



**Reliable Power, at Low Cost, for Generations:
Working Together to Achieve Energy Self-Sufficiency for B.C.**

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Introduction

Today, and for the next few years, we have access to enough electricity to meet the demands of our growing province. So we would only have a big problem if we have an unlucky combination of major equipment failure, storms affecting transmission lines and very cold weather, all happening at the same time.

So what are the reasons why you need to be interested in what I have to say today about the future of electricity supply in British Columbia? You need to be interested because there is a long-term challenge that needs long-term planning to solve.

Let me begin by talking about my own childhood. I realize with hindsight that like many of you, I was born at a very fortunate time. We did not live during a war. We saw a gradual increase in our standard of living. I grew up believing that I would have more education than my parents and that I would be able to buy more things. Travel would get easier, cities got bigger, and I now realize that we were using up some of the earth's natural capital at a fast rate; but I grew up believing that progress was my birthright, if I chose to take advantage of it.

Of course I found reasons to criticize my parents at the time, but I think I always knew that they were trying to make sure that my life would be easier than theirs. They made sacrifices for me. I appreciated that, but also thought it was part of the natural order of things, something parents did.

Now I have children of my own. And you heard that I coach soccer, so I have spent a lot of time teaching and mentoring young people. And I ask myself, am I doing for them, what my parents did for me?

Sitting at these tables today are fathers and mothers, aunts and uncles, and quite a few grandparents. Whatever your family situation, I think everyone deep down wants to ensure that we build a great future for our young people. I want you to think about that today while I speak.

A wonderful thing about children is that they can look forward in their imagination into a world of different possibilities. And as they learn about their environment, they also learn how to adapt to it, and ultimately to shape it. I don't think any other species can do that. It means that their choices are almost endless.

We make choices too, and the choices we make today, can either leave those children with a wonderful world of opening possibilities – or it can leave them with a narrowing existence.

Think for a moment of what it will be like to come of age 20 years from now. Will the sky be a protective blanket, a source of warmth and sunshine, as it was for most of us? Or will it be more threatening? Will these young people have good air to breathe, as most of us did, or will increased warnings keep them indoors on summer days? Will their water be drinkable, as it was for most of us, or will they be boiling it?

Will they grow up to learn that today, we are consuming the resources of the earth at a faster rate than they can be regenerated? Will future generations thank us for the choices we make today?

Most fundamentally, will we find a way of ensuring that they have the opportunity to live full and abundant lives, as our parents did for us?

Our purpose – for generations

At BC Hydro, we have choices too. We chose a purpose – reliable power at low cost for generations. We could have left off the generations; we could have ignored the future.

But instead we chose to take responsibility, with all of you, for that future. We chose to shape our plans and dreams with that future in mind.

And so we have framed our purpose, our goals, and our long term electricity plan, in the same way: we will not only ensure that our children have enough electricity, but we will do it in a way that protects the natural capital that they surely deserve to inherit.

Speaking to the Board of Trade today, a business audience, it would be easy for me to pretend that we can behave in one way as business leaders, and at the same time forget our responsibilities as citizens, as parents and grandparents, as trusted elders. But we cannot. The greatest mistakes we have made as a species were made by powerful leaders who disconnected themselves from other people, and made decisions about them as if they did not care about them.

So now we have the responsibility to pass on a rich heritage that will match what we inherited. How can we do that?

Our plan sees British Columbia become self-sufficient in electricity over the next 20 years and beyond. And we will do that through three strong pillars that will support each other—conservation, or Power Smart; new generation from independent power producers; and making the most of our heritage assets and positions on the Columbia and Peace Rivers.

Energy Self-sufficiency

Let me start by explaining why we should generate enough electricity in British Columbia to meet our domestic demand. Today we are not – we import about 12% of our needs at low water conditions. This was done for economic reasons, and it has been a good strategy. We have many ways of filling the gap in the short term

But going forward, we believe that this strategy will become increasingly risky, and that it needs to change. Why?

First is our geography; we are at the end of the line here, we rely on long transmission lines carrying electricity over rough terrain. The risks of bottlenecks in those lines, together with bad weather events, are likely to increase.

Second, there is price risk. No one can be certain, but it seems that 20 years from now, it is more likely that we will see energy being more expensive and scarcer, than the reverse.

And third and finally, we cannot afford to be wrong and not have enough. The consequences are too severe - for our citizens and our industry and for generations.

I am pleased that the B.C. Progress Board, this morning, released a report that recommended that B.C. be self-sufficient in electricity.

BC Hydro adopted self-sufficiency as a policy goal a few months ago, and the electricity plan that we are presenting to the regulator reflects that.

We are pleased that the B.C. Progress Board supports our policy, and welcome their support.

Power Smart

So now let me explain each of the three pillars that support our plan. The first is to develop Power Smart to levels that take us far beyond that we have done in the very successful past of this program.

The Power Smart program has been going for a few years and it has been a great success.

Many people have gotten rid of old refrigerators, installed compact fluorescent light bulbs, and now use light-emitting diodes (LED) light strings at the holidays.

Big industrial customers like Canfor have made changes to rely on their own operations for meeting part of their needs; commercial customers like the Hudson's Bay Company have reduced energy costs and energy use over a three-year period.

So you have all done your part to make Power Smart successful.

And when we recently polled British Columbians, they said that 93% strongly supported Power Smart.

So if it is so successful and so popular, why do we need to do more? The reason is simply that despite these efforts, we remain huge users of electricity, with a pattern of wasteful consumption that ranks us among the worst of the developed countries and regions.

Why? I suppose that many of us see conservation as not very exciting. We want to live abundant lives. Well, Power Smart is the way to achieve abundance. The monies we spend on Power Smart programs create jobs all over the Province; when you add up the monies, and the jobs, you can see Power Smart as a great unacknowledged mega-project in the province of British Columbia.

So looking forward - imagine a future British Columbia where commercial buildings are redesigned with 30% fewer seats than the number of employees because on any given day at least 35% of staff are not in the office. Combining portable filing cabinets with unassigned seating allows companies to dramatically reduce construction costs, taxes, and energy. Buildings are designed and built by architects and developers who have world leading reputations for minimizing footprint and achieving life cycle cost savings.

All homes are built or renovated to include an intelligent central nervous system that provides instantaneous access to information about all energy and water consumption. Every home has an energy rating and the rating is viewed as an important selling feature. The customer or even BC Hydro has the ability to remotely turn devices on or off and even standby plug loads can be controlled to reduce the wasteful draw of idle electronic equipment.

You have a panel in your home that tells you how much you consume, how the price is varying with the time of day, whether the grid is comfortable or unusually taxed. If you consume more than normal you pay at the marginal cost; if you conserve then you save at the margin. As a business customer you have a large menu of service levels to choose from. As a customer you and BC Hydro are equal partners; we share information, we give you price signals, we enable partnerships, and you make better decisions.

BC Hydro's Role

So how do we get to this future? Well, BC Hydro has a leading role to play in that. In proposing the right rate structures and the right incentives and partnerships.

We also have to explain why this is important, why it not only saves the environment and reduces long-term costs but also creates a long lasting industry that be a great exporter.

We need to broadcast that message to all parts of our society, and enlist people to help us, especially the young people who have the most to gain – and to lose – from our success.

We need to make the link not only in your minds, but in your hearts, between the choices you make to embrace modern appliances and tools and technology, and the better world that you are creating for our children.

Can we do all of this? It will not be easy. When I talk to people about Power Smart I find a frequent response is to say “I agree with you; but I do not think we can make those changes.”

We can make these changes if we choose to. We will choose to because we will think about the future of our children and of future generations. We will choose to because one day we will wake up and realize that inefficient consumption of a scarce resource like electricity does not make any sense – economically, or environmentally, or socially. It is not very complicated!

Independent Power Producers (IPPs)

So beyond what we can achieve through Power Smart, we will buy most of our needs from Independent Power Producers, as directed by the Energy Plan.

This has already proven to be a great success. Since 2000, we have brought on line 14 projects into our system, which are providing enough electricity to meet the needs of 100,000 homes. There are another 27 projects in the development pipeline that could bring on 3900 GWh of energy and we have just finalized our next “call” for 2400 GWh – our largest yet!

Let me spend a few moments explaining how we work with IPPs, now and in the future.

The first thing we are responsible for is to buy through open, competitive, transparent processes. Our processes are subject to greater regulatory scrutiny than those of any other North American jurisdiction that I am aware of. We publish more details about our contracts and our processes than any other utility that I’m aware of.

And of course there are some people who do not like that, because they would find it more convenient to deal on some other basis.

In running these processes, our general hope is that we will get a reasonable mixture of projects, so we do not find ourselves relying too heavily on one type of project. The North American industry used market approaches in the past few years, and the result was a glut of natural gas projects that helped to contribute to today’s high prices.

So far our approach is working, and we will keep looking at the portfolio we are ending up with, to see that we have that balance.

We must also make sure we account for the full range of costs and risks on behalf of our customers when we do those calls, so we do not inadvertently subsidize one set of bidders. Let’s look at costs related to greenhouse gases as an example.

There is a very wide range of estimates and opinions on how much mitigation of GHGs is going to cost in the future. Remember that our contracts will last for 25 to 40 years, and you can see the challenge. That creates a large and uncertain risk for our customers.

The way we are managing that risk today for our customers is to give IPPs a choice. They can choose to take on that risk, and factor the cost into their bid prices. Or they can ask us to, in which case we will assign an additional cost to those projects that we feel captures that risk.

Let me turn briefly to the question of which fuel types might be seen in future competitive processes.

A key point is that it is not up to BC Hydro to choose to accept or reject a particular fuel source. The Province has excluded nuclear, but everything else is included. That is part of the Energy Plan. We have a 50% clean target, but beyond that our mandate allows for everything.

Each fuel source – wind, coal, gas, hydro, etc. – has its own set of supporters and opponents and challenges; each has to meet environmental standards that are relevant to it, and that are set by governments.

Our job is to keep the public informed as much as we can about what is available; to engage fully with stakeholders and First Nations; to try to achieve a portfolio that is balanced within the energy plan constraints; and, as I mentioned earlier, to ensure that in contracting, we manage the risks well.

So if you love wind but don't like coal, or if you love coal but don't like wind, what do you do?

My advice is to get involved in the regulatory and public processes that all of these projects must go through. IPPs must get a range of approvals before they can build their projects. While we are fully supportive of the need for IPPs, it is up to the individual proponents to address environmental concerns and build the public support needed for any specific projects.

How does this square with what I said at the beginning? How can BC Hydro say that we have high environmental standards, and then say that we off-load this key decision to others?

I'll answer that in three ways. First, we emphasize Power Smart first; the best environmental impact is no impact at all.

Second, we have so far exceeded the voluntary guideline of 50% from BC Clean sources.

Third, like most utilities we ask that all bidders meet, and if possible exceed, minimal environmental standards; we point out best practices elsewhere and we try to provide leadership in this area.

So our role going forward, I believe, will increasingly be to ensure that we lead the debate; that we meet the highest standards of trust; that we communicate in a balanced way; and that we allow British Columbians to take part in this debate in a way that helps us all to achieve our goals.

Heritage Hydro Resources – The Peace and Columbia

So we will meet our needs first by a greater Power Smart program; and then by additional generation from independent power producers; and the final element in our plan is to make the best use of the heritage hydro systems on the Peace and Columbia rivers.

We are proud of our hydroelectric assets, and we know that most British Columbians feel the same. Our future partly depends on preserving these assets; and that means investing in them and ensuring that, as populations increase near our facilities, we strike the right balance between societal needs and the generation that fuels our Province.

We can also upgrade existing facilities like those at Revelstoke and Mica on the Columbia River. This won't add a lot of energy – because there is no more water behind the dams. But it would add cost-effective capacity for that coldest winter day. Doing it would also help firm up capacity to support generation from small hydro, wind and other renewable energy sources.

Resources of the Future -- Site C and Beyond

That still leaves us with the need for additional ways to meet future needs. There have been no decisions yet on what we will do here – and there are many different options – but the one most people like to talk about is called Site C. Let me spend a few minutes on that.

For those of you that might be new to the Province, Site C is a large potential hydroelectric dam that would be near Fort St John on the Peace River. It would, if built, supply about 10% of our existing needs.

The decision about whether to build Site C will be made by the B.C. Government. And I think that is exactly what you would expect. There are other considerations with Site C, because of its size, that go beyond our mandate – such as economic development, regional development, intraprovincial relationships with Alberta, significant First Nations issues, and so on.

BC Hydro's role in this is to present it to the B.C. Government as an opportunity; do a professional job of looking at engineering, environmental impacts, stakeholder and First Nations consultations issues; and then, if the decision is made to go ahead, we will do what we are asked to do.

When I say that the B.C. Government must make this decision, I must of course add that there would be a great deal of public consultation and engagement in all parts of the process. One of the challenges that we all face here is that when you start consulting with people, they want to know the answers to their questions. But until more of the work is done, there are many questions unanswered.

A key role for us, though, is to keep our eyes focused on the future. Site C is not a project that would come on stream before 2015. I have already said that we feel confident about the next 10 years, but that there are choices to be made beyond that.

Those choices are likely to involve the need for something large. While the smaller green projects that we have been buying from will help a great deal, there is going to be a clear need for a project that supplies firm capacity – that can be turned on when you need it (e.g., at 6 p.m. on a cold night in British Columbia).

What will that project be? Fuel sources like wind and run of the river hydro don't supply that type of firm power that will be there when you need it. The wind is not blowing and the river is not running, exactly when you want it to.

With today's technology, and excluding nuclear power, which is specifically not part of the Energy Plan, the main choices available to us today appear to be large hydro, coal, and natural gas.

So I believe the debate around Site C might be: which of the large firm sources of power available to us, can best meet our needs? All of them have societal and environmental impacts; which one makes the most sense?

And because Site C is a project which would take 12 years to come on stream, and would then last for 80 or a hundred years or more, it is a different kind of debate and decision than some of the ones we all make.

Conclusion

So how to sum up? It is up to us to make the right choices now, so that our young people can make choices for themselves when they grow up.

That means being prepared to do what is needed to be self-sufficient. It means committing ourselves to building a conservation culture that will support a strong economy that is truly sustainable.

We have to do this together. BC Hydro is just a piece of the puzzle, and we can provide leadership but so much depends on the creativity and foresight of British Columbians as citizens and as customers.

Let me go back to the beginning. To the young people that you can picture now.

What do we want to teach them? Can we teach them, through our own example, that we take what we need and give the rest back? Can we teach them, through our own example, that we can look after our environment in a way that achieves all of the economic goals we seek, but does not create waste and costs that they will pay for later on? And finally – can we teach them that when we are faced with a hard choice, we are capable of rising to the occasion and thinking of others?

Today, I want to make a personal challenge to all of you here:

- Will you join me, and the people of BC Hydro, in creating a conservation culture in this province that will offset a third of our new energy needs over the next twenty years?
- Will you work with us to come to some kind of agreement that we have to move ahead to ensure there are the new resources in B.C. that ensure energy self-sufficiency?
- And will each of you commit to get involved so you can have input into decisions that will affect the rates, environment and communities for you, your children and your grandchildren?

If we will all make these commitments, we can achieve a conservation culture as I've tried to picture it today; we will have assured a future of the lowest rates in North America, the most reliable power, and the least environmental impact. That really is a picture of abundance that we all want to leave for future generations.

For me I'm not sure that I can equal what my parents did for me. I'm not sure my children will be better educated, with a better quality of life, with a longer life expectancy, with better health than I've had. But I am convinced that we will build a great sustainable future for them in terms of electricity for British Columbia. That will give THEM the platform to build a great future for themselves. I hope you'll join me in that effort.

Thank you.