

**Building on the success story –
The road ahead for Manitoba Hydro**

Address by

Scott Thomson

President & CEO, Manitoba Hydro

To

The Winnipeg Chamber of Commerce

September 19, 2012

Good afternoon and thank you for the warm welcome and for the opportunity to share with you my thoughts on Manitoba Hydro seven months into my job. This is one of my first major public appearances as Manitoba Hydro's CEO.

In my first 100 days my plan was to immerse myself in our operations, meet with as many people as I could, see as much of our system as I could, and meet with key external stakeholders.

The Chamber approached me earlier to come and speak with you but I asked that they hold off until fall to give me an opportunity to get my arms around our provincial utility.

Today, I will provide my perspective on Manitoba Hydro and the opportunities and challenges on the horizon for us.

But - before diving into the deep end, let me answer the question I am repeatedly asked.

How is the transition from British Columbia to the leadership of Manitoba's largest crown corporation going and is it what you expected?

First, on a personal level, the warm welcome for me and my family has surpassed our expectations and is greatly appreciated.

In accepting the CEO position, I understood Manitoba Hydro to be a large, complex organization that plays a vital and central role in the lives of Manitoba families and businesses. Manitobans should be proud of what has been built here and be grateful we have a sustainable, clean resource for present and future generations.

In many ways, the learning curve has been steep – at times I felt like I was ‘drinking from a fire hose’ – but over the past few months, as I mentioned, I have focused on ‘learning’ the organization, by speaking with employees throughout the company and visiting operations across the province.

I have had to contend with a significant change in our financial circumstances with a drop in export revenues as well as having to deal with issues that come through our front door daily (more on the financial situation later). As a result I have had the opportunity to become quickly acquainted with stakeholders and their interests and I don't see that demand easing anytime soon.

The breadth and scale of our operations is obvious but what has impressed me is the skill and commitment of our employees and their dedication to keeping the lights on, and keeping us safe and warm. This is the foundation that will serve us well as we go forward.

I was gratified to learn that our corporation and employees share a strong commitment to working safely, a goal that is sacrosanct in the utility context.

As someone from outside the province, I had the opportunity to make a dispassionate assessment in contemplating the opportunity to lead Manitoba Hydro. From my background in the industry, I knew it was the province's major energy utility, with \$2 billion in annual revenue and more than 6000 employees .

For those of you less familiar with our organization, I want to give you a high level sketch of Manitoba Hydro, by the numbers.

I admired Hydro's reputation for customer service, reliability, and, of course, low rates.

I was impressed by the PowerSmart programs and our position, both as a pioneer and as a national leader in promoting energy conservation and efficiency. Adding in purchases of wind power, Manitoba has one of the cleanest electricity systems in the world.

The development of the Manitoba Hydro system has been impressive, and the future hydropower development plan to expand capacity by 40% to almost 7700 MW, was, to be frank, a key driver in my decision to come to Manitoba hydro.

There is no 'one-size-fits-all' template for our future developments -- they are not without challenges or controversy and without doubt require major commitment of time and resources from Manitoba Hydro and key stakeholder groups, including our Aboriginal communities and resource users.

That said, our efforts are beginning to bear fruit; this summer we commissioned the first two of three units and power is now flowing from the 200 MW Wuskwatim generating station. This project was developed through a unique partnership with the Nisichawayasihk Cree Nation. It is, to my knowledge, the first time a utility has developed a major hydropower generating station in partnership

with a First Nation. In my prior role I had developed and implemented a limited partnership ownership structure with two Vancouver Island First Nations for a liquid natural gas storage facility near Nanaimo, but that was a much smaller scale.

This speaks to Manitoba Hydro's commitment to operating sustainably. And we have another prime example right here in Winnipeg- our downtown head office building; having achieved many awards world-wide, including LEED platinum certification, it is one of the most energy efficient office towers in the world.

But what I want to focus on today is our future.

Where do we go from here?

To put it simply, three key factors are driving our future:

1. The need to plan and invest to meet current and future demands for electrical energy and gas supply for Manitobans
2. The need to accelerate investment in our existing infrastructure for reliability purposes, and
3. The need to address the negative financial impact of the recent drop in export revenues arising from the decline in prices for short term export sales

We are about to embark on an investment program that will see the largest nominal dollar capital investment in Manitoba Hydro's history – we plan to invest almost \$20 billion in new generation, transmission and upgrades and reinforcement of our existing distribution systems.

Electricity use in Manitoba is projected to grow by 1.6% or 80 mw of peak demand annually, and this is expected to continue well into the future. To place this in context – the capacity of the new 200 MW generating station at Wuskwatim will be used up in only 2 ½ years. To supply this growth, we require additional capacity by 2020 - which is only eight years away!

To meet this demand, we are proposing a development plan that continues a path of predominantly hydro generation with enhanced access to export markets, along with continued demand side management programs and other renewables, as and where they are economic.

We have announced the 695 MW Keeyask generating station with an in-service date of 2019/20. We are also planning the 1485 MW Conawapa generating station with an in-service date of 2025/26. We have entered into new export sale commitments with Minnesota Power and Wisconsin Public Service, which will help to underwrite these new capacity expansions, and a new transmission

line to the U.S. will also be required by around 2020. Plans are currently underway by Minnesota Power to construct new transmission capacity on the U.S. side of the border.

Our generation development program will be reviewed by independent panels put in place by the provincial government. One will conduct a “needs for and alternative to “ or NFAT review. –this is the process through which the government of Manitoba screens our plan to ensure it makes the most sense for Manitobans. In addition to this review and approval process, each generation and transmission project individually will be subject to the required regulatory and environmental approvals.

But let's not lose focus on the second driver-reliability.

Like most electrical utilities in Canada, generation, transmission and distribution systems that were installed decades ago are aging, and are significantly more costly to maintain and renew. The Canadian Electricity Association estimates that across Canada \$350 billion will need to be invested in electricity infrastructure over the next 20 years.

In Manitoba we have identified a need to spend between \$500 - \$600 million annually, just to maintain the reliability of our existing system.

Here are two examples illustrating this need.

Our system of distributing electricity to our customers largely depends on overhead lines on wood poles.

We have about 1 million wood poles in Manitoba, a critical component of our distribution plant. About 250,000 of those were put in place between 1945 and 1960 and, of those, about 117,000 are at the end of their useful life and need to be replaced, at a cost of over \$400 million, over the next 20 years.

The second example is substations in the City of Winnipeg. This picture is of our King Street substation in Winnipeg – the oldest such station in our system with almost 100 years in service. Its

equipment is antiquated and does not meet current standards for safety clearances for employees working within the station and has little capacity for new load additions. Refurbishing the station will cost about \$50 million over the next 7 years. We have identified the need to replace or refurbish 20 substations in Winnipeg alone; with a program estimated to cost \$630 million over the next 10 to 12 years.

While focusing on reliability, I would be remiss not to include Bipole III. Shortly we expect to appear before the Manitoba Clean Environment Commission for a review of our Environment Act Licence application for Bipole III. This third Bipole

line is critical to the reliability of our system. We plan to have this in-service in 2017.

The third driver, export spot market pricing, is a major factor negatively affecting our revenue outlook.

I need a few minutes here to explain why and how we export electricity. Selling electricity to off-system customers is a necessity for any hydroelectric utility, due to the nature of its operations, and relates to managing the capacity and demand balance.

First, even if we were to match perfectly the energy capability of our generating stations to the peak load in Manitoba, in most years we would have surplus electricity to sell. We design our system to provide sufficient electricity with water flows at the historical **minimum** level. Any water above this minimum will produce surplus electricity – we can flush this over our spillways, or we can find or develop a market for it. As we expand our hydropower system, the potential amount of short-term surplus electricity grows.

Second, we can't match electricity growth in Manitoba in nice, neat 80 mw portions, at least not economically. Our hydro sites have generally been

developed in much larger capacity blocks to take advantage of the different hydroelectric potential of each site— as a consequence there are interim surpluses in production until the Manitoba load catches up.

So since the 1970's we have been able to match firm electricity export sales for a specific period of time to take up this surplus energy and to help pay for these projects.

Over the long run, revenues from firm and short term export sales have helped to reduce, very significantly, the cost to Manitoba ratepayers. In reality, we have become somewhat reliant on exports as a source of revenues to subsidize the

rates of our customers here in Manitoba. It might surprise some of you to learn that over the past decade export customers have contributed more to our revenues than our own residential customers!

While we continue to obtain good prices from our existing and pending firm export contracts, revenue from short term market-based sales, which account for about 60 per cent of our total exports, has dropped significantly over the past two years because of the slow economy in the United States and because of competition from low-cost natural gas generation.

Looking longer-term, I believe that export markets will serve us well, providing an important financial contribution to our bottom line.

Here's why.

U.S. Federal and state regulators and influential politicians favour clean, renewable hydropower and the construction of new transmission.

Manitoba hydropower also provides customer utilities low carbon emitting sources of electricity for their portfolios, along with long term price certainty and stability, thus mitigating the volatility of natural gas pricing and hedging against potential carbon taxes or cap and trade measures. Our recent firm

export contracts signed with Minnesota and Wisconsin utilities at good prices reflect these factors – even in the face of competition from low cost natural gas.

There is no question that this “decade of investment” will be a challenge for Manitoba Hydro on many levels.

The answer to how we will reconcile lower revenues with the need for higher expenditures is that we must focus on cost containment and at the same time will need to ask Manitobans to pay more for their electricity. It is a zero sum game. This is no different than what our parents’ generation did for us

in the 1960's and why we currently enjoy the lowest electricity rates overall in North America.

The good news is that we expect those planned electricity rate increases to be **moderate and predictable** so that our residential and business customers can plan for and accommodate the higher costs. The Public Utilities Board recently approved a 2.5% rate increase on an interim basis starting this month, and we have asked for a 3.5% increase for April of next year. Our current forecasts call for annual 3.5% increases going forward. No one wants to pay higher prices, myself included. But I compare this to BC which will see an artificially restricted 17% increase over the next 3 years and which starts from

a higher base price, and we can still count ourselves fortunate.

It is true these increases are higher than the projected general inflation rates, and we understand this presents challenges for some of our customers but we expect to remain at or near the low end for rates for Canadian utilities, given the announced rate increases across the country. Here are some rate comparisons with other jurisdictions in Canada, for residential, commercial and industrial classes of customers.

I want to assure you that we have been taking other appropriate steps in recognition of our revenue challenges.

We are carefully examining all expenditures and reducing or deferring where possible: over the past 5 years increases to our operating and administration expenses have been less than the rate of inflation, notwithstanding that wage pressures and benefit costs which are the majority of our operating costs, have been escalating at greater than CPI.

Are we on the right path?

Planning for our future electrical supply is a complex and challenging task. Simply put, we are looking at multi-billion dollar investments, many with gestation periods exceeding a decade, yet which result in facilities with a service life of 100 years or more.

Planning for such long time frames entails much uncertainty and must carefully consider the various risks.

Will the pace of the electricity load in Manitoba be as predicted, higher, or lower? How will key global or North American economic measures – interest rates, inflation, exchange rates - play out? What about fossil fuel prices, environmental policies in Canada and the U.S., wages and salaries, construction and material costs? Long term interest rates are at historic lows; if we have to invest in the future, and we do, I can't think of a better time to lock in long term financing.

Predicting these factors from year to year is a challenge -trying to do so accurately a decade out is near impossible. The only thing we know for sure is that the future won't unfold exactly as we have planned.

But we can't wait for absolute certainty to make a decision. We can't accept a future where our customers hit the light switch and nothing happens.

In this dynamic environment, we are constantly reviewing and updating our analysis based on the best information available.

Key factors affecting energy prices are the expansion in natural gas extraction in North America and the accompanying drop in prices, coupled with a weakened U.S. economy. Natural gas for electricity generation is regularly assessed as an option to supply Manitoba demand and currently sets the price floor for electricity spot pricing. But at this time, our analysis continues to show that hydro development makes the most economic sense for Manitobans, and that is without considering environmental benefits. We plan to demonstrate this in the upcoming independent reviews.

Analysts in the energy industry are trying to predict where natural gas prices are going to go.

The conventional wisdom seems to be that the current low-price trend will continue for some time.

As it mentioned earlier, natural gas spot prices which are currently creating a floor for electricity prices are hovering at 20-25% of European and Asian gas prices. North America currently lacks the export capacity to reach these markets but with an arbitrage opportunity that large I am confident that liquid natural gas exports will grow and there will be a move toward a world price for natural gas.

Others point to the fact that the aging North American fleet of coal-fired generating stations in the U.S. is being replaced largely by natural gas fuelled

generation, and as the U.S. economy returns to growth, demand for natural gas to generate electricity and as a North American transportation fuel, will increase. These factors will affect demand and therefore price in the years to come.

What appears cheap today may not be so cheap tomorrow.

I am advised that in the late 1960s and early 1970s when decisions were being made in Manitoba about expensive northern hydro development, the lowest cost option at the time was coal fired electrical generation. With the benefit of hindsight, I think most of us would agree that the more far-sighted decision

to pursue northern hydro development was the correct one for Manitoba over the long term.

There are other parallels between the frantic period of hydropower development that began in the '60s and what we are proposing today, that may provide some perspective.

In 1968 at the start of the major expansion of hydroelectric development in the province, the assets of Manitoba Hydro were about \$600 million. Over the next dozen years, approximately \$2.4 billion was spent to develop the Churchill River Diversion, Lake Winnipeg Regulation, the Kettle generating station and Long Spruce generating

station. So **4 times** the then current depreciated assets were spent in expanding the provincial hydropower system.

In contrast, today Manitoba Hydro's assets stand at \$13.8 billion. The plan is to add some \$20 billion in new capital spending, adding about **1.4 times** the value of the existing system. Although our development program is large indeed, in relative terms it represents a much smaller step than that undertaken 45 years ago.

The investment that began in the 1960s led us to the system we have today – which I think we can all agree, is one of the premier electricity systems in

Canada, and possibly the world if judged by the normal standards of cost, reliability and customer satisfaction.

My task now is to lead the next expansion in the development of the electricity system in Manitoba. We have a different set of challenges than those of the '60s and '70s – including increased responsibility for those affected by our projects and greater scrutiny and accountability for both financial and environmental impacts –and we are up to these challenges.

In closing, I look forward to continuing to get out in the community and meet more Manitobans as

together we build our clean energy network of
tomorrow.

Thank you.