



National Farmers Union

Presentation to the public consultation on the report  
of the  
Saskatchewan Uranium Development Partnership

May 27, 2009

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### **Introduction**

The National Farmers Union (NFU) welcomes this opportunity to respond to the report of the Saskatchewan Uranium Development Partnership.

The NFU, founded in 1969 through the merger of the Saskatchewan Farmers Union and three other provincial farmers unions, is the only farm organization in Canada chartered under a special Act of Parliament. The NFU is a non-partisan, democratic organization made up of farm families across Canada who produce a variety of commodities. The roots of the NFU in Saskatchewan run deep, stretching back to 1901 and the formation of the Territorial Grain Growers Association. Over the past century, our predecessor organizations included the Saskatchewan Grain Growers Association, the Farmers Union of Canada, the United Farmers of Canada (Saskatchewan Section), and the Saskatchewan Farmers Union.

The policies of the NFU are democratically determined at our annual national conventions. The NFU's mandate is to promote the family farm as the foundation for Canada's food production system, and to advocate policies designed to ensure economic and social justice for farm families while promoting environmental sustainability.

### **NFU Policy on uranium mining and nuclear issues**

The National Farmers Union has a long-standing policy of opposition to the expansion of uranium mining and nuclear power, as well as opposition to nuclear weapons. This policy was reinforced at the most recent NFU national convention, held in November, 2008, in Saskatoon. At that convention, the following resolution was adopted by delegates:

*“BE IT RESOLVED the NFU reject any new nuclear facilities due to their negative social and environmental impacts on this and all future generations due to the radioactive waste produced.*

*BE IT FURTHER RESOLVED the NFU lobby the provincial government and the federal government to promote conservation and alternative renewable electrical power generation options such as solar, wind, biomass, tidal, co-generation, geothermal, low impact run of rivers and potentially clean coal.*

*BE IT FURTHER RESOLVED the NFU demand full disclosure of costs associated with nuclear waste disposal, decommissioning of existing nuclear plants and that such costs are identified as operating costs.*

*BE IT FURTHER RESOLVED the NFU rejects privatization of energy development and reaffirm support for public ownership of renewable sustainable energy options.*

The NFU policy book contains the following section on “Nuclear Energy”:

*“We urge the Government of Canada to speak out against nuclear arms proliferation and work hard towards unilateral disarmament in conjunction with the United Nations. We support the position that calls for the signing of a strategic arms limitation treaty and the convening of a conference on Détente and Disarmament.*

*“We share the growing concern over the threat to mankind and the environment arising out of the proliferation of nuclear energy generation facilities and the attending problems of waste disposal and storage. We are concerned over the manipulation of governments by large multinational corporations who are promoting the extremely costly production and financing of nuclear reactor installations for profit purposes around the world, thereby contributing toward the nuclear arms race.*

*“We ask the Government of Canada to end all uranium mining and refining and urge all provincial governments to desist from uranium development and exploration but actively pursue renewable, non-toxic, clean energy options and pass legislation forbidding the disposal of high, medium or low level nuclear waste anywhere in Canada until all questions have been answered regarding future leakage, contamination or possible reintroduction for military purposes.*

*“We oppose any Canadian involvement in the production and testing of nuclear weapons and cruise missiles. We support the position that all nuclear weapons be deactivated and dismantled and military spending be eliminated. We call upon the federal government to declare Canada a nuclear-free zone and that it cease all production of parts in Canada for the nuclear arsenal.*

*“We support the signing of the agreement on Intermediate Nuclear Forces and the Nuclear Test Ban proposals to prevent the development of new and more efficient methods of mass destruction.*

*“We reaffirm our alliance and support of groups for nuclear disarmament.*

*“We urge that nuclear studies be incorporated into the school curriculum to point out the nature and dangers of nuclear technology.”*

The NFU also makes reference to nuclear power in its policy on Wind Power and alternative energy sources:

*“The NFU supports efforts to move away from reliance on fossil fuels and nuclear power toward renewable, clean sources of energy such as wind and solar. These renewable energy sources provide an opportunity to revitalize local rural communities if they are developed in ways that promote and facilitate local individual and cooperative ownership and enterprise.*

*“With wind power, in particular, it is important that governments choose a system that maximizes benefits to farmers. The NFU recommends that provincial governments adopt a system known as Advanced Renewable Tariffs, which is well-established in Europe and which has a proven record of benefiting farmers and rural communities.”*

At an NFU National Board of Directors meeting in Saskatoon in early March, 2009, a decision was taken to support the Coalition for a Clean Green Saskatchewan (CCGS) and endorse the campaign advocating conservation and energy efficiency as a means of lowering demand for energy in Saskatchewan and in Canada. **The NFU strongly advocates a shift in energy policy toward a more sustainable system based on renewable energy resources.** It is, therefore, dismaying to see the Saskatchewan government moving in the opposite direction by endorsing the nuclear industry and pushing for expansion of the nuclear fuel chain in our province.

## **Expansion of nuclear industry based on flawed assumptions**

The Saskatchewan UDP report rationalizes proceeding with the nuclear energy option by using a number of flawed assumptions. In spite of decades of tragic experiences and significant evidence which directly challenge those assumptions, the arguments used by the UDP are virtually identical to those advanced in the 1970s by pro-nuclear vested interests. Those flawed arguments include:

1. *There are no other options;*
2. *It is safe (or relatively safe or acceptably safe);*
3. *It is environmentally benign (or relatively benign);*
4. *It is economical (or relatively economical);*
5. *It is secure and long-term, having a large resource base;*
6. *It is Canadian and thus contributes to self-reliance; and*
7. *It can be safely and profitably exported and it is desirable to do so.<sup>1</sup>*

The experience of nuclear reactor accidents at the Three Mile Island nuclear reactor in Harrisburg, Pennsylvania in March, 1979<sup>2</sup>; and the Chernobyl nuclear reactor in the Ukraine in

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<sup>1</sup> Fred H. Knelman, Nuclear Energy: The Unforgiving Technology, Hurtig Publishers, 1976, page 9.

<sup>2</sup> On March 28, 1979, a loss of coolant water to the reactor core at the Three Mile Island reactor in Harrisburg, Pennsylvania, resulted in a meltdown of fuel rods and a massive buildup of radioactivity to lethal levels. The

April, 1986<sup>3</sup>, clearly illustrates the reality of the massive dangers inherent in these facilities. Regardless of advances in technological engineering and designs of nuclear reactors, the reality is that the accidents at both Harrisburg and Chernobyl, like previous nuclear reactor accidents at Chalk River, Ontario in 1950<sup>4</sup>; Lucens, Switzerland in 1969; Browns Ferry, Alabama in 1975; and Douglas Point, Ontario in 1970<sup>5</sup>, were all traced to human error. The possibility of accidental discharges of radioactive contamination to the environment, wildlife and people, from nuclear reactors remains as high as ever.

The dangers were eloquently summed up by Hannes Alfvén, Nobel Laureate in Physics, in these terms:

*“Fission energy is safe only if a number of critical devices work as they should, if a number of people in key positions follow all their instructions, if there is no sabotage, no hijacking of transports, if no reactor fuel processing plant or repository anywhere in the world is situated in a region of riots or guerrilla activity, and no revolution or war – even a “conventional” one – takes place in these regions. The enormous quantities of dangerous material must not get into the hands of ignorant people or desperados. No acts of God may be permitted.”<sup>6</sup>*

Nuclear power is expensive, dangerous and environmentally-destructive. The recent campaign to paint nuclear power as a “green” source of environmentally-beneficial energy is manipulative and dishonest. Nuclear power is not in the fundamental public interest of citizens of Saskatchewan for a number of reasons.

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meltdown was fortunately halted before the five-inch steel bottom of the reactor melted due to the intense heat created by the molten uranium. Even though most of the radioactivity was contained, a significant amount of radioactive material was released into the surrounding environment. The wreckage of the affected reactor was not cleaned up until 1985. Source: Smithsonian National Museum of American History: Three Mile Island: The Inside Story. <http://www.americanhistory.si.edu/tmi/index.htm>

<sup>3</sup> On April 26, 1986, the nuclear reactor at the Chernobyl plant overheated and the coolant water became superheated steam. Fuel pellets in the reactor core began to explode, which resulted in the reactor’s dome-shaped roof blown off and the radioactive contents erupted outward. Air sucked into the reactor by the explosion ignited flammable carbon monoxide gas, creating a fire which burned for nine days. Large amounts of radioactive debris escaped into the atmosphere where winds circulated the radioactivity across northern Europe and throughout the northern hemisphere. The worst hit areas of the Ukraine, Russia and Belarus remain highly-radioactive today. Thousands of cancer cases resulted from the accident. Source: BBC News/In Depth/Chernobyl. <http://www.news.bbc.co.uk/2/shared/spl/hi/guides/456900/456957/html/nn1page1.stm>

<sup>4</sup> On December 13, 1950, the first major nuclear generator accident took place at the NRX reactor at Chalk River, about 150 miles northwest of Ottawa. A hydrogen explosion occurred, killing one man and seriously contaminating five others. The reactor core was largely destroyed and 1 million gallons of highly radioactive water flooded the structure... The accident was shrouded in secrecy in the United States, Canada and Great Britain for the sake of national security. Understanding the implications of nuclear accidents might reduce civilian cooperation with the growing weapon industry. Source: Rosalie Bertell, No Immediate Danger? Prognosis for a Radioactive Earth, Women’s Educational Press, 1985.

<sup>5</sup> Fred H. Knelman, Nuclear Power: The Unforgiving Technology, Hurtig Publishers, 1976, Page 108.

<sup>6</sup> H. Alfvén, *The Bulletin of Atomic Scientists* 28, no 5 (May 1972).

## **Nuclear Power is not a “clean” source of energy**

Nuclear power is not a “clean” energy source and will actually obstruct efforts to reduce fossil fuel dependence and build an effective strategy to deal with climate change. In fact, it is an expensive, dangerous and inefficient way to approach the problem. It would take 2,500 nuclear power plants worldwide, requiring one new plant built somewhere every week until 2050, to replace coal-generated electricity. There are presently 439 nuclear plants in operation worldwide and only 35 new ones under construction as of 2008. In addition, a full energy audit reveals that the generation of electricity by means of nuclear power is actually extremely costly to the environment in terms of its carbon footprint. The full cost of generating that electricity must take into account the entire fuel chain, from massive uranium mines – including those in northern Saskatchewan – right through to energy-intensive uranium enrichment facilities and nuclear power plants. In addition, the energy required to construct, operate and eventually decommission those nuclear power plants is enormous – yet the full costs are rarely taken into account by proponents of nuclear energy. Instead, these costs are externalized and conveniently ignored.<sup>7</sup>

While nuclear power plants do not produce black smoke and ash and don’t smell bad, they do routinely release radioactive tritium, and they create extremely hazardous highly radioactive waste in the form of used fuel. Add to that the legacy of uranium mine tailings in northern Saskatchewan which remain radioactive for centuries, producing alpha-radiating decay products that will inevitably and eventually find their way into the ecosystem. Alpha radiation normally does not penetrate very far through material barriers, but once inside the body, alpha-emitting particles can cause drastic biological damage.<sup>8</sup>

The real solutions to climate change can be found in the areas of energy conservation, energy efficiency and renewable energy. The Saskatchewan Environmental Society estimates that if the same level of financial support was given to these options as has been given to the nuclear industry, Saskatchewan and Canada could move much faster into the sustainable, low-carbon energy economy of the future. In 2004, small-scale renewable energy added almost 6 times as much net generating capacity world-wide and nearly three times as much electricity production as nuclear power did. By 2010, renewable energy is projected to outstrip nuclear power’s energy output by 43% globally.

## **Nuclear power does not make economic sense**

The UDP report claims that “nuclear energy has proven to be cost-competitive” (Executive-Summary), but nuclear power is competitive only when it is supported by disproportionately generous public subsidies. New nuclear power plants deliver electricity at far higher cost than many renewable energy sources, according to the Saskatchewan Environmental Society.<sup>9</sup> These

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<sup>7</sup> “Why the Coalition for a Clean Green Saskatchewan (CCGS) supports a non-nuclear energy strategy”, CCGS pamphlet, <http://sites.google.com/site/cleangreensaskca/>

<sup>8</sup> Saskatchewan Environmental Society pamphlet: “People are asking: Would nuclear power be a good choice for Saskatchewan?”, available online at CCGS. <http://sites.google.com/site/cleangreensaskca/>

<sup>9</sup> Saskatchewan Environmental Society pamphlet: “People are asking: Would nuclear power be a good choice for Saskatchewan?”, <http://sites.google.com/site/cleangreensask.ca/>

nuclear power plants, usually owned by private interests, are inevitably supported by funds from the public sector. The public not only subsidizes the operating costs, but also picks up the tab for construction and decommissioning of the plants, as well as any cost overruns and long-term environmental cleanup and associated health costs. Between 1953 and 2002, Canadian Government subsidies to Atomic Energy of Canada Ltd. totalled \$17.5 billion (measured in 2001 dollars).<sup>10</sup>

In the early 2000s, nuclear industry executives estimated that construction costs for building a new nuclear reactor could approach \$1500 per kilowatt of power-generating capacity, plus finance costs. However, that estimate now appears “wildly optimistic”. Since 2005, the anticipated cost of a new nuclear power plant has more than tripled.<sup>11</sup>

Ontario Hydro’s massive debt and liabilities of \$38 billion were largely incurred through its nuclear program – due to cost overruns on nuclear reactor construction and maintenance costs. The country’s last nuclear reactor, built in Darlington, Ontario, came with a price tag of \$14.3 billion - \$5.1 billion for construction and design, \$6.2 billion for interest, \$1.4 billion for commissioning and \$1.5 billion for heavy water. These massive costs translate into \$4,085 per kilowatt of power produced at Darlington, and that doesn’t include the cost of decommissioning the facility.<sup>12</sup> Bruce Power, the company which wants to build a nuclear power plant in Saskatchewan and another in the Peace River region of Alberta, claims the price tag for two 1000-megawatt reactors will be between \$8 and \$10 billion.

However, even Moody’s Investors acknowledges that “all-in” capital costs of nuclear power plants are consistently underestimated, and would likely range from \$5,000 to \$7,000 per kilowatt. Additional costs of interest, fuel, etc, would increase those costs even more. In particular, the recent global credit crunch could increase capital and related costs to as much as \$8,000 per kilowatt, according to credit rating agency Standard and Poor’s.<sup>13</sup>

Under Canada’s Nuclear Liability Act, a reactor owner’s liability in the case of an accident is extremely limited. A serious accident could end up costing several billions of dollars in damage – most of this cost would be billed to the taxpayer. No insurance company is willing to carry the entire risk, so without taxpayer bailouts, the nuclear industry would not be able to operate. The costs of nuclear power are going up as uranium prices rise and public pressure increases for operational safety requirements to be tightened. This trend is in stark contrast to the costs of

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<sup>10</sup> Saskatchewan Environmental Society, People are asking: Would nuclear power be a good choice for Saskatchewan? <http://sites.google.com/site/cleangreensaskca/>

<sup>11</sup> The High Cost of Nuclear Power: Why America should choose a clean energy future over new nuclear reactors. Maryland Public Interest Research Group Foundation, March, 2009, [http://www.nirs.org/nukerelapse/calvert/highcostnpower\\_mdpirg.pdf](http://www.nirs.org/nukerelapse/calvert/highcostnpower_mdpirg.pdf)

<sup>12</sup> Murray Mandaryk, “What kind of total costs will nuclear power generate?”, Regina Leader-Post, April 24, 2009

<sup>13</sup> “Nuclear Power Costs on way to Tripling”, by Jim Harding, Ph.D.

renewable energy, which are falling rapidly. The cost of wind power fell by 50% over the past decade, while that of solar photovoltaic power declined by 30%.<sup>14</sup>

## **Nuclear fuel chain creates environmental and health hazards**

The environmental and health impact of the nuclear fuel chain begins with uranium mining and milling. An estimated 575,000 tonnes of tailings are generated by uranium mining and milling annually, of which approximately 100,000 tonnes can be attributed to uranium production for domestic energy purposes, according to research by the Pembina Institute.<sup>15</sup>

Uranium mill tailings are acidic or potentially acid-generating, and contain a range of long-lived radionuclides, heavy metal and other contaminants. Tailings generation would increase proportionally with the use of lower grade uranium ores, as large amounts of ore would have to be processed to produce the same amount of uranium concentrate. It is estimated that there are more than 213 million tonnes of uranium mine tailings in storage facilities in Canada, and 109 million tonnes of waste rock.

Even uranium mines and mills, which have been shut down for decades, continue to leave a grim legacy of toxic pollution that is taking a toll on the environment, wildlife and people's health. Studies conducted at Fort Chipewyan, Alberta, for example, in response to concerns over increases in rare forms of cancer, have revealed that the waters of Lake Athabasca contain massive amounts of radioactive toxic waste. The lingering effects of uranium mining and milling on the aquatic environment and land in the Lake Athabasca region have been worsened by the addition of toxic pollution leaking from tar sands tailings ponds upstream.<sup>16</sup>

The Pembina Institute study also estimates that nearly 1,000 tonnes of solid wastes and 9,000 cubic metres of liquid wastes are produced annually as a result of uranium refining, conversion and fuel production for domestic energy generation purposes. In addition, nuclear power plant operations generate approximately 85,000 waste fuel bundles every year.

As of 2003, 1.7 million bundles were in storage at reactor sites. These wastes will have to be secured for approximately one million years for safety, environmental and security reasons. Approximately 6,000 tonnes of lower level radioactive wastes are generated each year in Ontario as a result of power plant operations, maintenance and refurbishment. The refurbishing and maintenance of nuclear power plants also results in the generation of other hazardous wastes including heavy metals and asbestos. Large amounts of low, intermediate and high-level radioactive wastes are produced as a result of the eventual decommissioning of refining, conversion and fabrication facilities as well as power plants.

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<sup>14</sup> Saskatchewan Environmental Society, People are asking: Would nuclear power be a good choice for Saskatchewan? <http://sites.google.com/site/cleangreensaskca/>

<sup>15</sup> Pembina Institute, Nuclear Power in Canada: Key Environmental Impacts (media backgrounder), <http://www.pembina.org/pub/1494>

<sup>16</sup> Andrew Nikiforuk, Tar Sands: Dirty Oil and the Future of a Continent, Greystone Publishers/David Suzuki Foundation, 2008.

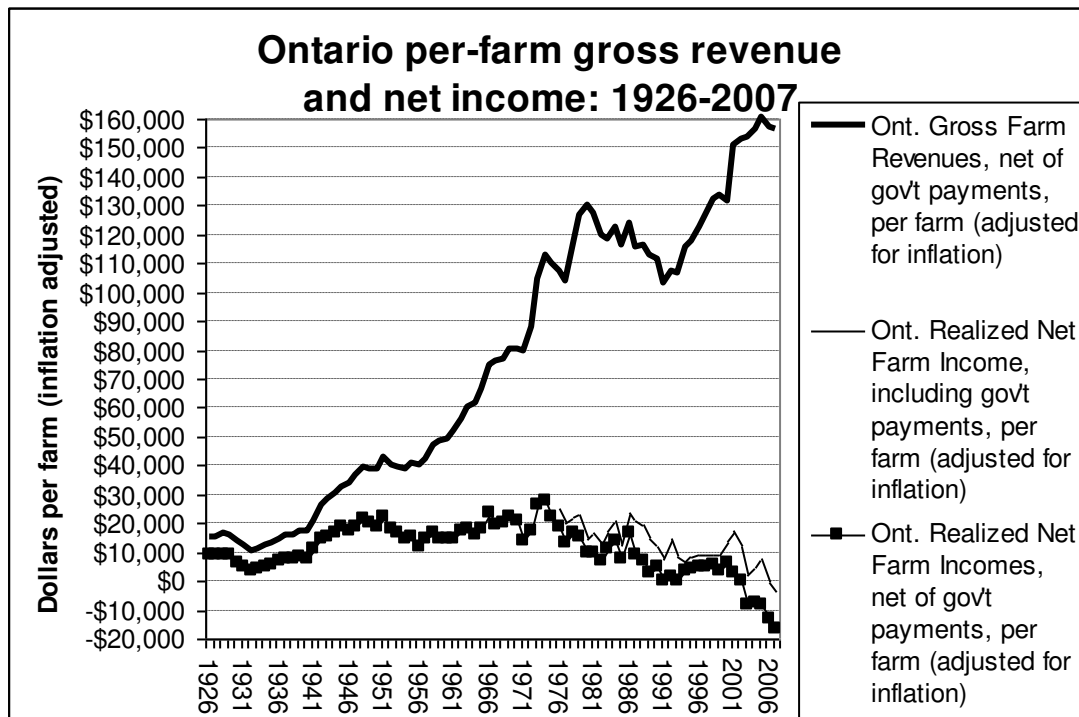


## Farm income and off-farm employment:

The argument is made by advocates of nuclear power that these plants will provide a much-needed injection of capital to depressed rural communities, thereby rescuing those areas from economic collapse. They suggest that if farmers can obtain off-farm jobs at these plants, they will continue to have a dependable source of income to subsidize their farm operations.

It is an unfortunate reality that the majority of farms in Canada are dependent, at least to some extent, on off-farm income to remain viable. The accompanying graph is taken from an NFU Brief entitled *The Farm Crisis and Corporate Profits* and is based on information from Statistics Canada. The graph uses Ontario farm incomes as an example to illustrate how realized net farm income in Canada has been declining for several decades. In recent years, the farm income crisis has accelerated to the point where average net farm income, per farm, has fallen to negative \$20,000 per year.<sup>17</sup>

This is all the more astounding when one considers that gross farm income over the same period has continued to climb – reaching unprecedented levels in recent years. The gap between gross farm income and net farm income provides evidence that the market power of farmers is declining.



While Canadian farmers are among the most productive and efficient sectors of the economy,<sup>18</sup> these attributes have, unfortunately, not led to prosperity for the vast majority of farmers.

<sup>17</sup> National Farmers Union, *The Farm Crisis and Corporate Profits*, November 30, 2005, [www.nfu.ca](http://www.nfu.ca)

<sup>18</sup> *The Farm Crisis, Bigger Farms, and the Myths of 'Competition' and 'Efficiency'*, National Farmers Union, November, 2003, <http://www.nfu.ca>

Farmers' productivity and efficiency is evident in the fact that the volume of production of major grains, oilseeds, vegetables and livestock has steadily increased since the 1970s, while farm gate prices for those products have remained relatively static or have actually declined.<sup>19</sup>

Farms have also declined in number while growing in size. Between 1988 and 2007, the number of farms in Canada declined from 293,089 to 229,373 – a rate of decline of 3,353 farms every year for nineteen years. The remaining farms have financed their expansion largely through increased debt loads. Farm debt rose from \$22.5 billion in 1988 to over \$54 billion in 2007.<sup>20</sup>

As noted earlier, farm families in Canada are relying heavily on three strategies to keep their farm operations going: debt financing, off-farm employment, and lowering their overall standard of living. Farm debt in Canada has nearly tripled since the early 1980s, climbing from \$18.3 billion in 1981 to \$54.3 billion in 2007.<sup>21</sup> Meanwhile, the percentage of farmers reliant on off-farm income has skyrocketed. According to Statistics Canada, small and medium-size farms rely on off-farm income for approximately 90% of their total income.<sup>22</sup> Meanwhile, even large farms with gross annual revenues between \$100,000 and \$499,000 rely on off-farm income for over half (52.1%) of their total income. Astonishingly, Canada's largest farms, with gross revenues over \$500,000 annually, depend on off-farm income for between 25.9% and 33.5% of their total income.

The National Farmers Union has proven in its research that declining net farm income is attributable to the dominant market power of large multinational corporations which control inputs, processing and distribution of the agricultural commodities. The solution lies in restoring market power to family farms through the creation and maintenance of farmer-owned and controlled collective marketing agencies. Canada's supply-management systems for dairy, eggs and poultry are one example. Another example is the orderly marketing system of the Canadian Wheat Board. Agencies like these increase farmers' market power and enable farmers to retain a greater share of the wealth which is generated on their farms and in their rural communities.

Off-farm income should be viewed as a supplement to farm income, not as a replacement. Farmers should not have to rely on off-farm income to survive, particularly when they are generating billions of dollars in new wealth.

Nuclear power plants, like other large industrial enterprises, do provide off-farm jobs. This is the case in Grey and Bruce Counties in Ontario. However, this forced reliance on off-farm employment is not a solution, it is a symptom of a dysfunctional marketplace. Building more nuclear power plants in rural communities will not solve the farm income crisis. The long-term

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<sup>19</sup> "The Farm Crisis, Bigger Farms, and the Myths of 'Competition' and 'Efficiency'," NFU, November, 2003, [www.nfu.ca](http://www.nfu.ca)

<sup>20</sup> "Free Trade": Is it working for farmers? Comparing 2007 to 1988, NFU, October 2007. [www.nfu.ca](http://www.nfu.ca)

<sup>21</sup> Statistics Canada, "Farm Debt Outstanding", November, 2008, <http://www.statcan.gc.ca/pub/21-014-x/21-014-x2008002-eng.pdf>

<sup>22</sup> Statistics Canada, December 8, 2005 release. [www.statcan.ca/Daily/English/051208/d051208e.htm](http://www.statcan.ca/Daily/English/051208/d051208e.htm)

solution is to restore farmers' market power so they receive a fair price for their commodities at the farm gate.

There are rural-based energy-production models that can, and do, contribute substantially to farm income. Community and co-operatively-owned windmills, such as those in rural areas of Germany, offer a tremendous success story. The revenue produced by these windmills, which generate a significant percentage of the power used throughout the country, is returned to the rural communities. The jobs created in construction and maintenance of these windmills are all local, and the economic benefits are spread throughout the countryside. The production of energy using this model is complementary to agriculture, and not destructive of the environment.<sup>23</sup>

## **Nuclear power and the tar sands**

One of the rationalizations put forward by advocates of nuclear power plants in Saskatchewan and Alberta is that the energy generated by these facilities can be used to replace natural gas as a means of creating electricity, hot water and steam for bitumen extraction in the tar sands.

The negative impact of the tar sands on the environment, water and agricultural resources is well-documented. The NFU put forward its concerns on this issue to the House of Commons Standing Committee on the Environment and Sustainable Development during recent hearings in Edmonton, Alberta.<sup>24</sup> Any move to utilize nuclear power to facilitate extraction of bitumen from the tar sands, or the bitumen deposits in the limestone formations lying below the layers of sand, will accelerate the environmental damage.

The tremendous drain on water resources from the current tar sands projects and bitumen upgraders will increase dramatically if nuclear power plants on the North Saskatchewan River and Peace River are built. Nuclear power plants at Darlington and Pickering in Ontario require approximately two trillion gallons of water for cooling a year, about nineteen times more water than the tar sands use.<sup>25</sup>

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<sup>23</sup> Out of Germany's 16 states Schleswig-Holstein is the most northerly, right next to Denmark with the Baltic Sea to its east and the North Sea to its west. It is here, in this exposed landscape, that a considerable part of Germany's national wind potential is located. The first step towards realising this potential occurred in 1988 when a change of the state government brought in a shift to energy policy. From an emphasis on nuclear there are in the region three plants of 2500 MW capacity the focus changed to renewables. Wind energy was seen as a local source of electricity which could cover a substantial proportion of the state's energy demand whilst simultaneously phasing out nuclear power and meeting ambitious goals for carbon dioxide reduction. The new government set itself the goal of meeting 20-25 per cent of the electricity demand through wind by the year 2010. This could require 1200 MW of installed capacity consisting of about 2000 wind turbines. To launch this programme the state government offered investment grants of up to 30 per cent per plant initially, falling to 6 per cent during the last year of the programme which is now phased out. This initiative was supported by the national Electricity Feed Law which encouraged private generation. The result has been extraordinary. The wind power capacity of 2 MW in 1988 has now reached 600 MW in 1999. Schleswig-Holstein's success has come about through a co-operative spirit amongst the state government, the regional utility, local manufacturers, planners, farmers and environmental groups. Source: <http://www.peopleandplanet.net/doc.php?id=448>

<sup>24</sup> NFU Submission to the House of Commons Standing Committee on Environment and Sustainable Development on the issue of Tar Sands and Water Resources, May, 2009. <http://www.nfu.ca>

<sup>25</sup> Andrew Nikiforuk, Tar Sands: Dirty Oil and the Future of a Continent, Greystone Publishers/ David Suzuki Foundation, 2008, page 134.

## **Conclusion and recommendations:**

A nuclear power plant in Saskatchewan will have long-term damaging effects on the environment, on water resources, on wildlife, on the health of people, and on the economy. The dangers associated with proliferation of this technology are massive and long-term.

The NFU, therefore, recommends that the Saskatchewan government reject proposals for any new nuclear facilities due to their negative social and environmental impacts on this and all future generations due to the radioactive waste produced.

The NFU further recommends that the provincial and federal governments promote conservation and alternative renewable electrical power generation options such as solar, wind, geothermal, and other methods that have minimal negative impact on the environment

The NFU further recommends that costs associated with nuclear waste disposal, decommissioning of existing nuclear plants and other operating costs of nuclear power plants be fully disclosed to the public.

The NFU reaffirms its support for public ownership of renewable, sustainable energy options, and opposes privatization of energy development.

*All of which is respectfully submitted*

*By the National Farmers Union*