

# REDUCING FOSSIL FUEL USAGE THROUGH NUCLEAR ENERGY

Based on the ongoing deterioration of the environment as a result of the burning of fossil fuels, the Chamber recognizes an immediate need to review the benefits of nuclear power generation, while never losing sight of the safety aspects of such a process.

At present, the ever increasing demand for industrial and residential power consumption is exceeding our ability to keep up with demand. Historically, this combination has resulted in inefficiencies, accidents and escalating prices. Inevitably higher energy prices result in increasing pressures on the economy and inflation.

Furthermore, our world will at some point run out of fossil fuels. Based on supply and demand, our ever increasing global demand will outstrip our fossil fuel resources, as well as our ability to increase production. Some say this will happen in 35 years, others maintain a much shorter time frame, again resulting in excessive escalation of energy costs.

As Canadians we are blessed with fossil fuel reserves but should not lightly view our continued use of them as a infinite right. We should be looking to preserve such fossil fuels both as a means of improving the environment and as a means of utilizing the fossil fuels for non-electricity generating purposes. We clearly should not be using our fossil fuels as an energy source for the production of electricity that could be produced using other methods.

Unfortunately, since 1994 the use of fossil fuels in Canada to create electricity has increased significantly. In 1994 the percentage of Canadian electricity created by nuclear plants was almost identical to the amount created by the burning of fossil fuels (18% nuclear vs 19% fossil fuels). Within 10 years fossil fuels had continued to increase in use while nuclear plants had cut back on producing electricity (15% nuclear vs 25% fossil fuels). This is trend that cannot be allowed to continue if we wish to preserve our environment and our economic viability.

The benefits of nuclear power far outweigh its risks which are arguably much lower than the harm being done to the Earth and its inhabitants through the ever increasing use of fossil fuels as a source of energy. A typical nuclear fuel bundle being 50 cm in length and weighing 23 kg will generate the same energy it would take for 400 tonnes of coal, 60,000 gallons of oil and 10 million ft<sup>3</sup> of natural gas. The corresponding fossil fuels would emit more than 900 million tons of CO<sub>2</sub>, approximately .5 million tonnes of acid gases, more than 100,000 tonnes of particulates, and contribute to approximately 1,000 deaths due to respiratory illness, every year.

In its quest for advancement and innovation, our society has ignored the damage to the environment caused by the burning of fossil fuels, including permanent irreversible damage. Provided our society does not ignore or compromise the safety requirements relating to the mining of uranium, the production of nuclear power and the storage of nuclear waste, the risks relating to the use of nuclear power would be minimal when compared to the harm that will continue to be done to the environment through the continued burning of fossil fuels.

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## REDUCING FOSSIL FUEL USAGE THROUGH NUCLEAR ENERGY - *continued*

Nuclear fuel is comprised largely of uranium, which is a naturally occurring element that exists in the earth's crust. After the fuel is discharged from the reactor, it is hot and radioactive. It gets stored onsite in water filled bays where it gets cooled and shielded for a period of 10 years. Spent nuclear fuel is a waste stream in that it becomes less toxic over time, as radioactive atoms decay into stable products that are not radioactive. As time passes, the danger from spent fuel does not come from exposure, but rather, it comes from the possibility of accidental ingestion. In Canada's 45 years of using nuclear energy, no member of the public has been harmed as a result of a radiation leak from a nuclear power plant or waste storage facility.

The major roadblock to the growth of the nuclear industry is that of public and political perception. Nuclear power is not understood by the vast majority of Canadians. What little knowledge is provided to them comes from the sensationalized stories of the world media reporting on nuclear mishaps in countries that do not have the regulatory requirements or safety records associated with Canada's nuclear industry. The people and industries involved in the nuclear power industry understand the vast benefits and minimal safety risks associated with nuclear energy.

The process of understanding, acceptance and development of this technology is mandatory for environmental, economic, and health reasons.

### RECOMMENDATION:

- The federal and provincial governments initiate public relations campaigns to inform the members of the public about the environmental and economic benefits of nuclear power and the safety record of this power source.
- Changes be made to nuclear regulatory practices to allow for more streamlined licensing requirements permitting shorter delivery times of nuclear power facilities while still maintaining required safety protocols.
- The federal and provincial governments work together to construct new nuclear power plants that would provide at least 25% of the electricity produced in Canada by 2020 and to correspondingly reduce the amount of electricity produced by burning of fossil fuels to less than 15% of the electricity produced in Canada.

### PRESENTED BY:

The Kamloops Chamber Policy Task Force