

Sustaining our Lead: Smart Development of Saskatchewan uranium resources and energy policy

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Good afternoon and thank you for inviting me here today to discuss the smart development of uranium resources and energy policy in Saskatchewan.

The issue of energy is becoming a prevalent topic in political, economic, and environmental circles. Sources, reliability, risks, costs: these are all issues changing the shape of energy policy abroad and at home. As many countries face the reality of energy insecurity; Saskatchewan maintains a very unique and potentially prosperous position. Saskatchewan is endowed with many natural advantages that are key to assisting and possibly leading energy development in Canada, and the world.

With the increase of worldwide demand for our uranium resources we stand at a crossroads between business as usual and advancement into a value-added industry. Having achieved worldwide leadership in uranium production, what are the next options for our province? What are the global issues influencing these options? And what do we need to achieve at home in order to move ahead?

My presentation today will try to answer these questions by taking a look at international trends that have and will set the stage for pursuing further development of our uranium and energy platforms. Second I would like to

briefly describe the possibilities of extending our own value-added role, followed by a summation of key players who will be instrumental in allowing us to sustain our lead in this industry, as well as shape our energy policy for the new era.

In order to understand our situation at home, I believe it is best to first take a look at what is occurring on a global level

Over the next decade 1 billion people will be added to the planet's population. A large portion of this population will be situated in China and India, where development is swallowing large amounts of the world's energy resources.

A second trend is the worldwide effort to mitigate environmental damage being caused by greenhouse gas emissions.

A third major factor is security of supply. Western countries have become increasingly dependent on energy resources that are located in unstable regions of the world, causing volatility in both supply and price, which leads to a fourth factor of economics. Due to the rising cost of fossil fuels, countries are looking to find more affordable ways to generate energy

Because of these 4 pressing issues, many countries have begun to reassess their energy policies for the future.

Policy makers are at the root of changing energy platforms, a task that is anything but easy. They must listen to social concerns and incorporate those into sound technological and scientific information to base their policy. From what we are seeing on a global level, future energy policy

must incorporate the issues of diversification, security of supply, safety, the environment and technological development; while maintaining energy production that is affordable, sustainable, and meeting the growing demand.

Current energy generating options include fossil fuels; renewable energy sources; and nuclear energy. Each option has certain generating advantages and drawbacks; however, it is essential to understand that a sustainable energy future is not dependent upon one energy source alone, but a broad mix of many sources.

For the purpose of today's discussion, I want to focus on the nuclear option that many countries are currently considering, due to the direct effect that this energy source has and will have on Saskatchewan.

Today there are 441 nuclear units operating in 31 countries that are providing more than 16 percent of the world's electricity. (World Nuclear Association). As of 2006, there were 24 more reactors under construction and 41 planned. (Canadian Nuclear Association)

The factors currently driving this nuclear resurgence include various sustainable features that countries are looking to have complement their own energy policies.

First, nuclear power has the ability to provide large quantities of energy, **however** without the environmental stresses of greenhouse gas emissions generated by fossil fuels.

Second, the fuel that powers a nuclear reactor, uranium, is an abundant resource that is cheap, reliable, and secure.

Even though nuclear power has been generating for more than 60 years; the perception of risk, weapons, and meltdown associated with nuclear still remains. That is why governments, industry, and institutions around the world are actively engaged in research and development, as well as educating the public about future energy solutions.

As a result of these factors, nuclear energy is seeing a revival throughout the world:

- China has opened six reactors since 2002 and aims to increase nuclear capacity 5 fold by 2020.
- India has plans for 16 new reactors
- Finland has begun the process of constructing a fifth plant, and France says it will build 30 more.
- South of the border, the public approval rate for nuclear energy has soared to 70%. The Energy bill recently signed by George W. Bush has allocated billions of dollars in subsidies to interest companies in building new plants.

Not to mention our own demand for uranium to power Canadian reactors.

With headlines like these, Saskatchewan's uranium industry and policy makers should be very interested in the coming opportunities.

Our participation in the front end of the nuclear fuel cycle effects energy generation on a global scale. First we are the world's largest producer of uranium, shipping over 80% of this resource to international markets. We are directly related to powering 60% of France's energy and 20 % of the

United States. With the growing trend toward nuclear generation, our ample supply of uranium is not the only attraction. Saskatchewan's stable economy, secure supply and environmental stewardship represents comfort to countries who are seeking a long term solution to providing energy. Furthermore, Saskatchewan hosts two of the world's leading nuclear companies, involved in many stages of the nuclear fuel cycle.

So what types of opportunities does this current and expected demand for uranium have on our industry and future energy policy?

With worldwide uranium prices and demand increasing, uranium producers have begun to implement key activities to respond, through increased exploration, new mines, and expanding mill operations.

On average, industry, government and the public have maintained a positive attitude toward the front end production of uranium in our province and are now faced with the opportunity of incorporating more elements of the cycle.

The processing and refining of uranium would be the next, most near term stepping stone that would add value to our resource before shipping it out to the rest of the world.

Nuclear energy has also been posed as another option both for powering our province and the oil sands of Alberta. However, in discussing the addition of this energy source into our local electricity market, we must consider the infrastructure in place.

SaskPower manages a net generating capacity of 3,505 megawatts for Saskatchewan. Nearly 70% of our electricity comes from coal-fired technology; 25% is generated through hydro, and the remaining is from natural gas, with a small portion of wind.

In the short term, nuclear power will have a hard time fitting into this energy infrastructure. Current reactors are generally too big for our base load needs. By installing a standard 1000MW reactor, our electricity market would be overloaded; not to mention the effects it would have on the coal-fired industry.

Nuclear energy may not be an economical option for the province **today**; however it is a source that our province could utilize in the future. Designs continue to improve and reduce in both size and price, as well our own growth and demand for energy can only increase. With Alberta's need for a major alternative power source and the Saskpower coal-fired fleet up for renewal, at a significantly substantial cost, Saskatchewan should not be ruling the nuclear option out for the long term.

Finally there is the issue of used fuel storage. Northern Saskatchewan has been mentioned as a potential storage location because of its ideal geography and involvement in the front end of the fuel cycle.

No matter what we choose, advancement is certain to drive innovation and wealth creation for the province. Jobs will be created, spin-off industries started, R&D set in motion. Maybe even more young people will stick around. Saskatchewan could become a global leader not only in uranium mining, but also in value added supply, environmental standards and technological performance.

To secure this potential for advancement, we need to begin planning today. By aligning energy policy that reflects our short, mid and long term goals, with positive policy for growth, we can be certain that these opportunities not will be missed. The wealth creation of this province is directly linked to creating more competitive tax, investment and regulatory advantages for industry. We need to be pro-active about our future energy initiatives, as we begin to compete with the rest of Canada for capital investment and qualified workers.

This all sounds great, but before any of these goals can be achieved, we need to have the following key players onside in order to move the agenda forward.

Policymakers have the job of setting out public policy initiatives over the short to long term framework that correspond with evolving social, scientific, and economic priorities.

The Saskatchewan government has set out **short term** energy policy initiatives that it believes will make "Saskatchewan one of the most diversified and environmental energy economies on the continent; accomplished through developing energy policy that will include traditional and new energy sources." The province includes development of wind technology, research into "clean coal", hydrogen and biofuel initiatives in its latest energy plan.

With regards to our uranium resources, the government has acknowledged the need to expand and increase uranium production in response to worldwide demand, as well as consider opportunities for

processing and refining uranium in Saskatchewan. This is extremely positive because not only has uranium been considered, it has been put on the agenda; a necessary stepping stone when dealing with the long term potential of nuclear energy policy. Mines, mills, and generators do not get built overnight. There are years of regulatory, public, and licensing measures that all factor into the equation even before the soil is broken. Considering it now, means a great deal for the future.

Beyond the role of policymakers, there are the industry and corporate bodies who are becoming more transparent and are reaching out to the public through education initiatives and consultations.

Federal and provincial bodies are improving the regulatory environment for the industry by working with companies to streamline regulatory processes.

Our northern residents and aboriginal people will also be vital to further advancement. Many sectors are currently faced with serious labour shortages; however these communities have a very young population, with 40% under the age of 14 (Richards 136). This is potentially our energy workforce of the future.

Rural municipalities factor in due to their widespread voice throughout the province, representing over 30% of the province's population.

Educational institutions will play a vital role in providing streamlined education for industry specific training and recruitment.

Business, industry, and community associations also play a major role in the discussion and debate regarding the advancement of industry and policy. A fine example is the Chamber today, providing a platform for these issues to be discussed.

Last, but most importantly, development and policy cannot move forward without the public onside. The current barrier to forward thinking energy initiatives is not the lack of information or technology, but rather the lack of public awareness and support. This is why an energy education initiative that targets young and old, is a necessary endeavor and the final issue I wish to focus on today.

Having had the opportunity to work with the energy policy unit of the European Commission, I experienced the task of educating a public faced with short term energy concerns. Rather than see the same issues occur at home, I identified the need to begin an education process for Saskatchewan.

The Energy Strategy Saskatchewan is a research project designed to investigate and advance public policy and perception regarding the development of energy sources. It is an active research initiative that will investigate the knowledge base of society, promote interactive dialogue with all stakeholders and address the main barriers to energy development. The Energy Strategy is major project of the Prairie Policy Centre, an independent, public policy think tank focused on advancing ideas on wealth creation in the prairie province region. This institute provides a unique, third party platform positioned between industry, government, associations and the public. From this position we can effectively bridge the gap between these four parts of society by

disseminating a consistent stream of information that is fact based and impartial.

The main objectives of the Energy Strategy Saskatchewan are to:

- Identify the energy knowledge gaps
- Facilitate interactive dialogue with all levels of society
- Research and provide reliable information regarding all energy sources
- Communicate information through energy education campaigns
- Recommend policy options to promote future stability of energy infrastructure.

The main goal of the ESS is to have researched and targeted the public with the best information for them to make better energy choices. It is expected that by providing the most necessary facts to close the knowledge gaps, the public will become more confident in identifying policy that is best for their province and their future.

It is hard to imagine what will unfold within the next 50 years, however it is **inconceivable** to envision a new era without major changes to how we currently generate energy. As many countries seek the use of nuclear energy to fuel their future, Saskatchewan faces a prime opportunity to not only maintain its position as a leader in uranium production, but also to move its own energy policy forward with the rest of the world. Endowed with many energy options that will be needed in the future, Saskatchewan must adopt a balanced energy policy involving significant investment in diversified supply over the long term framework. The energy future begins **now** by involving **all** key players in the debate, especially the public, who essentially have the final say.