



**ENERGY TOMORROW:
Canada in the World's Energy Future**

Presented by Jeff Gaulin
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Good evening everyone. Thank you for that kind introduction.

Thanks to Queen's Global Energy Conference for convening today's event to explore the future of Canadian energy.

Or as I prefer to say: "How Ontario algae and Alberta oil together will fuel the world's future."

But more on that in a few minutes.

Before we discuss our future I would like to acknowledge our past.

Tonight we are gathering on the traditional territory of Anishinaabe and Haudenosaunee peoples.

Our discussion on the future of Canadian energy is of national relevance.

Even when those natural resources are found in every province, the benefits are.

It's important to every provincial economy. To the nearly 1,600 Ontario small businesses that do \$4-billion in direct business with Alberta's oil sands every year.

It's relevant to every Canadian household. To every home that heats with gas, or moves by car or truck.

To every person who wears contacts or glasses, synthetic clothes, who texts on a smartphone.

To every family that uses a road, a school or a hospital funded in some part by the \$15 billion in public prosperity generated every year by our oil and natural gas resources.

But that is today.

What is possible for our future?

Innovation and **infrastructure** are key for Canada's oil and natural gas to become part of the world's energies of tomorrow.

- By **innovating** the way we produce, transport and use Canadian oil and natural gas we can ensure they playing a leading role in our **energy mix** at home and abroad for the long-term ... and
- By **building** new energy infrastructure – such as pipelines to the coast to reach international customers – can ensure our oil and natural gas resources continue to play a leading role in our **economic mix** by increasing Canada's role in global energy trade.

Energy trade that will provide more security and prosperity to a growing middle class, especially in India and China where citizens want more Canadian oil and gas.

Energy trade that will provide more prosperity for future generations of all Canadians, so our children can continue to enjoy one of the best qualities of life in the world.

Because the value of our oil and natural gas resources is not just in the substances underground, but in the resourcefulness of the people who help bring them to the surface.

People on this map. People in this room.

In Canada, we have everything to get the world's energy future right.

Canada can balance the environmental needs of our planet with the energy needs of a growing world.

We can be the world's energy of tomorrow.

To set the stage, let's talk for a moment about the world.

We live in a growing, urbanizing world that's going to need more energy – in every form.

More wind, more solar – absolutely.

But more oil and natural gas too.

Even in a world that limits the growth of carbon under the Paris Accord.

Even in a world where every new car is an electric car.

World population will grow to 9 billion people by 2040.

That is like adding a second China to the world.

Imagine adding a city such as Shanghai to the world every four months – a massive urban energy centre.

That's the world's appetite for more energy.

The International Energy Agency estimates the world will need about 31% more energy by 2040.

Thankfully, advances in energy efficiency are helping us all get better at reducing the amount of energy we use – or the real demand growth would be more than 60%.

There's no doubt we are going to see renewables and new alternatives supply a growing part of this energy.

In fact, renewables are expected to grow more than 400% in the coming decades.

There is an abundance of energy sources ... but our growing world is going to need them all.

And the world wants more Canadian energy.

We know we live in a growing world that is going to need more energy.

And we know that Canada has an abundance of supply – the third largest reserve of oil and the sixth largest reserve of natural gas.

But does the world want to buy what Canada has to sell?

The answer is in. The answer is clear.

And the answer is **YES**.

This summer we released a report called the **Global Energy Pulse**.

It's the first-ever international research into global perceptions about oil, natural gas, Canada, and our opportunities in the world's energy future.

And the results are perhaps surprising in a number of areas:

We learned:

- Citizens around the world want **more oil and natural gas** in their energy future. They believe it improves their quality of life.
- By a 2:1 margin, citizens around the world would prefer to get their oil and natural gas from countries that have **climate change policies** ... places such as British Columbia, Alberta, Ontario ... countries such as Canada.
- If given the chance, citizens around the world would prefer to buy oil and natural gas **from Canada** more than from any other country in the world.

The message is clear: the world wants more Canada.

So that's good news for all of us in this room. As I mentioned at the start, the discussion about Canada's oil and natural gas future is one of national relevance.

It's good for producers, who wish to develop oil and natural gas responsibly.

It's good for suppliers, who have the goods and services, the people and technology that create jobs and opportunities across Canada.

And it's good for governments from coast to coast who receive on average \$15 billion a year in public funds that support our communities – funds that help in part to pay for:

- our schools and teachers;
- our hospitals and nurses; and
- our roads, and ports and bridges to build our economy.

That can be good for all Canadians.

But are we innovating enough to turn our aspirations into action?

Because we will need to **compete** for Canada to become the world's energy of tomorrow.

No one is going to just give it to us. Not the Saudis. Not Putin's Russia. Not Trump's America.

There's no doubt that our oil and gas industry has experienced tremendous disruption in the last three years.

Everything from lower commodity prices ...to changing government policies ...to more complex, uncertain regulatory processes ...to increased supply from around the globe.

These are disruptive times.

We know our industry has to change if Canada – and the world – is to have a different energy future.

So how does Canada compete to become the energy of tomorrow?

Here are three ways:

We need to compete for **customers** ... and grow our reach into new markets such as China and India.

- **That means building pipelines, not barricades.**

We need to compete on **cost** ...and build an efficiently-regulated industry to create jobs for Canadians.

- **That means attracting capital, not uncertainty.**

And we need to compete on **carbon** ...and innovate to make Canada the world's top energy choice.

- **That means being carbon smart, not carbon simple.**

The first point is customer competitiveness ...driven by our changing relationship with our number one customer – the United States.

For decades now, we've sold our oil and natural gas exclusively to the United States.

Canada produces 4 million barrels of oil a day, but we sell 3 million barrels — or 75 per cent of what we make — to the U.S.

In fact, Canada supplies more than 40 per cent of America's oil imports ... more than all the OPEC countries combined.

It's a good partnership for both Canada and America. They have a safe, secure supplier. We have a close, reliable customer. It's fair energy trade that benefits us both.

But at the same time, the Americans are producing more energy themselves and relying less on the oil and natural gas we make.

They're exporting more of their oil and natural gas into Canada.

Tonight two-thirds of the natural gas used in Ontario is imported from America.

And they're starting to ship to the very global customers we one day want to supply, sending American oil to Europe and American natural gas to Asia.

Our number one customer has become our number one competitor.

Under President Obama, the U.S. became the world's second-largest producer of oil and the largest producer of natural gas. Since 2008, it has:

- Added nearly 4-million barrels of oil per day – more than all we produce.
- Added more than 20 Bcf of natural gas per day – more than all we produce.

It took Canada 150 years to make this much energy. It took America 8 years.

It's important we continue to serve our number one customer. As I said, it's a great partnership for both countries.

But at the same time, we shouldn't box ourselves in with just one trading partner.

In a growing, urbanizing world, we need more **global** customers.... Countries who want to open doors of energy trade with Canada, not close them.

Countries such as India and China, where a growing middle class wants to heat their homes, cook their food, connect with iPhones or get heart valves to extend the life of an aging parent.

By 2030, India will be the number one importer of oil in the world, ahead of China and the U.S. Today India imports 3.8 million barrels a day — or as much as we make in all of Canada. That will only grow.

In fact, the International Energy Agency forecasts world will need about 11 million more barrels of oil per day by 2040.

India and China along will account for 10 million of those 11 million barrels.

But how many barrels of oil does Canada send today to India? Or China?

None.

In reality, we live in a growing world that will need more energy ... in all its forms.

If we want Canada to lead the world's energy future, we need to be connected to the world.

And frankly today we are not.

To create our global future, we need more energy infrastructure to reach more customers.

That's why expanding the Trans Mountain pipeline ... replacing the Line 3 pipeline ... even building the Keystone XL pipeline ... are all so critical to Canada.

And critical for us to lead the world's energy future.

Connecting our energy resources to tidewater to reach more markets – by all means and in all directions – remains important to improve our country’s global competitiveness and protect the long-term prosperity of Canadians.

For infrastructure spurs innovation.

But once we get connected to the world, we also need to become more cost-competitive.

That’s my second point.

It’s clear we are going to operate in a world of lower oil and natural gas prices for a lot longer.

So the drive to apply new cost-competitive technologies has never been greater in Canada’s oil industry.

We must adapt – and it’s happening.

We’re becoming more high-tech every day.

Today we’re seeing drilling companies employ mobile equipment that can move quickly from site to site serving more wells from a single pad quicker with less land disturbance than ever before.

We’re seeing producers use next-generation technologies to recover oil with less water and less natural gas – meaning less energy and lower costs.

And we’re seeing Canadian companies doubling down on Canadian resources, in markets and resources Canadians know better than anyone in the world.

We’re getting more nimble and cost-effective.

And we’re doing this by maintaining the Canadian way we do things — by building a stronger industry without sacrificing our high standards for health, safety and the environment.

But that’s not all we’re doing to improve our competitiveness.

Because at the same time that our industry is reducing cost, we’re focused on taking the carbon out of our barrels.

Our industry has to be carbon competitive if we are to be the world’s energy of tomorrow.

The world is not just in an energy transition, it’s also in an innovation transition.

And that’s my third point.

It was innovative Canadians who found a way to get the oil out of the sand.

It will be innovative Canadians who get the carbon out of the barrel.

A carbon-neutral barrel of oil sands.

It's not just possible – it's inevitable.

And Canada is showing the world how.

Scientific breakthroughs led by COSIA – Canada's Oil Sands Innovation Alliance — will break the link between energy growth and environmental impact.

This is a unique world-class partnership that's committed to improving environmental performance in 4 key areas: water; land; tailings and greenhouse gases.

To do that, COSIA has set aggressive targets. It's working with the world's top scientists.

And it's put its money where its mouth is.

COSIA has already shared and developed more than 930 distinct innovations and technologies worth more than \$1.3 billion.

The work is ongoing – and impressive.

Imagine ...combining CO₂, waste heat and water, adding light and algae to make bio-fuel good enough to fly jets overseas.

In Canada's oil sands, we can.

In suburban Toronto, COSIA is working with biotech innovators at Pond Technologies on algae that can eat carbon and make clean energy.

This project shows that with innovation we can:

- generate primary energy from oil as well as make a secondary clean bio-fuel;
- create valuable byproducts such as fertilizer; and
- substantially cut CO₂ emissions.

This Ontario bio-technology can reduce 1.5 million tonnes of GHGs from just two oil sands sites.

That's like taking 300,000 cars off the road – forever.

Imagine that industry wide. Imagine that worldwide.

Canada's oil sands industry is developing bio-tech in Ontario to fight climate change and make Canadian oil a cleaner energy for tomorrow.

That's being resourceful with our resources.

These and hundreds of other energy breakthroughs are taking place right now in Canada's oil sands.

- In Montreal, we're working on a satellite in outer space to take the most accurate measurements of GHGs in the world.
- In B.C. we're working on ways to create mobile equipment to reduce our impact on the land.
- In Alberta we're working to produce carbon-free electricity ... from the emissions from buildings at the University of Calgary.

More energy at less cost with less carbon.

That's Canadian energy at work.

That's the world's energy of tomorrow, today.

So what does all this mean for Canada?

Today China and India source their oil and natural gas from places such as Saudi Arabia, Russia, Angola, Nigeria and Iraq. And now the U.S.A.

In an insecure world, Canada is a safe, reliable and innovative energy partner.

That's why Canada can – and should – play a larger role in the world's energy of tomorrow.

Certainly, the world is changing. But our industry can turn adversity to advantage.

We are part of the transition ... we are innovators for the future.

There is a long-term future for Canadian oil and natural gas, if we put our imagination into action.

It's an energy future that's going to be more global.

It's an energy future that is going to create more opportunities for Canadians from coast to coast.

It's an energy future that will come with higher tech, lower costs and lower carbon.

The energy of tomorrow needs more Canada.

Let's generate that future together.

Thank you.