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Introduction

Good afternoon everyone.

It's been a couple of years since I've been to the Oilmen's and I'm very pleased to be back – the only misgiving I have is that I'm not playing golf this time.

It's amazing how our industry has changed – a few years ago two pipeliners probably wouldn't have been invited on this panel.

But today, energy transportation is in the public eye because pipelines enable development – and we're a convenient target for those opposed to the oilsands.

This opposition has focused our industry, and North America for that matter, on the panel topic - “sustainable development” . . . an absolutely critical issue for Canada as an energy producer and exporter.

Market Access

And it's critical for pipeline companies who are charged with getting infrastructure in place.

This map puts the level of activity and the importance of sustainable development into context.

The picture highlights our own focus on connecting growing North American supply to premium continental refinery markets, even before we access much needed export markets.

We have several market access initiatives underway, and there are others besides ours.

These projects have been sequenced and sized to open up 1.7 mmbpd of new markets for production from the northern tier of the continent.

That's one part of what we are doing. If you look at our total capital program over the next several years it totals almost \$40 billion.

When you're putting that kind of capital to work, on-time, on-budget execution is essential.

So the issue of sustainable development and how we manage through this opposition has real day-to-day implications. Its front and center in what we do.

The Sustainable Development Equation

If you think about "sustainable development" it underscores there are 2 parts to the equation that need to be delivered on – and understood.

Part 1, the economic benefits of energy.

And **Part 2**, responsible extraction and transportation of resources – I think of Part 2 as safety and environmental protection.

On the economic benefits side of the equation, it's shocking to me we're still disputing how many jobs we'll create with pipeline projects, or whether they're full- or part-time jobs.

That line of debate misses the point.

Plug energy investment variables into any economic model and its obvious there's a massive economic benefit through multiplier effects alone . . . not to mention that energy is our economic growth engine and energy investment supports the social infrastructure and quality of life we enjoy in North America.

So I'm not going to talk about Part 1 today - frankly, the economic benefits are obvious to everyone here.

And, until quite recently, the general public hadn't invested time to understand those benefits, but that's not so today.

A positive result from media coverage is that now more Canadians understand the economics of resource development, building new infrastructure and market diversification. (They get it.)

From my recent travels in BC communities and from our research, it's clear that people generally understand the benefits and the imperative to diversify markets.

We need to keep communicating the benefits, but we need to focus more effort on Part 2 of the equation – safety and environmental protection.

Vintage Photo

This map and inset photo from our annual report back in 1950, showing the construction of our first oil pipeline across Canada to Superior, Wisconsin (small diameter line, 100 kbpd).

Let's be honest, many people see pipelines as a low-tech, seat-of-the-pants, antiquated industry.

You draw a line on a map, tell people you're going to build a pipeline, dig a trench, drop in some pipe, and start pumping oil from A to B.

That's the notion that is conveyed here.

The reality today is far different.

Just as the upstream sector has moved up the sustainable development curve, so has the pipeline industry.

Let me provide some transparency on 3 things about the pipeline business today:

- First, leading edge design, construction and public engagement;
- Two, advancements in integrity management and safety; and
- Three, enhancements in our own environmental performance and economic partnerships

Design and Construction Methods

Beginning with pipeline design: this sounds pretty mundane, what could possibly be new in this area? A lot!

You may be familiar with NASA's use of LIDAR models to map the surface of Mars – we use the same technology to identify the safest pipeline route.

Today, we embed environmental experts alongside our engineers – ensuring designs deliver the highest in safety, and environmental protection.

Given the magnitude of our capital investment program over the last several years, we've built an industry cluster that gives us superior quality.

We work our supply chain to drive R&D on new coatings to protect against underground shear forces and abrasive soil conditions;

And, advancements in mechanized welding results in lower weld repair rates and improved quality.

And, we engage communities much earlier, to listen carefully, understand concerns and incorporate that input into our design.

In the case of Northern Gateway for example, we established Community Advisory Boards that resulted in numerous changes to the project.

- **We altered the route in several locations to reflect community expertise about local conditions.**
- And, we baked in additional safety measures like valve spacing, thicker wall pipe, more horizontal drill crossings.

Advancements in Operations and Incident Prevention

Even though design and construction methods have substantially reduced risks, there's ever-increasing emphasis on ongoing integrity management and incident prevention.

- We've doubled spending on integrity and undertaken the most extensive in-line inspection program in the history of our industry; more than 400 ILIs and 6,000 verification digs in just 3 years. 6,000 Digs!
- We're using the most advanced inspection tools that leverage medical imaging technology – very similar to MRI's – so that we can see every millimeter of pipe in the ground from many angles.
- And, we've developed new algorithms for earlier and more reliable incident detection.

Being a leader in pipelines also means you go beyond using existing technology by investing in the development of unproven concepts (true R&D).

We're investing in promising start-ups, in non-traditional areas.

For example:

- We have an equity stake in Syscor, which is developing a wireless sensing device for floating tank roofs;
- We've invested in On-Ramp Wireless – they've developed network capability to gather and process data from remote sensors which can connect our facilities system-wide.
- And, we've just invested in a new internal liner that can be used to remediate lines without excavation
- And that could include a fiber optic leak detection system (field demo sites are now being identified).

Other things we're looking at:

- Using face recognition technology (similar to your digital camera) to monitor facilities;
- Ultra-sensitive acoustic sensors to identify the very smallest of anomalies;
- New pigments added to paints and plastics that detect the presence of H₂S;
- And, microbes that lower the surface energy of liquids, allowing for easier dispersion of product for spill remediation, or operationally, for drag reduction.

Neutral Footprint

And then there's the important area of local investment and our own environmental performance.

We've created economic partnerships with communities along our system – including investing with First Nations.

We've signed agreements with aboriginal businesses and employment worth almost \$90 million last year – and that figure will rise this year.

We've provided grants to 61 on-reserve schools and urban aboriginal partnerships as part of our School Plus program – benefiting over 10,000 students.

We're also putting our money where our mouth is on corporate sustainability, through our Neutral Footprint program (Scorecard):

- planting a tree for every tree we remove;
- conserving an acre for every acre we permanently impact; and
- generating a kilowatt hour of renewable energy for every kwh of additional power we consume.

Our renewable energy business – with over 1,200 MW of capacity – is part of that, while at the same time generating solid investment returns.

Cost and Timing – Vintage Photo

A final thought before I wrap up, and I'll go back to my original line 1 construction back in the summer of 1950.

This 1,200 mile pipeline was constructed in **150 days** at a cost of \$90 million.

The advancement I've discussed and the timelines involved in our current environment make these figures quite a bit different today. (Adjusting for inflation.)

This reality is challenging in that we already operate in a high-cost basin and we need to hit market windows, so schedules are important.

But we are where we are, and if we don't deal with the environment we're in and get this right, there will be **an even higher cost**.

You've seen the effects on producer cash flows from constrained pipeline capacity and the knock-on effects on fiscal budgets and social programs.

And there are longer term issues around the overhang on upstream valuations from the uncertainty around market access and the related risk around a slowdown in oilsands development.

Summary

So to conclude, back to the sustainable development equation . . .

We're making a strong case around economic benefits, and I believe that understanding will help inform public policy-making.

We will continue to drive home that message.

But, we need the same concerted effort to tackle the other half of the equation – to demonstrate that we can develop and operate energy sustainably.

My comments today are a call for cooperation to all of us in this room

In making the case that your transportation service providers are at the **forefront** of sustainable development . . . and that the infrastructure we build and operate is world-class.

It can't just be pipeline companies making this case.

We need to build coalitions that comprise producers, refiners, suppliers, service providers, unions and people within the communities we operate in.

We've seen that work very well so far on our Line 9 reversal project in Quebec.

The points that need to be made are simple and true, and we need to make these strongly as an industry:

- Canada has world class energy infrastructure capability;
- We invest significant resources in leading edge technology;
- We listen to community input; and
- We're focused on environmental performance and economic partnerships with those communities.

We've proven that this type of cooperation works well in everything we do as companies or as individuals.

The best evidence of that was what was accomplished in the face of the recent floods in this Province.

Let's bring that same power to bear here on Part 2 of this equation.

Thank you.