



**CANADIAN  
NUCLEAR**  
WORKERS' COUNCIL

## **CANADIAN NUCLEAR WORKERS COUNCIL POSITION ON GREENHOUSE GAS (GHG) EMISSION REDUCTIONS**

*The Canadian Nuclear Workers' Council (CNWC) is an organization of unions representing workers in various areas of the Canadian nuclear industry, including electric utilities, uranium mining and processing, radioisotope production and nuclear research. The CNWC believes that Nuclear Power, as a reliable and non-GHG emitting source of electricity, deserves special attention from policy makers to transition from a carbon-reliant economy. Specifically, the CNWC recommends the following policy actions:*

- 1. The Government's of Canada and Alberta, Saskatchewan, Ontario, Quebec and New Brunswick create a Nuclear Technology Roadmap for Canada that focuses on maximizing the economic benefits from domestic opportunities and export sales.***
- 2. Canada's Nuclear Technology Roadmap should include mechanisms that link Canada' nuclear technology to: the development of new nuclear generated electricity exports; the potential synergies of nuclear and hydroelectric generation i.e., the former providing back-up for the latter; the creation of a new national nuclear research reactor; extraction of oil in western Canada; the production of technologies such as zero emission vehicles; medical applications and sea water desalination.***
- 3. The Government of Canada and province's intending to build new Canadian reactors should expeditiously develop a cost-sharing mechanism to address the potential liabilities associated with these large, complex projects.***
- 4. The Government of Canada and provinces should increase funding for nuclear research and development at Canadian universities, colleges and research institutes in support of Canadian nuclear technology.***
- 5. The Government of Canada should continue to support the development and deployment of clean fossil fuel technologies such as carbon capture and storage. Canada's significant oil, coal and natural gas reserves represent substantial economic benefits and energy security.***
- 6. Investments in renewable generation and conservation, energy efficiency and demand-management should be based on solid economics and verifiable emissions reductions. As shown in other jurisdictions, carbon neutral biomass wastes help reduce emissions, generate economic spin-offs and produce dispatchable electricity.***
- 7. The Government of Canada should pursue the creation of a North American carbon cap and trading scheme with transparent and fair rules that do not put Canada at an economic disadvantage. Canada's nuclear generation should also be an eligible source of credits in the trading scheme.***
- 8. The Government of Canada and the provinces should create a transition fund to help mitigate any adverse impacts on workers and to help retrain them for the new low carbon economy. This is consistent with the international Labour movement's "Just Transition" framework.***
- 9. The CNWC recommends that the Government of Canada promote the use of nuclear power generated electricity as a means of achieving reductions in GHG worldwide.***

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## **BACKGROUND: CANADIAN NUCLEAR WORKERS COUNCIL POSITION ON GREENHOUSE GAS (GHG) EMISSION REDUCTIONS**

The CNWC supports global efforts to reduce greenhouse gas emissions in accordance with the provisions of the Labour movement's "Just Transition" framework. The shift to a low carbon economy will have major impacts on working people in the energy supply, industry, manufacturing and transportation sectors, and for all consumers.

Critical challenges face our policy makers and leaders in achieving this transition. Green renewable technologies, such as wind and solar generation and conservation are seen by many as the most effective way of achieving lower carbon emissions, creating new jobs and meeting future electricity needs. The CNWC and others believe that as Nuclear Power is a reliable and non GHG emitting source of supplying electricity that policy makers must include it as a source for the transition from a carbon dependent economy.

Reliable baseload, intermediate, and peak electricity generation, are fundamental to keeping our industries and businesses working and to maintain our high standard of living. Today, this means not only ensuring that this electricity generation meets constantly changing consumer demands, but also with the lowest carbon footprint possible without jeopardizing economic competitiveness. This must be accomplished against a backdrop of a growing population and the accompanying growing electricity demand and increasing electrification of the economy driven by new technologies such as the plug-in electric vehicle. Finding the right, balanced mix of generation technologies remains the critical challenge. The CNWC takes the position that all current forms of production are required and their contribution will vary from jurisdiction to jurisdiction.

To address the interests of people who work in Canada's nuclear industry, the CNWC stresses the importance of labour being a key player: in the discussions concerning how best to manage the transition to a low carbon economy; in prioritizing and guiding investments to minimize the loss of existing jobs and maximize the creation of new, decent low carbon jobs; and in determining, and being a major recipient of training necessary to equip working people with the skills required for a low carbon economy.

### **Canada's Greenhouse Gas Emissions in Perspective:**

Canada's GHG emissions represent about 2% of global emissions even though Canadians make up only 0.5% of the global population.<sup>1</sup> Canada's large land mass, climate, widely distributed overall population density and industrial structure are factors. Exports of coal, oil and natural gas, account for approximately 82% of Canada's current GHG emissions. Over 40% of Canada's economic output is exported to the U.S. and 40% of these are energy intensive, resource-based commodities (including more than half of Canada's oil and natural gas production).<sup>2</sup>

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<sup>1</sup> *Indicators of Well-being in Canada, Environment-Greenhouse Gases, Natural Resources Canada.*

<sup>2</sup> *Canada's Fourth Annual Report on Climate Change, Government of Canada 2006*

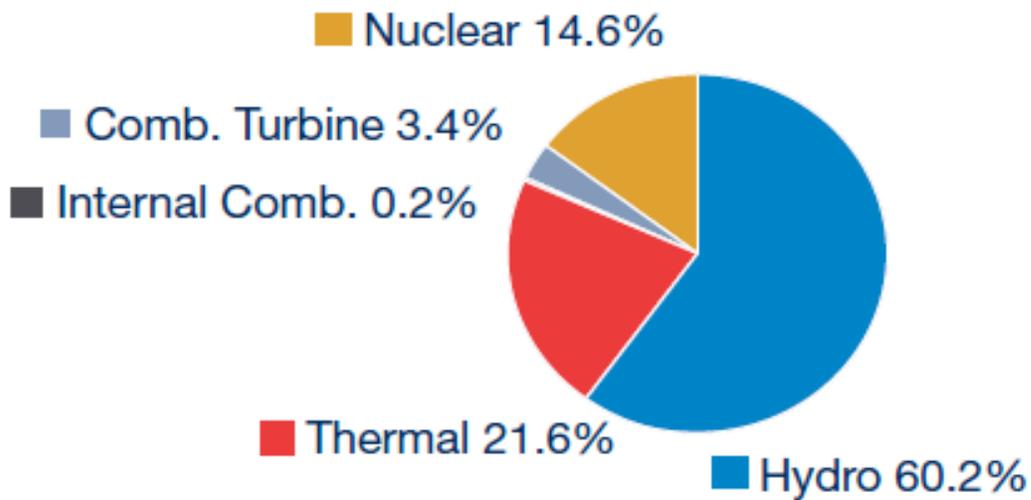
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Figure 1: Canada-Net Electricity Generation, 2005, shows that Canada has one of the lowest carbon footprints of any electricity system in the world because of its hydroelectric and nuclear generation. However, this hydroelectric generation and the potential to develop more, is not distributed equally across Canada's vast land expanse.

Figure 2: The chart showing the generation mix for each province indicates that there are opportunities in province's like Alberta, Saskatchewan, New Brunswick and Ontario to build new greenhouse gas emission free nuclear generation.

Figure 1:

### Canada Net Electricity Generation, 2005



Total = 593.6 TWh

Source: Statistics Canada  
Survey 2151

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Figure 2: Electricity Generation by Region and Source, 1990 and 2006.

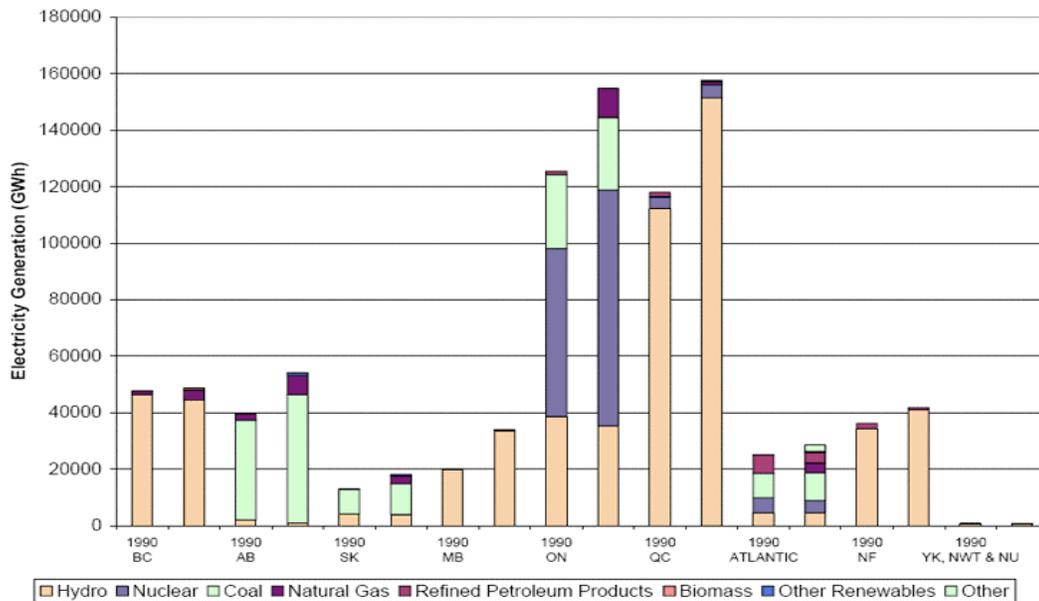


Figure A9-3: Electricity Generation by Region and Source, 1990 and 2006

Source: National Inventory Report: Greenhouse Gas Sources and Sinks in Canada, 1990-2006, Environment Canada.

According to the Canadian Electricity Association, a \$134 billion dollar refurbishment and replacement investment in Canada's generation infrastructure is required by 2030.

### Canada's Nuclear Industry:

Canada is a world leader in nuclear energy technology. Thirty-six CANDU reactors built domestically and abroad have been providing affordable, reliable electricity for decades. Uranium mines in Saskatchewan have made Canada the largest supplier of uranium in the world. These activities have created a \$6.6 billion dollar/year industry that supports over a 130 Canadian companies and 30,000 high skill, high paying direct jobs and tens of thousands of indirect jobs.

Refurbishing an existing CANDU reactor, not only extends its operating life by 30 years but also generates about 1,500 jobs and an investment of \$1.5 billion. Over the next twenty years, the potential global market for nuclear technology market is estimated to be more than a trillion dollars. Here in Canada, new reactors are being considered in Ontario, New Brunswick, Alberta and Saskatchewan. A recent Conference Board of Canada analyses estimates that building four new twin ACR-1000 reactors in Canada and eight twin reactors internationally could create 500,000 person-years of employment and add \$80 billion to Canada's gross domestic product.

CANDU generated electricity also avoids billions of tonnes of greenhouse gas emissions per year. Since 1972, the use of CANDU reactors has avoided 2.4 billion tonnes of GHG emissions.

**Canada's Nuclear Unions Working for a Secure Energy Future**

[www.cnwc-cctn.ca](http://www.cnwc-cctn.ca)

