

Canada-U.S. Business Association

Remarks by Al Monaco, President and CEO

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The Future of Energy: Building Energy Bridges

Introduction

Thanks to the Canada – United States Business Association for hosting me today.

This audience knows how deeply our two countries are connected – nowhere is that truer than in Detroit and Windsor.

12,000 vehicles a day pass through the Detroit – Windsor tunnel.

We take that tunnel for granted, but it was a struggle to build.

There were two failed attempts to build it, in 1871 and 1878.

But the Michigan Central Railway Tunnel was the spark to finally get it done in 1930.

Bridges have also been tough to build.

But the Gordie Howe bridge illustrates that it's well worth the struggle because it supports the biggest trading relationship in the world.

I'm here to talk about a different kind of bridge – the energy bridge, which is the lifeblood connection between our two countries.

I'll talk about this energy bridge by focusing on 3 things:

- First, the profound shifts in the global and North American energy landscape.
- Second, how the energy industry has changed its approach to supplying energy – from technology, to climate, to engaging communities.
- And yes, ...I'll talk about another tunnel, and energy bridge – the Great Lakes Tunnel project and what Enbridge is doing to protect the Straits of Mackinac.

Like the other tunnels and bridges our purpose is clear - to protect the Great Lakes, safeguard Michigan's economy and foster continued collaboration between our two countries.

First some context.



Enbridge

Enbridge has been delivering energy to Michigan and the Upper Midwest for more than 65 years.

We're proud of our history here – our people are part of the community.

The map illustrates our reach – today we're the largest energy infrastructure company in North America.

We move 20% of the natural gas consumed in the U.S. and 25% of all crude oil in North America.

We operate the 2nd largest natural gas distribution franchise serving 3.7 million customers.

Our Dawn Storage Hub provides security of supply and price stability to Michigan's electricity and natural gas consumers.

We have a large renewables footprint generating 1,750 MW of zero-emission solar and wind energy, including in Ontario and Indiana.

We have a large offshore wind business in Europe.

In Michigan, the energy we deliver heats homes and businesses, fuels transportation, and powers industry and is the key ingredient for products we use every day.

The energy we supply to refineries in Detroit, Toledo and Sarnia is the source of gasoline, diesel fuel, aviation fuel and many other products used here and the Midwest.

So we are a critical energy bridge for Michigan – in fact our name was founded on that notion; Energy-Bridge – ENBRIDGE.

Now to the global energy landscape.

The global energy landscape is shifting

Just a few short years ago, the world was focused on peak energy supply.

We were obsessed with finding enough energy to fuel our economy and way of life.

Technology changed all that, unleashing massive resources where lowest cost, quick-to-market supply, pushes out higher-cost energy.



Because of that, and shifting social norms, consumers now dictate terms – they want low cost, reliable and sustainable energy.

We all want energy to keep doing what it's been doing for generations.

- To lift billions from poverty and improve quality of life.
- We want lights to come on when we flick the switch.
- And we want to be able to fly anywhere, any time.

Today, though, we all want to reduce our environmental footprint and global emissions.

The conundrum is that even as consumer preferences shift, the world is demanding more and more energy.

By 2040 energy consumption will grow by 25% -- that's not just my view; it's broadly shared and here's why.

The global population will increase from 7.6 billion to 9.7 billion by 2050.

Today there are 33 cities with more than 10 million people. By 2030 there will be 43 megacities and 80% of the world's population will live in urban centers.

And, the middle class will grow by 2 billion.

To accommodate this growth, Istanbul is building an airport to serve 200 million passengers a year.

DTW served 35 million passengers in 2018.

So, unless you don't believe in population growth, urbanization and people's desire to improve their standard of living, then the world will need more energy, not less.

The question is how will we meet our future energy needs?

If you look at any credible energy forecast, one thing is clear – we need all sources of energy to meet global demand.

For sure renewables are going to play a far bigger role, growing by almost 4 times by 2040.

And that's because of changing policies but also because the wind and solar industry have done a great job of lowering costs.



But even with that, growth in consumption means about 70% of energy demand will need to be met by conventional energy.

And even if you assume the most aggressive climate policies are implemented (which is not a given), the number will still be about 50%.

As you can see, natural gas is going to do much of the heavy lifting when it comes to both meeting energy needs while reducing emissions. (back to that point).

America has a huge competitive advantage.

What's gone unnoticed is that America has developed a powerful global competitive advantage in energy.

New technology has unlocked massive low-cost, reliable and sustainable resources right here.

This year the US became the third-largest LNG exporter, behind only Australia and Qatar. (EIA)

Over the last 10 years, oil production has skyrocketed from 5.4 to 12 MMbpd.

Today, America is the world's largest oil producer and now we export 3 MMb/d (that's likely to double soon).

The fact is, that abundant, low-cost energy now underwrites the U.S. economy.

The industry supports more than 10 million jobs – 160,000 in Michigan. (API)

It generates nearly 8% of GDP and contributes nearly \$15B to Michigan's economy. (API)

Industry investment translates into more than \$8 billion a year in wages for Michiganders.

Low-cost natural gas means manufacturers – from steel to auto parts to food and agriculture...

...will realize cost savings of \$22B in 2030 and \$34B in 2040 (PWC, 2016)

That translates to 1.4 million more American manufacturing jobs by 2040 (PWC, 2016)

The American Chemistry Council points to low-cost, abundant natural gas as the impetus for \$200 B in new capital investment and 430,000 direct and indirect jobs by 2025.



It's part of the reason why DOW Chemical – a Michigan company – completed a \$6B expansion along the Gulf Coast and moved a silicon plant to Michigan.

It's clear that America's energy advantage supports our competitiveness and global trade.

But to sustain that advantage we need energy infrastructure – supplying existing and growing markets.

Case in point, opposition to natural gas infrastructure in the USNE means New Englanders pay the highest electricity and natural gas prices in the U.S.

The irony is that to address peak requirements, New England resorts to burning oil, coal and importing Russian LNG.

This is while the most prolific, lowest cost natural gas supply is sitting right next door in the Marcellus.

This makes no sense!

America has huge potential to gain global market share in energy, but we need infrastructure to make it happen.

Energy is much more than an economic story.

How energy companies approach the business today

Today, the energy industry is focused on reducing emissions, applying technology and a different approach to engaging stakeholders.

Since 1992, the U.S. economy has grown by 80% while emissions dropped below 1992 levels (remarkable).

The single biggest contributor to reducing emissions has been natural gas.

What's more, North American LNG is poised to do globally what natural gas continues to do here at home.

Multiple LNG projects are in the works along the US Gulf Coast.

One clean LNG facility can displace 20 or more coal plants in Asia.

This LNG buildout not only ensures low cost energy for America, but it can also play a critical role in reducing *global* emissions.

My point is this – conventional energy has been and can be an even greater part of reducing GHGs and combating climate change.



The fact is we need innovation across the energy system to achieve our climate goals.

Enbridge is not a large emitter, but we are leading on the environment.

We've set and met emissions reduction targets in the past and we're setting more aggressive ones now.

Our utility conservation program has resulted in CO2 reductions equivalent to taking 10 M cars off the road.

We're investing capital to capture methane from landfills that offers a cleaner product for consumers.

We've invested \$8 billion in renewables.

We're applying the newest technology to improve how we deliver energy safely and reliably while reducing emissions with:

- The most advanced tools and data mining to better assess the integrity of our systems; and
- Predictive analytics to reduce power use and plan maintenance, again to reduce emissions.

We've also evolved our approach to community engagement and building trust.

We listen carefully to community concerns and address them.

On Indigenous engagement, we gain a solid understanding of their connection to water and land.

Once we've worked together to address safety and environmental matters, we begin building an economic partnership.

Our Line 3 replacement project – for example – created more than \$400 million in economic opportunity for Indigenous people and companies in Canada.

At peak construction, over 150 Indigenous companies and 1000 people were working on the project – that's 20% of the project workforce.

There's another \$100 M in opportunity for Native American tribes in Minnesota when construction gets underway there.

That brings me to Line 5 and the Straits of Mackinac crossing.



Line 5, Tunnel and New Methods of Protection

Line 5 was first built so that we could get products off the great lakes and avoid transportation by truck and rail.

Enbridge has been operating Line 5 safely for 65 years.

It's the key energy bridge for the U.P., lower Michigan and the region.

It serves 55% of the State's propane needs, including about 65% in the UP and Northern Michigan.

The refineries we serve provide jet fuel for the Detroit Metropolitan Airport and regional airports throughout Michigan.

They provide diesel fuel that is vital for the movement of supplies and product by truck between and on both sides of the border...and the gasoline people use every day to get to work, bring our children to school, drive where we want to.

Line 5 is safe

Line 5 was engineered with the importance of this crossing in mind.

And we operate it under the most extensive risk management program anywhere across an entire system.

Here are some examples:

- Line 5 is constructed with extra heavy wall pipe.
- It has a cathodic protection system to prevent corrosion.
- We run the crossing at less than 25% of maximum allowable pressure (way below normal) because we want an extra-wide safety margin.
- We've installed automatic isolation valves - and anchor devices on the lakebed to counter the effects of water currents.
- We far exceed regulatory requirements for in-line inspections....
- And we use divers and underwater vehicles to physically inspect the integrity of the crossing.

In 2016, PHMSA (our federal regulator) contracted independent experts to review 20 years of Line 5 inspection data and concluded no locations required additional attention.



Actions taken to mitigate risk

That said we've listened to concerns and responded.

Two years ago, we conducted a voluntary hydro-test... state agencies, PHMSA, the EPA and the Coast Guard were part of that.

As confirmed by PHMSA, the test validated the fitness of the Straits crossing.

In November 2017, we introduced an additional safety measure whereby we cease operations when sustained wave heights in the Straits reach 8 feet.

But the prime example of how seriously we take the crossing and the environment is the Line 5 tunnel so let me speak to that.

The Tunnel

We share the concerns about the potential for anchor strikes at the Straits.

We're 100% behind steps taken by the Coast Guard and the State to further enforce "no anchoring" vessel protocols.

Effective mitigation of anchor strike risk doesn't require shutting down all shipping traffic in the Straits...

...just as it doesn't mean removing all critical infrastructure from the lake bottom.

There is more the shipping industry can do to mitigate risk.

And there are things we can do too as well.

In 2018, after several years of independent analysis and many discussions with the State, we committed to construct the Great Lakes tunnel approximately 100 feet below the bottom of the Straits.

This tunnel will have "foot-wide concrete walls" and house Line 5...this will eliminate the possibility of an anchor strike.

The tunnel is not just an Enbridge creation – it took years of collaboration with stakeholders and the State.

In fact, a 2017 report commissioned by the State that looked at various options concluded that the risk of a release into the Great Lakes from Line 5 housed within an underground tunnel would be "negligible" and "un-quantifiably low".



To demonstrate our commitment to the tunnel, we signed binding agreements with the State.

The cost of that tunnel is estimated at \$500 Million, which we would pay for – not the people of Michigan.

Last year’s tunnel agreement between Enbridge and the State has been a focus of the current Administration.

That’s understandable because we share the same objective of protecting the Straits.

Since January, we’ve put forward several ideas to help address further concerns.

We’ve suggested:

- Ways to collaborate to accelerate completion of the tunnel.
- More safeguards on the existing line while the tunnel is being built.
- And, we’ve invited more State oversight of the project.

Unfortunately, the Administration has not yet shown an interest in advancing these ideas and instead took legal action to shut down the pipeline.

We on the other hand are committed to getting this tunnel built.

In the of face legal action by the State, we’ve committed to spend \$40 million this year on an engineering and geotechnical program so we can keep the project on schedule.

Some of you may have seen the deep-water drilling vessel (*Highland Eagle*), when it was in port here in Detroit earlier this summer.

Currently it’s at work taking rock and sediment samples.

This program would allow us to begin construction in 2021 – assuming, of course, we receive State and federal permits in a timely manner.

Before I conclude I want you to know that we continue to add more measures to reduce the risk of anchor strikes...a concern we all share – until and while the tunnel is being built.

So today I’m announcing the following new measures:



First, we will implement a new prevention technology vessel monitoring and communication system.

The Vesper Marine Guardian system will identify approaching vessels and notify them of the “no anchor zone” in the Straits.

Second, we’re installing high resolution cameras to monitor ship traffic in the Straits 24-7 ... this is an early warning and notification system that would allow us to shut down our pipeline system.

Third, we’ve now placed two support vessels on the water to monitor ships navigating through the Straits and to help if they lose power.

Again, at no cost to Michigan taxpayers.

My message to you today is that protecting the environment and providing critical energy supply is not an either - or proposition.

We can protect the environment and provide the energy that people, businesses and industries of Michigan and this region need.

We will replace the pipelines on the bottom of the Straits, and we will do this as quickly and as safely as possible and we’d like that to be in partnership with the State and the people of Michigan.

The pipelines that cross the Straits today were built mostly by Michigan workers and the quality and integrity of the system is a testament to the skilled and professional work of Michigan labor.

We are committed to continuing to use Michigan labor on the tunnel project, on the pipeline replacement segments and on the ongoing maintenance of our pipeline throughout the state.

Despite this \$500M commitment and the long list of undertakings to reduce risk I’ve outlined today...the Administration has said that we walked away from the table and that we put profit above all else.

I would submit to everyone in this room that our actions to date and our commitments indicate exactly the opposite.

And, we’ve put our money where our mouth is.

The irony in all of this is that the State wants the tunnel completed sooner than is physically possible...yet, its legal action creates uncertainty and delays us from getting to work on the tunnel.



Conclusion

To summarize my views on the future of energy and energy bridges...

Consumers have spoken – they want affordable, reliable and sustainable energy.

And the reality is that we are going to need that energy to meet growing demand.

The good news is that North America is positioned to provide low cost, sustainable energy that the world needs and wants.

If America can seize this competitive advantage, it will mean good jobs, healthy communities and safe infrastructure for decades to come.

It will also mean good jobs and benefits for the people of Michigan.

Enbridge's 65-year history in Michigan gives us the confidence to know that...

... like those who came before us to build bridges and tunnels – we can do the same today.

Enbridge is listening and taking steps to safeguard the environment and economic prosperity.

We're committed to placing Line 5 under the Straits and we are proving that with our actions.

We'll continue to fuel Michigan's resurgence and most of all to build energy bridges with the community and the environment in mind.

This is our vision.

I can shout from the rooftops every day, but we need the support of everyone in this room to make it a reality.

Thank you.