still no method for long-term safe disposal of waste from nuclear fission-based energy programs.
3. The spread of nuclear fission technology around the world has led to an increase in the number of countries who have or are developing nuclear weapons.
4. The expense of nuclear fission energy programs diminishes the money and technological expertise available for research and development of environmentally and socially friendly alternatives.
5. Nuclear fission energy is a greenhouse gas generator in the development, mining, processing, transportation and decommissioning phases.
6. Nuclear fission is incapable of making a substantial contribution to total world energy requirements, as it only supplies electricity and is very expensive and very slow in the development phase.
7. Including nuclear fission as an energy source for the future implies constantly escalating radioactive and chemical contamination of the natural environment and those communities in the vicinity of nuclear fission plants.
8. With these concerns in mind, it is proposed that CYM call for a phase-out of (1) the use of nuclear fission-based energy, (2) the mining, refining and exporting of uranium, and (3) the exporting of fission-based nuclear power reactor technology and fissionable materials.
9. Nuclear science can continue to be applied to the field of medicine, which does not require the use of nuclear fission reactors for electricity production. There is enough mined uranium currently on hand to supply the very small amount of uranium required in nuclear medicine applications for some two hundred years.
10. In moving to a more ecologically sound energy economy, it is proposed that CYM affirm the right of affected workers to a just and reasonable transition process during which they may be retrained for more ecologically sound work.

3. Responses from MMs and WGs to the Ten Points:

In total, twelve responses were received to ten points. Seven of the responses were straight forward endorsements of the proposed minute's content; another four were supportive, but had specific suggestions for additions or changes; and one seemed to be calling for more research on the topic. The following paragraphs summarize and, in some cases, quote from the various suggestions that have been made.

Several responses express the desire to include a statement on energy conservation and/or renewable energy in the minute. One example: "We endorse the ten points in the Uranium Working Group report but request the addition of two statements: one to the effect that further emphasis should be placed on energy conservation, and the other addressing the

harmful local effects of uranium mining."

Several responses suggested that CFSC will need to produce educational material for MMs and worship groups if CYM approves a nuclear phaseout minute. Several respondents suggested that links or references to sources supporting the statements be included in the minute. A couple of Meetings wondered whether Yearly Meeting really has the scientific knowledge to tackle nuclear energy issues. One Meeting felt that the minute should state that natural gas will be a major energy source in a post-nuclear energy world, and that the minute should also advocate a system of "green taxes" as a way of bringing about a transition to renewable energy. One or two Meetings wondered whether renewable energy would be able to fill the gap left by a phaseout of both nuclear fission and coal. Another Meeting demonstrated, perhaps, the meaning of simplicity by adopting the following very simple minute:

"It is our firmly held conviction that nuclear power use and uranium mining should cease. Our conviction is based on the principle that we have a spiritual calling to live as simply as possible, and in so doing can, by our witness, increase the will among ourselves and others to live a life free from nuclear weapons and nuclear power, a life that is sustainable for our children and the earth we live on."

The following is part of the response sent by another Meeting:

"We can say that we are in unity about working toward alternative forms of energy and also conservation, and that we are not in unity concerning the right way forward concerning the hazards of uranium mining, nuclear energy and the handling of radioactive waste and of radiation leaks. ... We heartily approve a research group being formed to look at this technically difficult question, and we would welcome a visit from that group when the research is done."

4. Clarifications and Responses

Friends are concerned that society's consumption patterns should change so that greenhouse gas emissions are reduced and climate change mitigated. Confusion arises as to the impact that phasing out nuclear fission electricity generation would have on this. Since electricity is only one of the energy end-uses that produce emissions, overall greenhouse gas emissions can be reduced even if the emissions of electricity generation remains the same. However, emissions from electricity generation *can* be reduced at the same time as phasing out nuclear fission by increasing the use of lower-emission fuels (natural gas emits less than coal, and renewable sources such as solar and wind emit less still) and by conservation. Indeed, because of the extreme expense and time requirements of building nuclear fission plants, this strategy can not have as timely an effect on reducing greenhouse gas emissions as the other strategies available. The Pembina Institute has produced careful studies of Ontario and Alberta and a national study showing that this is possible while still producing enough electricity to meet a demand diminished by available conservation measures. This is the reasoning behind point #6 of the ten points. It seems that a Yearly Meeting minute should include text that indicates a commitment to reducing greenhouse gas emissions while phasing out Nuclear Fission.

Nuclear fission electricity generation and uranium-based industry impose uniquely

devastating risks on society. This is the fundamental reason given by Friends who oppose these industries. It is also the reasoning behind points #1, 2, 3, and 7. One MM's response focused entirely on this issue:

“The risk assessment context of nuclear fission energy production is literally incalculable. While the chances of catastrophic failure may be small, the consequences cannot be calculated. There is no way to scale or delimit the potential damage of catastrophic failure. This is why no insurance companies will write policies for nuclear power plants. The risk entailed cannot be determined through actuarial calculation. Governments are the insurers of last resort and are, therefore, placing the fiscal viability of their jurisdictions, and all tax paying citizens, at an unknown and incalculable risk.”

No other energy system has comparable risks.

Much of the debate in the technical literature about radiation is about how much risk is acceptable, and this debate can be distracting from the fundamental moral issue. The fundamental moral issue is expressed as “the precautionary principle”, cited by many people within and without the Friends community, but notably in the YM 2001 minute on sustainability (number 2001.52). It is phrased in a paper authored by a Friend and referred to in the response from one MM:

“[If] an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is not harmful falls on those taking the action.”

Given that there is clear evidence of harm, though debate about how much harm, the YM is encouraged to make a the policy decision that favours developing the strategies that do not incur those harms, and phasing out those that do. Radiation accompanies every stage of the nuclear fission industry from mining to plant closure. Exposure to radiation is accumulative. It builds up in biological organisms including human bodies; the more exposure—the greater the likelihood of getting cancer². It causes changes in genetic material. And, once released, it can't be cleaned away. The irreparability of radiation damage is of a scale and type that no other energy source approaches.

Because of its unique type of risk, choosing to expand nuclear technology and thus the global burden of radioactivity is like determining that it is acceptable that some people and other natural beings are expendable. For instance, the people who live near the plants or are involved in the mining and other stages, the animals that live near the tailings ponds.

² *BEIR VII (U.S. Academy of Science report on the Biological Effects of Ionizing Radiation) unequivocally states that “no low level of radiation exposure is safe”. See also: Kaatsch P., Kaletsch U., Meinert R., Michaelis J. An Extended Study on Childhood Malignancies in the Vicinity of German Nuclear Power Plants. Cancer Causes Control 1998; 9: 529-33*

5. Proceeding Towards a Draft Minute

Having received such a variety of responses, the way forward needs to be discerned, and in particular, how much it is appropriate to include in one minute.

As reported in the January 2011 report, a decision was made to focus the minute more specifically on nuclear fission phaseout, noting that CYM had already adopted several minutes addressing climate change, carbon emissions reduction, conservation and a shift toward renewable sources. To maintain a connection to these concerns, a supportive sentence has been added to the draft minute.

A minute should be a simple and straight forward statement of what we feel the Spirit is calling us to say. It is felt that it would be more appropriate to include links and references to supporting sources in accompanying educational material, which will be prepared when a minute is adopted. The Working Group has begun compiling such references, and have referred to some in this report. CFSC will post two items on the website which may be helpful in the interim – a document prepared by Sharon Baker, which was recommended by Coldstream Meeting, and a minute from Palm Beach (USA) Monthly Meeting. Please email cfs_c@qua_ker_ser_vic_e.ca for the link (*the items were not able to be posted when the report was submitted to CYM office*).

On the topic of whether the Working Group (or CFSC) have the scientific knowledge to work on these issues, we are reminded that George Fox's first opening was his realization that a degree from Oxford or Cambridge was not necessary for the ministry of Christ. Quakers do not necessarily have to be formal experts on a topic in order to arrive at a conclusion. Our testimonies and our particular positions over the years have come from the interaction of our hearts and minds and the Spirit. Having said this, the Working Group does have several members who are quite knowledgeable in this field, people who have given many years of their lives to the study of environmental and health concerns, peace concerns and nuclear industry history.

Regarding the question of whether lower greenhouse gas-emitting energy can replace nuclear fission and coal, it may be useful to state over what period of time Friends would envision a nuclear fission phaseout as taking place. The general sense is that such a phaseout would occur, in Canada, over a 15 to 20-year period, and globally, over a 20 to 30-year period. During this time period, no new nuclear reactors would be built, and existing reactors would be shut down as they reached the end of their operational lifespan. During the same time period, solar, wind and other ecologically sound energy sources would be allowed to continue to expand.

Natural gas is preferable to coal for base load electricity generation in the transitional phase, hoping eventually for primarily renewable sources. With regard to endorsing the idea of a green tax system to assist the transition, such a specific idea should really be studied separately.

In response to the request from one Allowed Meeting to establish a group to do further research, the Working Group is certainly open to the idea of assembling more information from primary sources. The Working Group does not feel, however, that this necessarily

precludes or should delay possible adoption of a nuclear fission phaseout minute by Yearly Meeting. Over the past three years, Friends have been provided with both speakers and written materials which have attempted to explain how a nuclear phaseout process may work. As this report goes to print, a dialogue is in process with this particular meeting in the hope of coming closer to unity.

Since 2008, thirteen monthly meetings, and a few worship groups, have endorsed a nuclear phaseout minute, in one wording or another. This constitutes a significant section of CYM. The Working Group and QPASCC are hopeful that this year CYM will be able to move forward and adopt a minute that can establish a groundwork for formal Quaker witness for nuclear fission phaseout.

5. Moving Forward

Based on comments and suggestions received, a minute for consideration by Yearly Meeting, arising from this consultation, is given below. Program Committee has been asked for a SIG slot on the Tuesday of Yearly Meeting to test this minute, and to hopefully present a minute for consideration by Yearly Meeting as a whole thereafter.

Draft Minute on a Nuclear Fission Energy Phase-out:

Based on a variety of peace, environmental and health concerns, and with our testimonies of Simplicity, Peace, Equality, Community, Integrity and Earth Stewardship in mind, we call for a phase-out of: (1) the use of nuclear fission-based energy, (2) the mining, refining and exporting of uranium, and (3) the exporting of fission-based nuclear power reactor technology and fissionable materials.

We envision a phase-out of nuclear fission energy as occurring, in Canada, over a period of fifteen to twenty years, and internationally, over some twenty to thirty years. During this time period, no new nuclear reactors would be built; existing reactors would be shut down as they reached the end of their operational lifespan; energy conservation technologies would be employed in all energy sectors, and renewable energy sources such as wind, solar and small-scale hydro would be allowed to continue to expand. We are confident that such a phase-out of nuclear fission energy is compatible with a parallel phase-out of coal, and a reduced and more efficient use of oil and natural gas in the context of climate change concerns.

During this phase-out process, we affirm the right of affected workers to a just and reasonable transition process during which they may be retrained for more ecologically sound work.

We do not oppose the use of nuclear science in the field of medicine, acknowledging that nuclear medicine does not require the use of nuclear fission reactors for electricity production, and that there is enough uranium already mined to provide the small amount of uranium needed in nuclear medicine for an estimated two hundred years.

We empower Canadian Friends Service Committee, through its Friends Uranium and

Nuclear Working Group, to work with other Quaker, faith-based and secular organizations, both in Canada and internationally, toward the goal of a phase-out of nuclear fission-based energy and of greater accountability and honesty around the health, environmental and peace concerns related to nuclear fission.

We shall continue to advocate for greater energy efficiency and a shift to renewable energy alternatives, and to encourage ecological energy practices in our own lives, in keeping with minutes adopted by CYM in previous years.