Voice of Canada's Oil and Natural Gas Industry

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December 2016

CONTEXT

ENERGY EXAMINED.

A TALE OF TWO CANADAS

What happens if we say "Yes" versus "No" to pipelines and LNG

THE MARKET ACCESS ISSUE

CAPP
CANADA'S OIL & NATURAL GAS PRODUCERS
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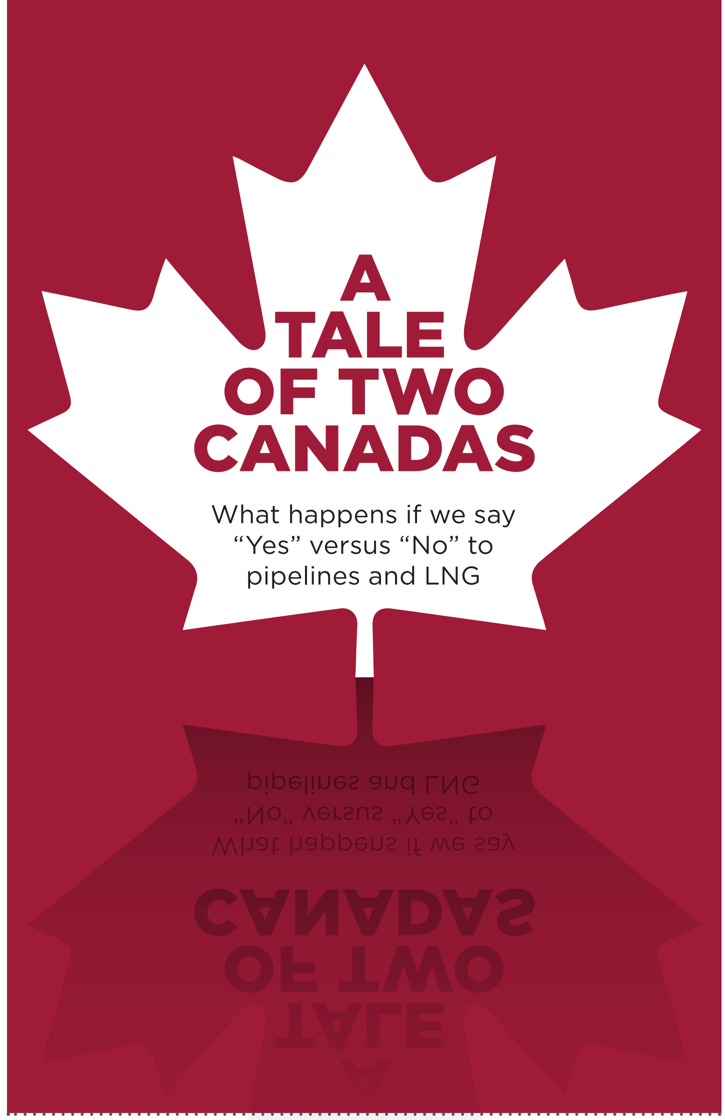
THE MARKET ACCESS ISSUE

DEPARTMENTS



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CONTEXT ENERGY EXAMINED.

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MERIT AWARD WINNER

MARKET ACCESS AND CANADA'S ENERGY FUTURE

In this issue of *Context* magazine, we cover some of the key issues surrounding market access, and why, in particular, new pipelines and LNG facilities are needed here in Canada. A key point I'll highlight is that there is no such thing as status quo. Increased production of both oil and natural gas south of the border means that our access to the U.S. market—our historic dominant primary customer—is under threat. As has been noted in a few places, our best customer is now also our greatest competitor.

Which as our cover and main feature story (page 8) articulate, leave us with a choice. We can choose a path of growth—building the infrastructure needed to reach global markets that need and want our products. Or we can forego a generational opportunity and deal with the consequences.

The recent federal approval of the Trans Mountain Expansion Proposal is a vital step in the right direction. It represents an opportunity for Canada to compete globally. In its latest forecast, the International Energy Agency predicts continued growth in oil and natural gas consumption through to 2040. Most of that growth will occur in China and India.

Today, China and India source their oil and natural gas from places like Saudi Arabia, Russia, Angola, Nigeria and Iraq. Meanwhile, Canada has some of the highest environmental and safety standards in the world. We face our challenges head on, and we invest in innovation and continuous performance improvement.

Canada can and should play an increasing role in becoming a supplier of choice to countries like China and India and their growing economies. By providing increased access to tidewater and the Pacific Rim, the Trans Mountain Expansion will enable Canadian producers to supply preferred fuels for the world's energy future, while at the same time supporting Canada's long-term economic growth and prosperity.

> "Government approval is not the same as shovels in the ground. There is still much work to do."

However, as we have learned from other experiences, government approval is not the same as shovels in the ground. There is still much work to do. While the pipeline proponents work to meet the conditions for their respective project approvals, we will continue having important energy discussions with Canadians—so that they have the facts and context to make informed choices regarding Canada's energy future.

A key part of those discussions involves the ever-growing Canada's Energy Citizens community. Thanks must go to the almost 20,000 energy citizens who wrote to Prime Minister Justin Trudeau in support of Trans Mountain, and the many others who have joined in petitions, events and conversations—both social media and dinner table—over the past year. As the voice of every-day Canadians, they support market access more effectively than CEOs and politicians, and their voice will be essential as we move forward into 2017.

We profile two energy citizens (page 14) in this issue—highlighting their passion and support for what our industry represents for the future of Canada. In my own travels, which take me from one end of the country to the other, I meet hundreds of people just like Jennifer and Kane—people who recognize the value a thriving Canadian oil and gas industry represents to Canada's economy, innovation and prosperity. It is truly inspiring to know the depth of support that we have on the ground and in every region of the country.

Lastly, I'll highlight our Energy East toolkit (page 18). As we've done previously with other pipeline proposals, we pull together the key facts, underscore the benefits and bust a few myths related to the proposal—providing a handy reference you may find useful as you head into holiday conversations with extended family and friends.

Sincerely,

Tim McMillan
President and CEO
Canadian Association of Petroleum Producers

Thank You Energy Citizens

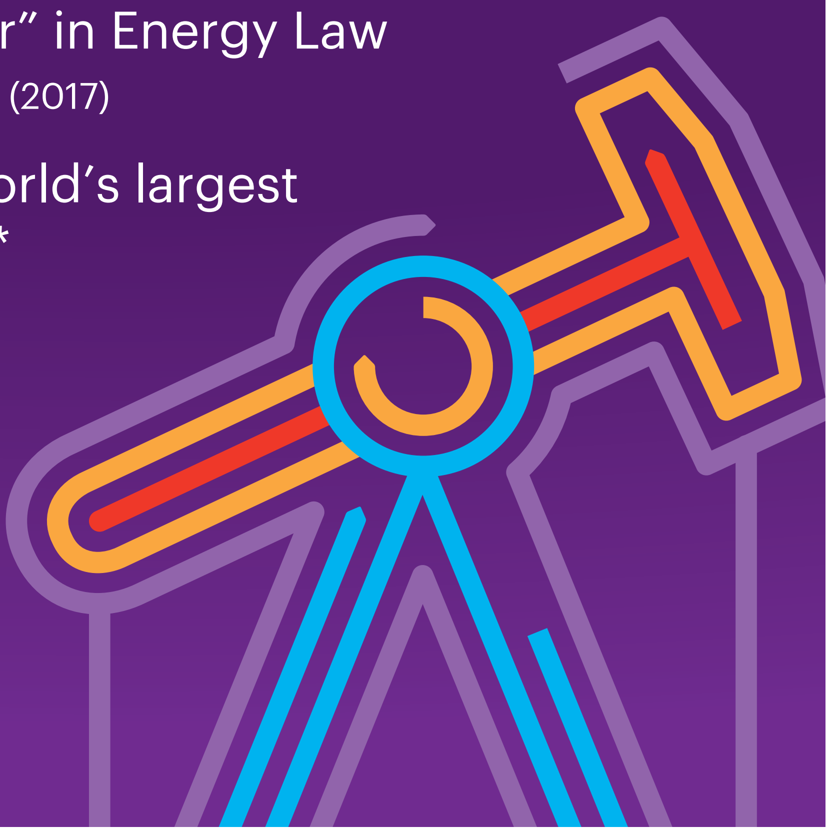
You spoke and your voice was heard. During a few weeks in November, Energy Citizens from across Canada sent more than 20,000 emails to Prime Minister Trudeau expressing support of the Trans Mountain Pipeline Expansion Project. On November 29, Canadians received an early Christmas present: approval of the Trans Mountain proposal. Thank you to all the Energy Citizens who participated—though, keeping in mind that our work isn't done. Let's keep standing up for oil and gas developed the Canadian way.

Learn more at **www.EnergyCitizens.ca** and **www.Facebook.com/CanadasEnergyCitizens**.

CANADA'S ENERGY CITIZENS

The grassroots **Canada's Energy Citizens network** continues to grow, now with more than **140,000** followers on social media.

Illustration: Mark Cromwell



WHAT'S UP AT CAPP

"We were able to show municipal leaders firsthand how Canadian oil sands producers are leaders when it comes to running safe, sustainable operations."

92 municipal leaders—mayors, councillors, and chief administrators—visited the Syncrude and ConocoPhillips oil sands facilities.

B.C. Municipal Leaders See Oil Sands Firsthand

CAPP gave a tour of oil sands facilities to 92 representatives of municipal governments from across British Columbia, including members of B.C.'s Green Party, this September. The tour was held in conjunction with the 2016 Union of B.C. Municipalities Convention held in Victoria.

"We were able to reach out to an unprecedented number of key decision makers in B.C., people who will influence decisions regarding market access to the West Coast" says Lee Coonfer, B.C. outreach advisor for CAPP. "I think the tour was very effective. You can't Photoshop or airbrush a tour," he says. "We were able to show municipal leaders firsthand how Canadian oil sands producers are leaders when it comes to running safe, sustainable operations and implementing world-leading environmental mitigation strategies."

Coonfer notes that feedback from the participants has been excellent, with most expressing an appreciation of the industry's transparency and professionalism.

For more information, contact Lee.Coonfer@capp.ca.

Updated Natural Gas Website a Key Resource for Canadians

The Canada's Natural Gas website (**www.canadasnaturalgas.ca**) has been redesigned, reorganized and updated. Features include fresh topic-driven content that is engaging and speaks to current issues; as well as content being presented in both French and English. The new site is a key resource to help Canadians learn about natural gas and how it is developed in a safe, environmentally responsible way.

What was our top Tweet?

CAPP's social media audience really liked this infographic highlighting the irony of Canada having to import oil from overseas.

WELCOME NEW MEMBERS

Q3 2016

PRODUCERS:

- Longshore Resources Ltd.

ASSOCIATES:

- AGI Envirotank Ltd.
- GFL Environmental Inc.

Visit www.capp.ca/about-us/membership to view our full list of members.

Nancy Bérard-Brown,
manager oil markets & transportation
at CAPP.

Enbridge Line 3 Replacement Program Approved

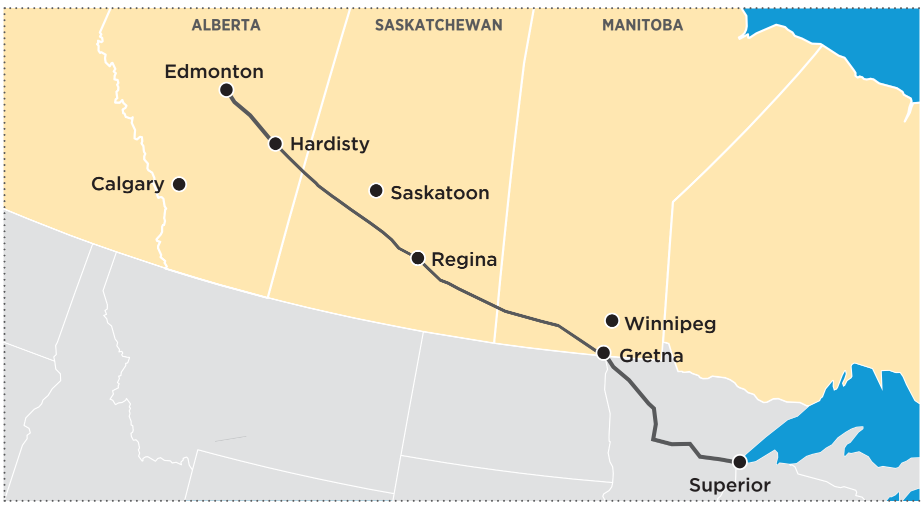
On November 29, 2016, the federal government approved the Enbridge Line 3 Pipeline Replacement Project, subject to the 89 conditions identified by the National Energy Board during its review. The project will result in 370,000 barrels per day of additional capacity by restoring the line to its original capacity of 760,000 barrels per day. The project cost is estimated at $7.5 billion and has a target in-service date of 2019.

"The project does not require an approval from the U.S. Department of State as the segment which crosses the international border was previously replaced as part of a maintenance project," says Nancy Bérard-Brown, manager oil markets & transportation at CAPP. She adds that Enbridge has obtained regulatory approval from the North Dakota Public Service Commission, and the regulatory review in Minnesota is under way.

In advance of the government's decision, CAPP had provided a submission to Environment and Climate Change Canada, who was responsible for developing a GHG report on the proposal.

"We emphasized, for example, that Line 3 is unlikely to impact global GHG emissions due to it having no impact on global oil production," says Bérard -Brown.

For more information, contact Nancy.BerardBrown@capp.ca



Line 3 Route Map

Enbridge's Line 3 Pipeline from Edmonton, Alberta to Superior, Wisconsin has been in operation since 1968. Enbridge's Replacement Program proposal would see the majority of the 1,660 kilometre pipeline replaced.

For more information, contact
Andrew.Mah@capp.ca

New Members Resource: My Energy Library

CAPP launched in September a resource library of communication materials aimed at energy advocacy and energy literacy. Called My Energy Library, this resource is available through CAPP's members-only MemberNet portal.

"These materials were developed for other purposes like ad campaigns and to support outreach efforts," says Andrew Mah, communications advisor at CAPP. "However, we recognized that this is good content that can be leveraged to support the advocacy and energy literacy efforts of our members. So we created this as an easy, one-stop place to find, download and share these resources."

Materials in the library include presentations, infographics, fact sheets, videos and publications. The library will be updated continually as new materials are developed at CAPP. To access: MemberNet users log in as usual, and click on the My Energy Library tab along the top row menu. Members can request an account if they don't have one here: https://membersif.capp.ca/requestaccess.aspx.

LNG Update: Are We There Yet?

Q&A with Mark Pinney, Manager Markets and Transportation

Q: It's almost 2017. How would you describe the status of Canada's LNG industry?

A: Encouraging. We're finally seeing some positive steps. The decision of Woodfibre LNG in November to go ahead with its $1.6 billion project near Squamish is a significant milestone, as was the federal government's regulatory approval of the Pacific NorthWest LNG project in September. We also believe that Pacific Northwest LNG's commitment to making a decision by April 2017 is encouraging. In addition, we've seen good news with respect to more First Nations groups stepping up as partners and supporters.

Q: How do we compare with our competitors?

A: We're definitely lagging behind our main competitors: the United States and Australia. We've already seen export facilities go into service in both countries. Cheniere Energy's Sabine Pass LNG terminal on the Texas-Louisiana border started this year shipping to markets mainly in Latin America—but some to Asia using the newly widened Panama Canal. There's also the Gorgon gas project in western Australia that recently started shipping to Japan. More troubling is that additional U.S. and Australia projects are currently under construction, even as Canadian projects still await regulatory and final investment decisions.

Q: Are we in danger of missing out?

A: The global LNG market is very challenging right now, which is causing a lot of project proponents to hesitate. Global oversupply of both oil and natural gas have driven down prices and made it tough for project proponents to compete for buyers willing to sign on to long-term contracts. Typically, a LNG project proponent wants 70 to 80 per cent of its shipping capacity tied up in long-term contracts before it'll commit the billions of dollars needed to build a new facility.

A few project proponents, like Pacific NorthWest LNG, might still be able to go ahead in this pricing environment because they have buyers (that is, natural gas end users) built into their ownership structure. They're right now busy crunching the numbers on project costs, and we'll know by April where they're at.

In terms of 'missing out', I'd say that the fundamentals still look really good, with the International Energy Agency predicting a 49 per cent increase in global natural gas consumption by 2040. As demand catches up to supply, I expect we'll see renewed interest in Canadian LNG. It may be, however, that we'll have to wait a few years longer than initially anticipated.

Q: Is it all about global supply, or are there factors within Canada making proponents pause?

A: By coming out with a clear and competitive LNG tax regime last year, the B.C. government helped remove a lot of the uncertainty that had been troubling project proponents. That said, it's always important for investors to see a country as a safe and viable destination for capital investments. I think it'll be important for governments here to continue sending positive signals that Canada is open for business with regulatory decision-making processes that are transparent, effective and timely.

Projects to Watch

There are 20 proposals for LNG terminals along Canada's West Coast. Key ones to watch include:

PROJECT PROPONENT	LOCATION	CAPACITY (BCF/D)	STATUS
Woodfibre LNG	Near Squamish	0.27	Construction to commence in 2017 with first shipment in 2020.
Pacific NorthWest LNG (PETRONAS, JAPEX, PetroleumBrunei, Indian Oil, Sinopec, Huadian)	Prince Rupert	1.2	Final investment decision by April 2017.
LNG Canada (Shell Canada, KOGAS, Mitsubishi and PetroChina)	Kitimat	1.4	Final investment decision delayed.

A TALE OF TWO CANADAS

What happens if we say "Yes" versus "No" to pipelines and LNG

Economic experts agree that access to new markets is vital for Canada to take advantage of its resource riches and build long-term prosperity

BY DAVID COGLON AND ANDREW MAH

EARLY THIS YEAR the head of one of Canada's largest banks stood in the Canadian Club of Toronto to make the case for building new pipelines. "At a time when the price of oil is low, conversations about pipelines might seem counterintuitive. But in fact these conversations are long overdue," Scotiabank president and CEO, Brian Porter, told the audience of senior executives.

"We must make global market access for Canadian energy a national priority today, and then make it a reality," he stated.

Canada's Energy Riches

171 billion
barrels of oil reserves

3RD LARGEST IN THE WORLD

Source: Oil and Gas Journal

1,230 trillion
cubic feet of natural gas resources

300-YEAR SUPPLY BASED ON DOMESTIC CONSUMPTION RATES

Source: National Energy Board

Photograph: CANADIAN PRESS/Jeff McIntosh

"We must make global market access for Canadian energy a national priority today, and then make it a reality."

— Brian Porter, president and CEO of Scotiabank

Royal Bank of Canada president and CEO Dave McKay echoed the thought in a speech earlier this fall, emphasizing Canada's historic opportunity:

"If we don't take on the energy infrastructure that we so clearly need, the world will move on, and we would lose our opportunity to help lead the global energy transition," he said.

What these statements by two leaders of Canada's banking industry illustrate is that we have reached a pivotal—some might even say crisis moment in Canadian history. Canadians today are faced with choices: To build new oil and natural gas pipelines—or not. To nurture a nascent West Coast LNG industry, or allow that opportunity to pass.

Each choice comes with consequences. Cumulatively, the decisions we make in the next few years when it comes to Canadian energy infrastructure will have a significant impact on our national economy, our ability to attract foreign investment, and our capacity to deliver jobs and prosperity to all Canadians. Ultimately, it will be a choice between a robust, economically vibrant future for Canada, or a Canada that squanders its greatest resource assets through squabbling, delay and incomprehension.

NEW MARKET ACCESS: SOON OR POSSIBLY NEVER

The historic opportunity to which Porter and McKay refer is the convergence of two important facts. One: Canada possesses enormous, accessible crude oil and natural gas energy resources. Two: global energy demand is steadily increasing, driven primarily by worldwide economic growth and improved living standards in places like China and India.

"Increasing global energy demand means that crude oil and natural gas will remain vital for global energy security for decades to come," says Terry Abel, executive vice-president at CAPP.

Abel's statement is borne out by the latest forecast by the International Energy Agency, which published its *World Energy Outlook 2016* this November. It predicts that global energy consumption will rise 31 per cent by 2040. This includes a 12 per cent increase in oil consumption and a 49 per cent increase in natural gas consumption. The numbers factor in growth in renewables and government commitments to reduce GHG emissions made in last December's Paris Accord.

Abel adds that Canada is well positioned to meet this energy demand as a preferred supplier—due to its strong reputation for political stability and for having a world-class regulatory regime.

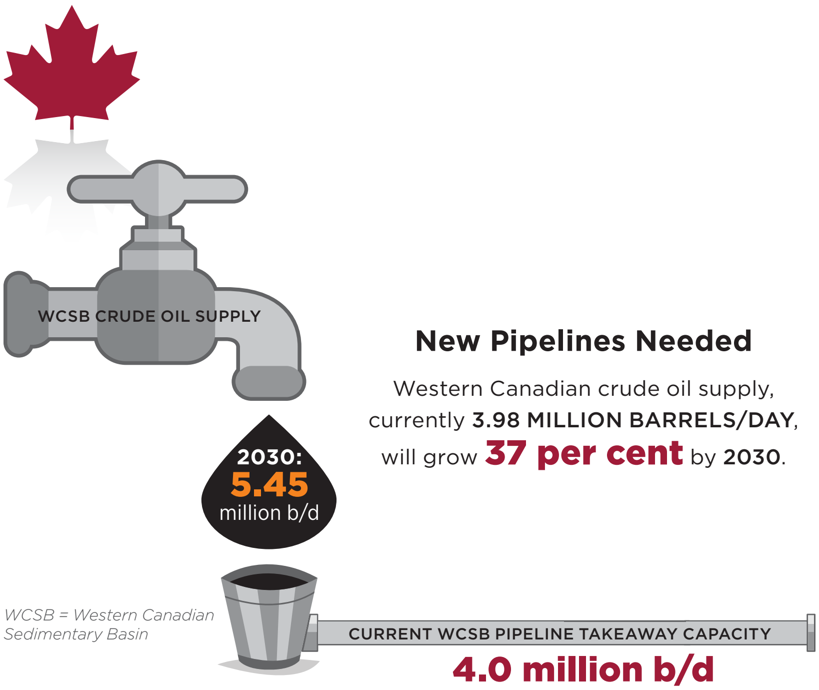
"We've developed tremendous, world-class technologies and expertise when it comes to economically feasible, safe and sustainable resource extraction. I think anybody who cares about the environmental and safety records of the producers they get their oil from would choose Canadian oil and natural gas first."

At the same time, Canada can no longer rely solely on exports to its historic primary customer: the United States. The growth of shale gas and shale oil production south of the border has blunted U.S. demand for Canadian oil and natural gas (see O&G 101, page 16).


Photograph: Jason Dziver

"Quite simply, our biggest buyer has become our biggest competitor."

— Robert Skinner, executive fellow at the University of Calgary's School of Public Policy



Without new markets overseas—and the pipelines, LNG terminals and marine transport facilities to get our products to these markets— there is a strong likelihood that Canada's oil and gas industry will stagnate.

"While there's strong interest around the world in Canadian oil and natural gas, the fact is, these markets won't wait forever. If we don't act soon, investment will dry up here, and other nations will fill the void," says Abel.

Robert Skinner, executive fellow at the University of Calgary's School of Public Policy adds, "If we don't pull this off and improve industry access to tidewater—with at least one or two new pipelines—then Canada risks sending an enormously important signal to the world that, largely for symbolic reasons, we're prepared to sacrifice a critically important sector of the Canadian economy."

THERE'S NO STATUS QUO

Based solely on current and committed investments, crude oil supply in Western Canada will increase from 3.98 million barrels a day (b/d) in 2015 to 5.45 million b/d in 2030—a 37 per cent increase.

This production growth should be a good news story. However, at the same time as crude oil supplies are increasing, pipeline takeaway capacity from the Western Canada Sedimentary Basin is nearing capacity. Without new pipelines capable of reaching new markets, in a few short years the industry will begin facing severe transportation bottlenecks. History has taught us that this will arrive with severe consequences.

"If we continue to grow production out of the Western Canada Sedimentary Basin and don't have takeaway capacity, we'll run into a supply bottleneck that will again decrease commodity pricing. And that's a problem," says Michael Loewen, an energy commodities strategist at Scotiabank.

> "If we don't take on the energy infrastructure that we so clearly need, the world will move on, and we would lose our opportunity to help lead the global energy transition."
>
> —Dave McKay, president and CEO Royal Bank of Canada

Loewen is referring to pricing differentials created when transportation bottlenecking creates a regionalized oversupply of oil. This was a major issue a few years ago, with oil from Western Canada having no place to go except into the already saturated mid-Western United States market. The supply glut resulted in Western Canadian oil becoming heavily discounted relative to international benchmark prices.

Loewen notes, "For every $1 per barrel discounted relative to world prices, there's an opportunity cost to the Canadian oil industry of about $1.4 billion per year. In 2014, for example, we estimate that had Canadian oil been able to reach tidewater rather than being locked inland, producers could have gained $14.3 billion in additional revenues. That's a substantial sum of money to leave on the table."

Price differentials have narrowed in recent years due to improvements to existing pipeline infrastructure and low prices globally. However, as global energy demand continues to grow, and if Canada remains trapped with a growing land-locked crude oil supply, the differentials could widen again, costing Canadian producers once more.

Natural gas faces a similar market challenge. Dramatic increases in production south of the border are keeping prices in North America depressed, while also gradually eroding traditional markets for Canadian producers.

"Production growth in the U.S. has been disruptive and transformative," says Skinner, noting that the boom in U.S. natural gas supply is steadily displacing Western Canadian gas in the U.S. Midwest and U.S. Northeast and above all in Central Canada. U.S producers are also ahead of Canadian producers in LNG exports.

"Quite simply, our biggest buyer has become our biggest competitor," says Skinner.

The impact: total exports of Canadian natural gas have declined by nearly one-third between 2007 and 2015.

"Access to growing energy markets in Asia via LNG shipments, where Canada has some relative competitive advantages including shorter shipping times and existing trade relationships,

Economic Impacts of the Oil and Natural Gas Industry in Canada

The oil and natural gas industry is the largest single private investor in Canada.

DIRECT AND INDIRECT EMPLOYMENT:
425,000
Canadian jobs

ENERGY SECTOR CONTRIBUTION TO GDP:
7.3%

CAPITAL EXPENDITURE:
$81 billion in 2014,
$37 billion in 2017

CONTRIBUTION TO GOVERNMENT REVENUES:
$15 billion/year

SUPPLY CHAIN:
Over **5,000** companies in Canada (outside of Alberta) providing goods and services to the oil sands

Source: NRCAN, 2016 and CAPP

IMPACTS OF THE CURRENT DOWNTURN:

Oil and gas company revenues decreased more than **$60 billion**, or 40% compared with 2015

125,000 jobs lost

55% decrease in capital investment over the past three years, equaling $44 billion.

Source: CAPP

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would definitely help reverse this trend," says Abel.

A CANADA WITHOUT

The oil and natural gas sector is Canada's single largest industry. Today, the industry is struggling. Admittedly, the current slowdown, particularly in the case of oil, is due more to the global price environment than Canada's market access challenges. However, the economic impacts being felt by the industry, and the ripple effects across the entire Canadian economy, are acutely illustrative of what the oil and natural gas industry means to all Canadians—and what we might have to learn to live without permanently should a 'no pipelines' agenda prevail.

One of the greatest casualties is employment. Tens of thousands of jobs have been lost—most in Alberta, but elsewhere too. Moncton used to have 14 chartered flights a week carrying workers to Fort McMurray. Today it has none. That's more than 3,000 New Brunswickers who no longer work in the oil sands to support their families back home.

Financial impacts are also being felt by the more than 5,000 companies in Canada but outside of Alberta who supply goods and services to the oil sands industry—an industry which has been forced to cut costs and scale back on new projects.

"The oil downturn is certainly affecting manufacturers in Ontario," notes Mary Webb, Scotiabank's director of economic and fiscal policy. "It's one reason why Ontario's interprovincial exports have been trending lower recently."

Falling oil and gas revenues also means the average $15 billion a year in royalties, leases and tax revenues the industry generates for governments in Canada (source: CAPP) are at risk.

"Decreasing government revenues would affect everything. It might make the difference between a new school in your community being built or not, or whether your local hospital is able to buy a new MRI machine to lessen wait times," says Abel.

Finally, more than $44 billion in capital investment has been cut in the last three years—a 55 per cent decrease. That's capital investment that could create Canadian jobs and spur economic growth. It's an area where Martha Hall Findlay, president and CEO of the Canada West Foundation, believes Canada's market access challenges are already having a toll.

"We're used to being seen as a good place for investment, but today we're having trouble getting major infrastructure projects built – not just energy but any trade infrastructure. And that raises questions among foreign investors," says Hall Findlay.

The pain of low oil and natural gas prices and decreasing capital investment into the Canadian economy is temporary—perhaps. As global energy demand catches up, the oil supply glut should reverse, triggering a rally in oil and LNG prices. Provided Canada has the infrastructure to access new markets—and remains competitive relative to other producers—Canada's fortunes should rise alongside.

"This sector has proved its resiliency time and time again," notes Webb. "If the industry could get its oil and natural gas products offshore and fetch higher prices in those markets, it would be hugely positive for producers as they strive to contain costs during an extended recovery in petroleum prices."

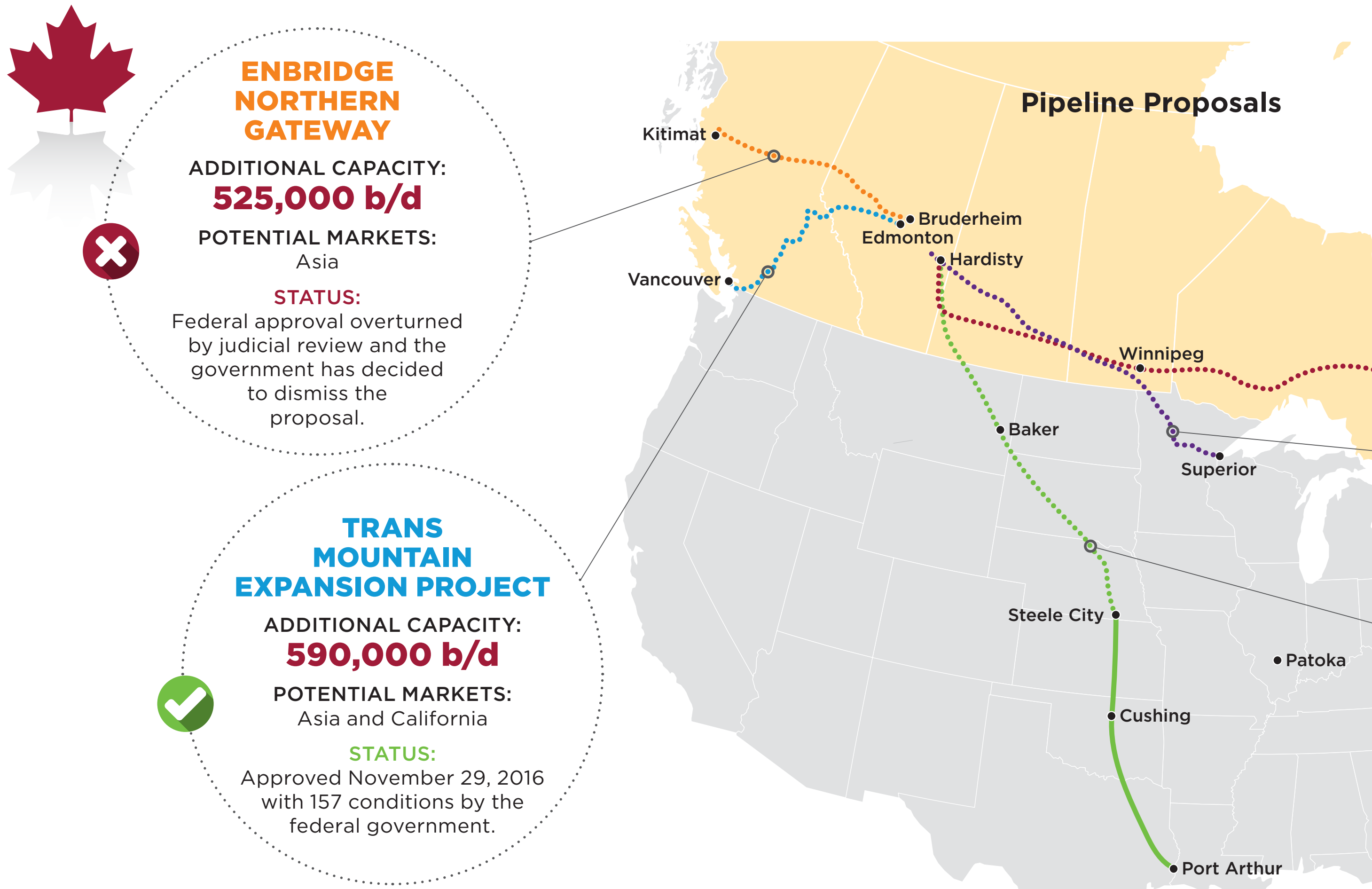
BUILDING A STRONG NATION

The opportunity before Canada is to greenlight new pipelines and support the creation of a vibrant, new LNG industry. A number of proposals have been developed that would access key markets to the east, south and west. The economic benefits of each proposal have been well-studied by multiple different independent think tanks and research organizations.

The Conference Board of Canada, for example, has calculated the economic

For every $1 per barrel of oil discounted relative to world prices, there's an opportunity cost to the Canadian oil industry of **$1.4 billion** per year.

(Source: Scotiabank)



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Photograph: Courtesy Canada West Foundation

> "Any time you have projects that could benefit national prosperity, these projects become incredibly important to our country's future. There is a lot at stake."
>
> — Martha Hall Findlay, president and CEO of the Canada West Foundation

impacts of the Kinder Morgan Trans Mountain Expansion Project and TransCanada's Energy East Project, as well as estimating the economic benefits of a modest West Coast LNG industry. Trans Mountain, for example, which would twin an existing pipeline carrying oil to a shipping terminal in Burnaby, would result in more than 800,000 new jobs, or 32,000 new jobs for each of the next 25 years. The project would generate more than $46.7 billion in new government revenues across Canada, or $1.87 billion in new revenue every year for 25 years.

Energy East project would generate more than 14,000 jobs each year during development and construction, while generating $10 billion in government tax revenues and contributing $55 billion to Canada's GDP over its project life.

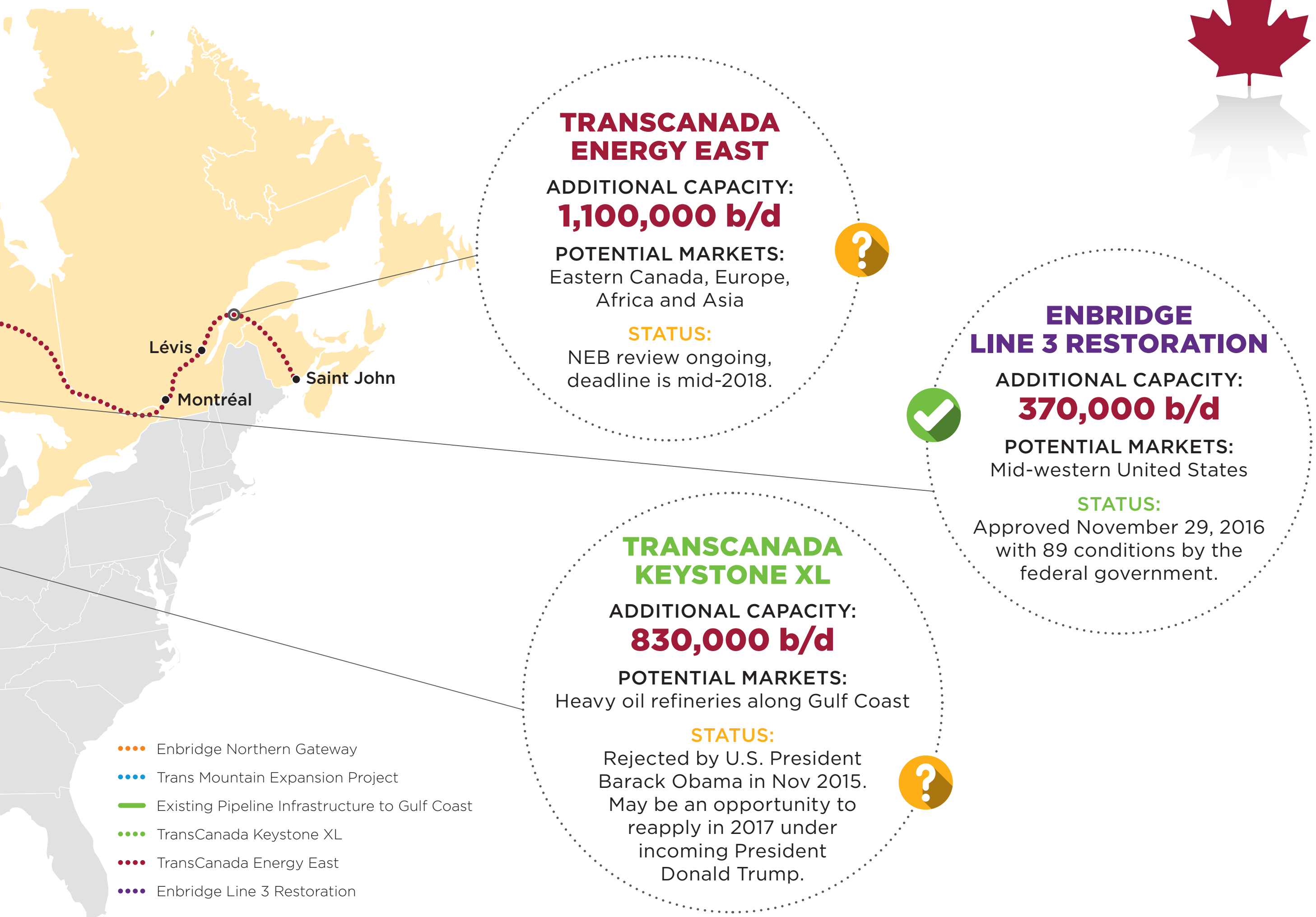
Finally, a modest West Coast LNG industry, exporting about 30 million tonnes of natural gas a year, would grow Canada's economy by an average of $7.4 billion annually over the next 30 years.

What's more, economic growth can help drive the innovation needed for a long-term transition to lower-carbon energy sources.

"As we move to a pan-Canadian carbon strategy, we believe that continuing investment into innovation is the key to ensuring the energy mix of the future has a much lower carbon footprint, while still delivering the energy security Canadians and others demand," notes Abel. "It's a vision of a strong and sustainable industry that balances Canadians' economic aspirations with their environmental concerns."

Ultimately, expanding Canada's energy transportation infrastructure through new pipelines and LNG terminals is an investment in a more prosperous and engaged future.

"Any time you have projects that could benefit national prosperity, these



projects become incredibly important to our country's future. There is a lot at stake," says Hall Findlay, who has compared proposed pipeline projects to nation-building projects like the building of the St. Lawrence Seaway or the Trans-Canada Highway.

ONE CANADA FOR ALL

Much is made of the divisiveness of the energy debate. The fact is that polls show a decisive majority of Canadians support Canada's resource extraction industries, and the pipelines needed to transport our products to market, provided they are transported in a safe and sustainable manner.

"I think most Canadians understand the importance of the issue. They understand the need for Canada to be competitive. They'd like to see development and that Canada take advantage of the resources we have. But they want us to do it in a way that is done well and in an environmentally sustainable way," says Hall Findlay.

When it comes to the perception of a divided nation, the problem according to Steve Rennick, manager of the Canada's Energy Citizens campaign, is that a vocal minority has been allowed to dominate the public discourse.

"As with all major infrastructure projects, there are valid issues to debate and it's vital to consult with all stakeholder groups. We support that," says Rennick. "However, there's a small group of vocal constituents who are determined that the only answer they'll accept is 'no.' Unfortunately, these groups offer no real solutions."

Through the Canada's Energy Citizens grassroots advocacy program, Rennick is recruiting Canadians who are supportive of the oil and gas industry and supplying them with the information they need to balance that debate. In just over a year, the program has grown its social media presence to more than 140,000 followers. These are ordinary Canadians who are participating in online petitions, letter-writing campaigns and on-the-ground events in support of market access projects. This includes a recent letter-writing campaign to Prime Minister Trudeau which sent close to 20,000 letters in support of the Trans Mountain Expansion proposal in advance of the federal government's recent approval.

"With Canada's Energy Citizens, we're showing that Canadians prefer a positive approach to these issues and are willing to stand up for their vision of Canada's future. That's when political leaders pay attention—and that's how we'll see decisions on these projects reflect the true will of Canadians—which is to say, 'Let's start building some pipelines already.'"

CANADA'S ENERGY CITIZENS

Join Canada's Energy Citizens: www.EnergyCitizens.ca and **www.facebook.com/CanadasEnergyCitizens**

CANADA'S ENERGY CITIZENS

Jennifer and Kane are members of Canada's Energy Citizens, a grassroots community of oil and natural gas supporters from all backgrounds and parts of the country.

Learn more at **energycitizens.ca**.

"LNG would create jobs and support the economy not just here in Fort Nelson, but right across Canada."

Photograph: Jamie Emmelkamp

WHY I SUPPORT LNG

ENERGY CITIZEN: Jennifer Barkved
COMPANY: Gearheads Truck Repair
RESIDENCE: Fort Nelson, B.C.
OCCUPATION: Business Owner

Jennifer Barkved knows first-hand what can happen when a sector goes south...literally. In her early working years, she lived in Midway, a small town on the border between British Columbia and Washington. The region was hit hard in the early 2000s by the Canada-U.S. softwood lumber dispute—thousands of jobs were lost and entire communities were impacted.

Now, Barkved lives with her husband in Fort Nelson, B.C., where they run Gearheads Truck Repair—a commercial truck and trailer repair operation. They've done well by the local oil and natural gas industry, though the current downturn means business has slowed. She supports an LNG industry that would restore growth to the region.

"LNG would create jobs and support the economy, not just here in Fort Nelson, but right across Canada," Barkved says. "From income taxes to gas company royalties, everyone will get a share of the revenues through investments in infrastructure, medical facilities and schools."

Until recently, Barkved didn't realize there was a stigma attached to the industry. The light came on one evening as she was enjoying a meal with her extended family. "The subject of pipelines and natural gas came up and I couldn't understand how they had become so misinformed about the sector," Barkved says. "Industry has been fracking responsibly and supporting the local economy here for over 50 years. I want people to come to Fort Nelson to get a first-hand look at the way we do things rather than believing everything they read or hear in the news."

Since then, she's joined forces with like-minded residents to form the Fort Nelson for LNG organization which has held rallies and brought in speakers. Barkved also participated in Rally with Resources, which sent a cross-Canada convoy to Ottawa in support of LNG. The group also sent 100,000 letters to local MP Bob Zimmer asking for approval of the Pacific NorthWest project.

"I like to think that in some way our group helped sway the recent government decision in favour of an LNG pipeline," says Barkved.—KB

WHY I SUPPORT PIPELINES

ENERGY CITIZEN: Kane Lam
COMPANY: Tapp Studios, Inc.
RESIDENCE: Richmond Hill, Ontario
OCCUPATION: Digital Strategist

Kane Lam knows the value of innovation when it comes to building a better future. He saw his father build a successful poultry packing business from the ground up after arriving in Canada from Hong Kong.

Following in his father's entrepreneurial footsteps, Lam has launched a number of business enterprises including a technology startup in Richmond Hill, Ontario. He and his partners are working to develop innovative mobile app technologies for Canadian businesses.

He supports pipelines because he knows that the energy sector helps drive the kind of global innovation needed to keep Canada at the cutting edge.

Citing the stringent regulations and intense public scrutiny that Canada's oil and natural gas producers face, Lam notes: "Our energy sector has had to adapt and innovate to continually reduce their impact on the environment. Pipelines will accelerate that innovation by bringing in more money for research and development. That will lead to technologies which could ultimately have applications that reach far beyond Canada and the energy sector."

Adds Lam, "When the energy sector does well, Canada does well, which means opportunities for all of our citizens in all sectors, all regions, and all backgrounds."

Six years ago, when Lam was a student at the University of Toronto, he constantly heard from well-intentioned friends about the evils of the energy sector. "However, I did some independent research and discovered that our energy sector is, in fact, top-class in the world," states Lam.

Since then, Lam has made standing up for the energy sector part of his daily life. "I consider it a duty to speak up for the industry wherever I am—at school, around the dinner table with family and friends, at work and on social media," says Lam.—KB

"Our energy sector has had to adapt and innovate to continually reduce their impact on the environment. Pipelines will accelerate that innovation."

Photograph: Nation Wong

OIL AND GAS 101:
HOW OUR BEST CUSTOMER BECAME OUR GREATEST COMPETITOR

Our Best Customer

Canadian Natural Gas Exports, 2015

100% TO THE U.S.: **7.4** Bcf/day

0% TO OTHER COUNTRIES: **0.0** Bcf/day

Canadian Crude Oil Exports, 2015

99% TO THE U.S.: **3.0 million** b/d

1% TO OTHER COUNTRIES: **0.026 million** b/d

Source: NEB

Bcf = billion cubic feet
b/d = barrels per day

In 2015, virtually all Canada's natural gas and crude oil exports were to one customer: the United States. There are, of course, good reasons for this. They are our closest neighbour and the only country with whom we share a land border. They are a longtime ally and a large market that buys a host of Canadian goods and services.

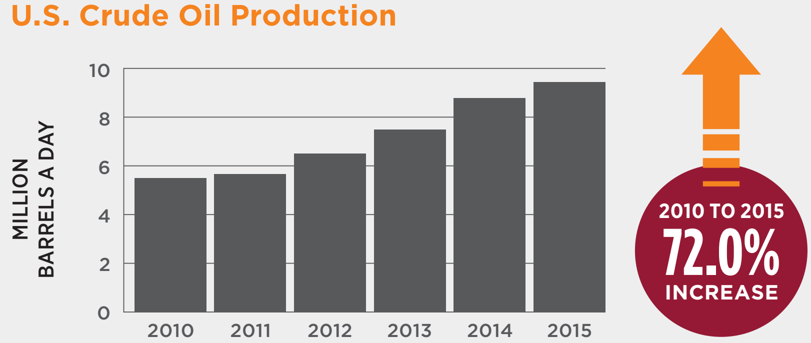
On the energy front, however, that is changing. New techniques in accessing gas and oil from shale formations has unlocked large quantities of previously inaccessible resources. U.S. production of both natural gas and oil has increased dramatically.

The North American Glut

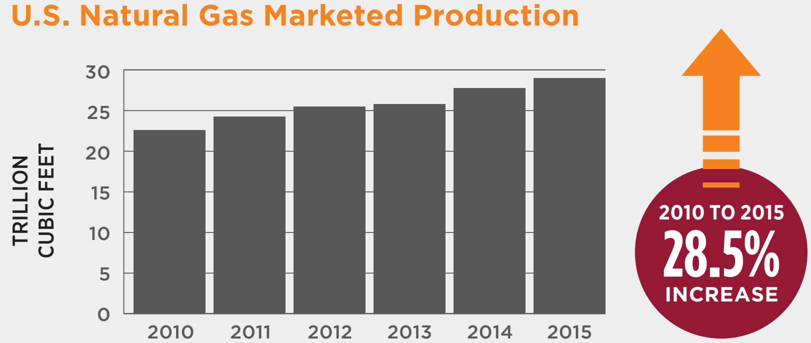
Strong and growing U.S. production has created significant competitive challenges for Canadian producers trying to export into the traditional U.S. market. Canadian exports to the U.S. of natural gas have fallen 23 per cent by volume from 2006 to 2015.

While Canadian oil producers have managed to increase crude oil exports into the U.S. in recent years by displacing other import sources (e.g. Venezuela), overall growing production and a lack of export capacity have resulted in an oversaturated North American market. This has depressed prices relative to international benchmarks.

U.S. Crude Oil Production



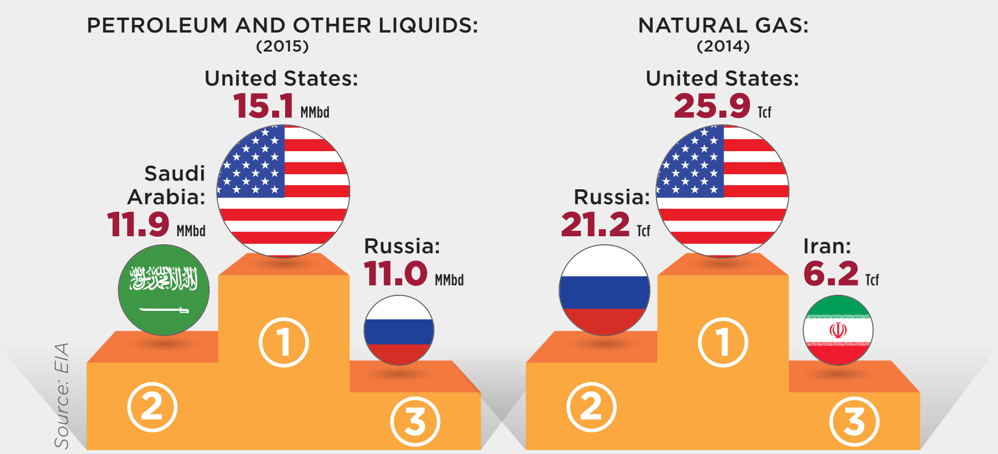
U.S. Natural Gas Marketed Production



Source: EIA

We're Number One

The United States is now the number one producer of petroleum and other liquids, and the number one producer of natural gas in the world.



MMbd = million barrels/day, Tcf = trillion cubic feet

Double Jeopardy:
U.S. Now an Exporter

On December 18, 2015, the United States lifted its 40-year ban on oil exports. The U.S. is also exporting increasing quantities of natural gas—notably into central Canada—and has even begun exporting LNG overseas. This means that Canada has one more competitor when selling oil and natural gas, both domestically and overseas. It's another reason Canada needs to build infrastructure as soon as possible—to access new markets, enabling us to diversify our exports, and gain better prices in a cost-effective manner.

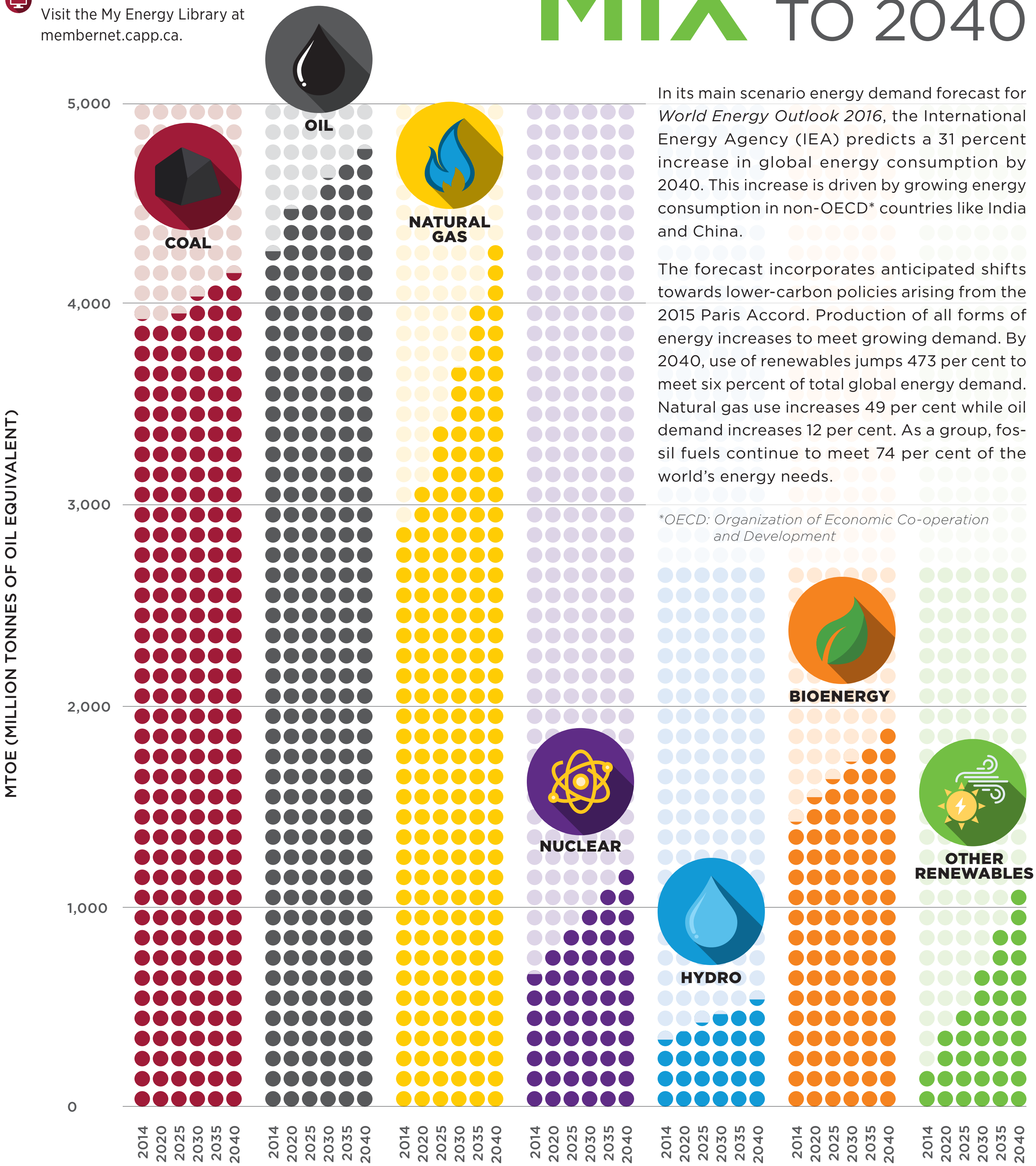
GLOBAL ENERGY MIX TO 2040

Want to download and share this? Visit the My Energy Library at membernet.capp.ca.

In its main scenario energy demand forecast for *World Energy Outlook 2016*, the International Energy Agency (IEA) predicts a 31 percent increase in global energy consumption by 2040. This increase is driven by growing energy consumption in non-OECD* countries like India and China.

The forecast incorporates anticipated shifts towards lower-carbon policies arising from the 2015 Paris Accord. Production of all forms of energy increases to meet growing demand. By 2040, use of renewables jumps 473 per cent to meet six percent of total global energy demand. Natural gas use increases 49 per cent while oil demand increases 12 per cent. As a group, fossil fuels continue to meet 74 per cent of the world's energy needs.

**OECD: Organization of Economic Co-operation and Development*



THE TRANSCANADA ENERGY EAST PIPELINE:
EVERYTHING YOU NEED TO KNOW

What is Energy East?
Energy East is a proposal by TransCanada Corporation to build a 4,500 kilometre pipeline that would transport 1.1 million barrels of oil per day from Alberta and Saskatchewan to refineries in Eastern Canada and an export terminal in New Brunswick. TransCanada would take advantage of 3,000 kilometres of existing pipeline by converting the underutilized Mainline pipeline from gas to oil, and connecting it to a new section of pipeline built through a small section of southeastern Ontario, Quebec and New Brunswick.

Myth Buster

MYTH: Converting a gas pipeline to transport oil isn't safe.

The design, construction and placement of oil and natural gas pipelines is essentially similar, using the same materials and welding techniques. As a result, conversion of a pipeline to carry one product versus another is safe when properly executed. Indeed, TransCanada has done similar conversions in the past: most recently, it converted a section of the Canadian Mainline pipeline from gas to oil for delivery to the Keystone Pipeline in the U.S. Since July 2010, this converted pipeline has safely delivered nearly one billion barrels of oil into the United States.

Some differences do exist between gas and oil pipelines—in particular the location of shut-off valves and pump stations. If Energy East is approved, TransCanada will install new valves and pump stations as necessary, while also performing a check of the structural integrity of the entire existing pipeline.

HARDISTY

MOOSOMIN

What Would Energy East Mean for Canada?
During the development, construction and first 20 years of operations, Energy East would generate:

14,000+
jobs across the country

$55 billion
added to Canada's GDP

$10 billion
in federal and provincial taxes

Source: Conference Board of Canada

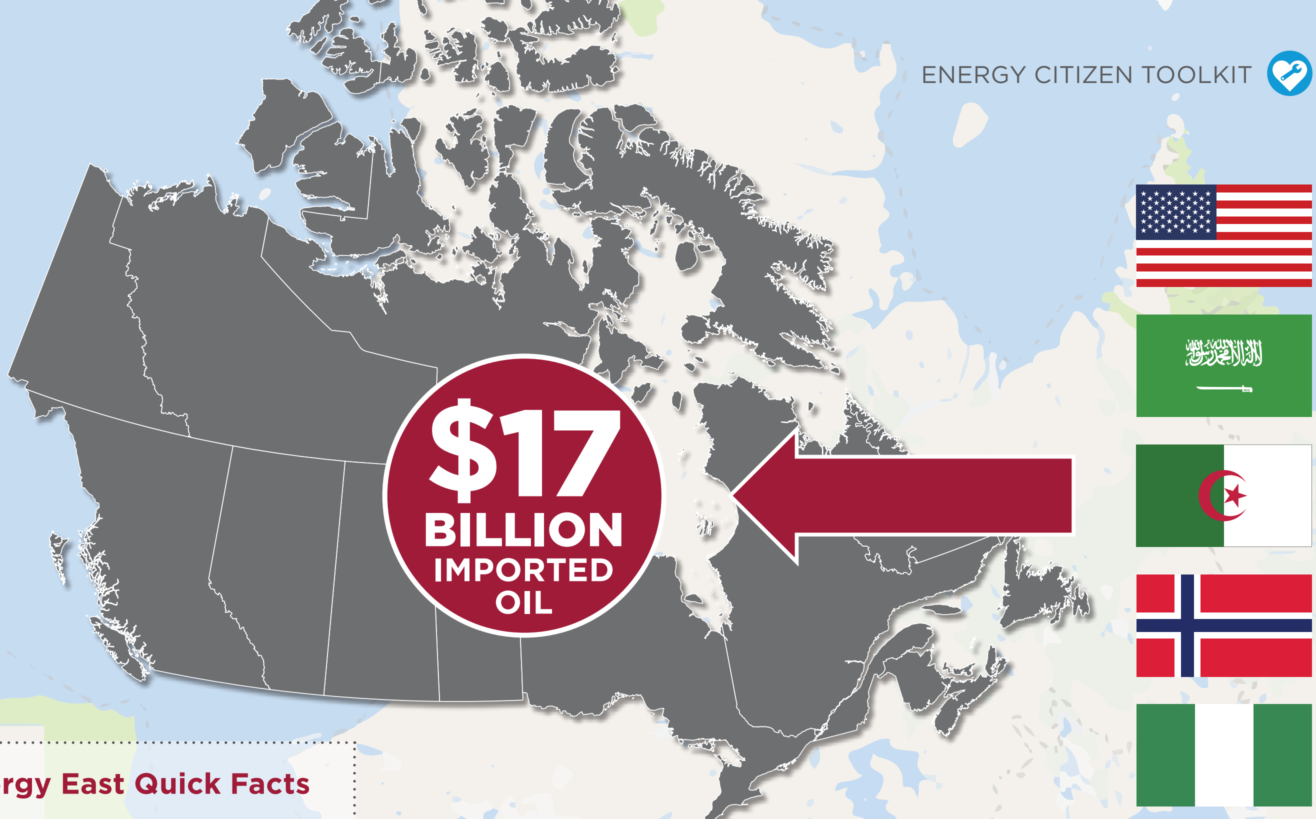
Where It's at and What You Can Do

CANADA'S ENERGY CITIZENS

Energy East is being reviewed by Canada's energy regulator, the National Energy Board (NEB). Public consultations have been temporarily suspended after the three panel members conducting the review decided to recuse themselves in order to preserve the integrity of the NEB and Energy East review. The proceedings will resume once a new panel is appointed.

"While the review is suspended, it's important for supporters of Energy East and increased market access for Canadian oil to keep letting key decision makers know that this is an important nation-building project for all of Canada," says David Sword, advisor of Ontario communications and outreach for CAPP. "To keep in touch on all the latest, I'd highly recommend joining Canada's Energy Citizens."

Learn more at **www.EnergyCitizens.ca** and **www.Facebook.com/CanadasEnergyCitizens**.



Energy East Quick Facts

PROPONENT:
TransCanada Corp.

LENGTH:
4,500 KM
(3,000 already built)

CAPACITY:
1.1 million b/d

CAPITAL COST:
$15.7 billion

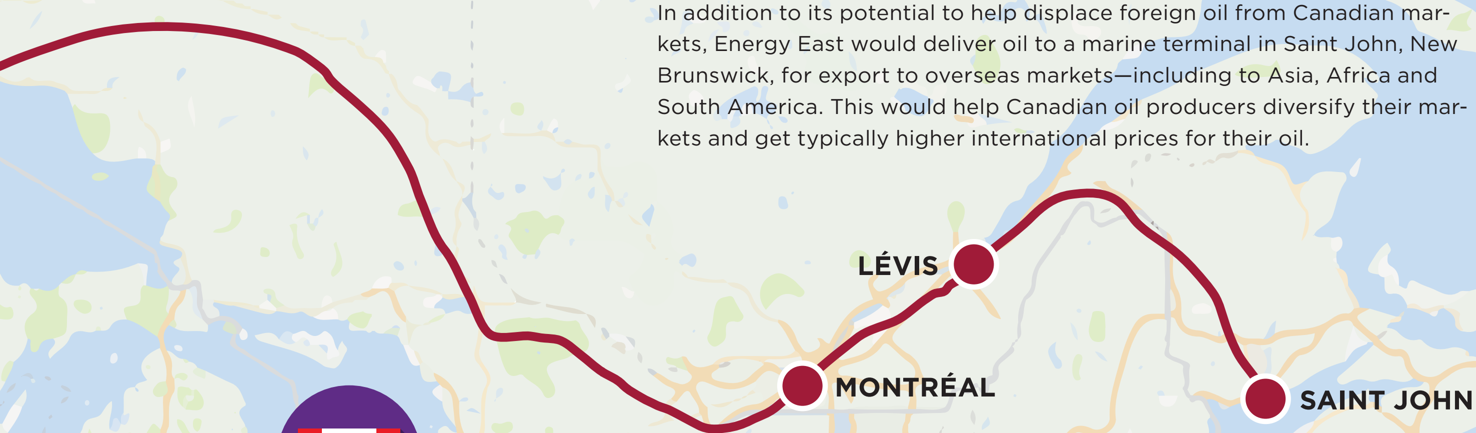
MARKETS:
Eastern Canada and overseas markets via Atlantic Ocean

Why it's Needed? Achieving Energy Independence and Accessing New Markets

You may find it unexpected that Canada, with the third-largest oil reserves in the world, imports hundreds of thousands of barrels of oil into Eastern Canada. In fact, Canadians in Atlantic Canada and Quebec spent $17 billion last year to import oil from the United States, Saudi Arabia, Algeria, Angola and Nigeria. That amounted to more than 50 per cent of the oil used in the region.

Why not use Canadian oil? Well, currently, there is no continuous west-to-east pipeline that can carry large quantities of Western Canadian oil to refineries in Eastern Canada. This is a situation that Energy East would correct.

In addition to its potential to help displace foreign oil from Canadian markets, Energy East would deliver oil to a marine terminal in Saint John, New Brunswick, for export to overseas markets—including to Asia, Africa and South America. This would help Canadian oil producers diversify their markets and get typically higher international prices for their oil.



As of November 2016, more than **54,000** Energy Citizens have pledged their support to building Canadian pipelines.

Recognizing the potential economic benefits to Eastern Canada, New Brunswick Premier **Brian Gallant** has expressed strong support for the Energy East pipeline proposal.

Photograph: THE CANADIAN PRESS/James West

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