

Notes for a presentation by

Patrick D. Daniel
President & Chief Executive Officer
Enbridge Inc.

Energy Issues and Enbridge

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INTRODUCTORY REMARKS

- Thank you Brad for that kind introduction.
- And thank you to Lawson Lundell and Accenture.
- I am pleased to be here today in Vancouver, and plan to speak to a number of topics, all related to energy.
- In the précis that was sent to the Board of Trade back in September, it was suggested that I would talk about Enbridge – our vision and values; our broader continental strategy; and the status of our Gateway project, a proposed \$2.5 billion pipeline across northern B.C.
- But I'm not sure all of you are all that interested in pipelines per se. Or in Enbridge, a company you probably know very little about. So I will speak to those subjects, but I want to begin at the beginning, and talk about energy in broader terms – the big picture.
- Energy is back on the front pages again, and is a subject of considerable debate, probably because of the perceptions and misperceptions it generates, and current high prices.

- However, high prices are not the problem, they are just the symptom of what has been happening in the energy industry over the years.
- So I would like to spend a few minutes describing the big picture for energy, as I see it. Along the way I'll itemize a few problems that I see and then propose a few possible solutions. Then I will conclude with a few comments on Enbridge and some projects that should be of interest here on the West Coast.

THE ENERGY SCENE

- Let me begin by describing the current energy scene.
- First, I would like to suggest to you that the energy industry is at least twice as big as you probably think it is – because I consider the industry to include not only the suppliers of energy, but also the consumers. So you, too, are all part of this.
- Second, I think too many people lose sight of the fact that energy use has arguably been the single biggest contributor to human well being. It is no coincidence that the greater the availability and use of energy, the longer we live and the better our lives. We need energy to heat our homes, refrigerate and

cook our food, transport our food, our manufactured goods and ourselves and much more.

- In other words, our standard and quality of living is tightly tied to energy.
- A third obvious observation is that a variety of energy sources are used around the world. Currently, oil is still the major source, providing about 40% of the world's energy. Natural gas accounts for 23 %, as does coal. Nuclear supplies 6%, hydro 7% and “other” 1%. (*source: U.S. Energy Information Administration*) But not all forms of energy are available to everyone.
- Much of the world's population has no access to secure, reliable energy sources. In fact, an estimated 40% of the world still relies on biomass – wood and crop residues – for cooking and heating.
- My fourth and last observation is that there is enough science around the impact of greenhouse gas emissions on the environment that some people – myself included – think we should be working to lower our dependence on hydrocarbons as sources of energy.

- We should do that because it's the smart thing to do, and because oil and gas are finite resources. In Canada, conventional production of both appears to have peaked and begun to decline, so in a sense the decision to lower our dependence on hydrocarbons is already being made for us.
- So let me sum up my four observations:
 - we're in this together;
 - energy is our lifeline;
 - hydrocarbons still provide 86% of energy; and
 - we should develop an alternative.

ENERGY PROBLEMS

- With those four “observations” as background, what is the problem??
- I mentioned earlier that energy prices are high once again: oil was over \$50 a barrel for a while, and is still over \$40 a barrel; natural gas is over \$6 per million BTUs, and is expected to remain there for the near term.
- The second problem is that conventional sources of energy – and I'm referring specifically to oil and natural gas – are

beginning to dry up. They're also getting more and more expensive, as we rely more and more on non-conventional sources such as the oil sands, tight gas, coalbed methane, etc.

- This leads me to the next problem we as consumers face – a growing gap between energy supply and demand.
- Right now, the world oil market is operating near the limits of its dependable capacity. There's virtually no slack in the system.
- We face a new kind of energy crisis. In the past, supply shortages were generally the result of temporary supply restrictions due to war or political strife.
- The situation we face today is due to unprecedented demand – demand that continues to grow.
- And it's not just a North American problem. The global economic outlook has never looked so strong, which means energy demand is also rapidly growing worldwide – particularly in China and India.
- In 2004, global crude oil demand had its largest increase in 24 years, fueled by strong demand in the U.S. and China. Natural gas demand rebounded to year 2000 levels due to increased

demand for use in power generation. Global demand for both oil and gas is forecast to continue to increase in 2005.

- Compounding the problem is the growing inability of energy developers to get the energy supplies we do have to the markets that need them.
- A major hurdle is the NIMBY factor – the “not in my back yard” approach to energy development. Far too often, a single community or special interest group can derail an energy project that is much needed elsewhere. NIMBYism is preventing energy suppliers from bringing necessary new supplies on stream to solve those issues of high prices and price volatility.
- Regional and provincial politics are also delaying projects and adding costs to projects that could help solve the problems of supply. Everyone wants his or her pound of flesh – but there is no consideration of the broader societal good.
- For example, much-needed energy infrastructure, such as new pipeline capacity into the U.S. Northeast, has been dragged out and stopped in its tracks by regional and local opposition. And Liquefied Natural Gas (LNG) projects despite regional needs

and widespread provincial and state support, may well flounder due to local opposition.

- In my view, this almost automatic opposition to energy projects isn't an affront to energy companies – it's a big world and they can often find somewhere else to invest.
- It is, though – or it should be – an affront to you and me as consumers, who have to live with the consequences.
- What I have described here is a huge disconnect between the consumers of energy and producers. That disconnect is too often characterized by antagonism and emotional rhetoric. We should be pulling together on this!
- And one last problem for you. Even if we were all pulling in the same direction, would we know if it was the right one? We don't have a vision or strategy as to where we want energy production and consumption to go in this country.

SOME SOLUTIONS

- So I've tried to describe the current state of the energy industry and identified lots of problems. Are there any solutions?
- The answer is yes, but unfortunately they won't come easy.

- There are plentiful sources of energy in the world, at reasonable prices. Most notable are nuclear and coal.
- Nuclear power is a major factor in Europe, where it supplies three-quarters of the energy for France. In fact, there are some 440 commercial nuclear reactors now operating in 31 countries. And although it has been developed sparingly here in Canada, we do have one of the three proven commercial technologies in the world for nuclear reactors.
- Of all the fossil fuels, coal is by far the most plentiful. There are large reserves in the U.S. – where coal already supplies much of that country’s energy needs – in Eastern Europe, in Asia and in China. And there is also clean coal technology being developed to address environmental concerns.
- However, here in North America NIMBY is and will continue to be a major challenge for nuclear development and for coal, no matter how much they may be needed. So those solutions will not work in the short term.
- Renewable forms of energy are becoming more cost effective sources of supply, and are an important part of the energy mix of the future. Wind, in particular, should have a role to play, and forecasts suggest it could provide in the order of 5 to 10%

of the world's electricity by 2020. Solar and power from tides and other sources are likely to be only bit players because of their cost.

- Hydrogen has been identified as a reasonable alternative to gasoline and diesel for transportation. It may be 20 years before it is in common use, and 50 years before it is the predominant transportation fuel. But we do need nuclear and coal to generate plentiful hydrogen.
- All of these energy forms will have major roles to play in our global energy future. We do have enough crude oil and natural gas available to act as transition fuels for the next 50 years. So there are solutions to our major energy “problem”.
- But, in my view, the most important solution to all of the problems relates to something we can all participate in. We need to decide what we are going to do in Canada to ensure a secure long-term energy future.
- We need a national energy strategy. It must consider our current state, our transition, but most importantly our desired state 50 years from now. It must consider the environment, individual rights and overall societal needs. It must make realistic energy choices and some very, very tough decisions.

ENBRIDGE

- Let me turn now to the Enbridge story – our view of North American supply and demand, our approach to energy infrastructure development in general, and two of our projects that should be of some interest to B.C.
- First, the Enbridge commercial.
- Enbridge is a Calgary-based Canadian company that is a North American leader in energy delivery. We have been the major transporter of North American crude oil for 55 years and currently deliver over 2 million barrels per day to our customers. We operate the world's longest most complex crude oil pipeline system.
- We own Canada's largest natural gas utility, which began serving Toronto customers 155 years ago, and which currently delivers gas to 1.7 million customers in Ontario, Quebec, New Brunswick and northern New York.
- We have major interests in the Alliance and Vector natural gas transmission systems which deliver gas from northeastern B.C. and Alberta to the Chicago hub and on into Ontario.

- We also have significant U.S. investments. We are involved in gas gathering and processing in the U.S. Gulf Coast and Mid-Continent regions. We recently announced the acquisition of offshore gas gathering and transmission pipelines that deliver half of all the Gulf of Mexico gas production to the U.S. mainland.
- We own and operate major pipeline facilities in Spain and Colombia.
- And we have investments in wind power and fuel cell projects, because we plan to be in the energy delivery business for many years to come.
- In terms of future projects, we have a keen interest in northern gas pipelines – particularly the Alaska gas project, which should be of interest in this province. Any Alaskan pipeline that is built will likely cross through the northeastern part of B.C. and provide interconnects with existing B.C. pipeline systems.
- We are also pursuing North American LNG development, and gas pipelines from the U.S. Rocky Mountain region.
- As Canada's major transporter of crude oil, we are also very much involved in what we see as the largest single opportunity

Canada has to benefit from growing continental demand for energy – the oil sands of northern Alberta.

- With over \$50 billion in investment already targeted for project development, oil sands volumes are expected to increase significantly in the next few years. Volumes of heavy and synthetic oil from the region already exceed the conventional oil volumes from Western Canada, and will continue to grow.

THE GATEWAY PROJECT

- And that's where our Gateway project comes in.
- We have been working on Gateway for about three years now and are quite enthusiastic about its prospects. We are proposing a \$2.5 billion, 1200-kilometre pipeline from Edmonton to a deep-water B.C. port – either Prince Rupert or Kitimat.
- The pipeline would be capable of transporting up to 400,000 barrels per day, for markets in California and Asia. Depending on the timing of shipper commitments, the pipeline could be in service by about 2009.
- Interest in China, Japan and South Korea is very high, particularly in China where the booming economy requires

energy to fuel its continuing growth. Potential Asian-Pacific customers are looking seriously at possible investment in the pipeline, in oil sands production, in tankers and in refineries.

- The Chinese interest has been our most pleasant surprise on this project.
- They have become the 2nd largest consumer of crude oil in the world behind the U.S.
- They want more diverse sources of supply.
- They want secure supply.
- Enbridge continues to work closely with the producers and potential customers. We have also worked hard to establish good working relations with the government of this province, with communities along the potential right-of-way, and with the various First Nations in northern B.C.
- We have initiated environmental and socio-economic impact and benefits studies, along with the engineering and design work that is going on. We do take our role as a good corporate citizen seriously.

- We see this project as a win for Canadian producers – it broadens their markets.
- A win for Chinese consumers – it gives them access to energy they badly need.
- A win for the Provinces of British Columbia, Alberta and their residents – construction jobs, property taxes, regional employment.
- So we are very optimistic on Gateway, and in conclusion let me say that I am also optimistic on the broader energy front.

IN CONCLUSION

- Although, as I have noted today, I do think far too many projects are needlessly at risk because of all the problems I described earlier.
- The biggest problem is that disconnect, as too many energy consumers have stopped seeing the linkage between high prices, scarce supplies, and opposition to new projects.
- Thank you very much for your attendance today.

- I very much appreciate this opportunity to speak to you and look forward to Enbridge becoming a much bigger player in your community here in B.C.