

There was a time, not long ago, when Canada was best known internationally for its wide-open spaces, wheat and hockey. Energy is rapidly changing that. While Canada's substantial energy assets are undisputed, there remains much to do if Canada is to fully realize its potential to become an energy superpower.



ENERGY BUILDERS

IMAGE: GETTY

The evolution on energy is about using energy efficiently and in a sustainable way – to cut costs, address environmental concerns, make the most of existing resources through innovation.

Jason Langrish
President, The Energy Roundtable

BY RANDALL ANTHONY MANG

Canada's is on its way to becoming a world-leading energy provider, but proponents of that movement say Canada's formidable energy assets alone are not enough for Canada to realize its potential.

During a recent speech to the U.S. Chamber of Commerce in Britain, Prime Minister Harper referred to Canada as an energy "superpower" and specifically to the oil sands as "an enterprise of epic proportions, akin to the building of the pyramids or China's Great Wall. Only bigger."

Jason Langrish, a former Canadian government trade and investment promoter in Brussels, is now president of The Energy Roundtable – a group that hosts executive-level meetings in Canada and abroad designed to bring executives together to help shape policy and stimulate investment in Canada's energy sector.

"Energy is Canada's 'ticket' in the world. This makes us a player," says Mr. Langrish, who says among Canada's assets, "We have the resources; we are peaceful, politically stable; and we have a prosperous neighbour who buys the lion's share of our products."

Peter Krenkel, president of the TSX Group-owned Natural Gas Exchange, says, "If you look at energy in general – crude oil, natural gas, electricity, nuclear, coal and alternatives – investment is required on all fronts."

Canada's biggest energy play – Alberta's oil sands – is also arguably our best model for how to develop our energy assets.

There, proven reserves of more than 170 billion barrels of oil sands crude have made Canada the world's second-biggest oil nation after Saudi Arabia. But that's only part of the success story.

Ken Smith, managing partner of Secor Consulting, says, "The oil sands serves as a good example of the kind of foresight we need in the development of our industries in general, and especially our resource industries."

He notes that companies such as Imperial Oil began patiently investing in the oil sands "decades ago,

when the economics weren't necessarily there."

It wasn't until recent years, however, when the federal and Alberta governments began allowing companies to recover their capital and operating costs before being charged large royalties, and the price of oil began to soar, that oil sands development kicked into high gear.

Mr. Langrish notes today, "The oil sands is a global project. It's not just Canadians or even American firms. Europeans are investing heavily as well: Royal Dutch Shell, BP, Total of France, and large banks like Société Générale and companies such as ThyssenKrupp AG are involved."

Craig Spurn, co-chair of the Energy Practice Group at Blake, Cassels and Graydon LLP in Calgary, is among the legal professionals facilitating foreign investment.

In recent months, Blakes has led major transactions including Kinder Morgan's \$5.6-billion acquisition of Terasen Gas, and the Chinese-state-owned Sinopec Group's \$105-million investment in a 40 per cent interest in the Northern Lights Project and its related entity Synenco Energy, a partner in an estimated \$4.5-billion oil sands

upgrader project. Sinopec is also fuelling a major pipeline project to ship Alberta oil to Asia through Prince Rupert.

While Mr. Spurn says a host of challenges (environmental, labour shortages, infrastructure, regulatory and others) must be addressed for the oil sands to achieve its longer-term production targets, "Overcoming the challenges is in the interests of a lot of different parties, including Canada. It's very viable given the size of the prize."

Will Canada's other energy sectors get the support they need to grow? Part of the driver may be concern for the environment

Mr. Langrish says, "The evolution on energy is about using energy efficiently and in a sustainable way – to cut costs, address environmental concerns, make the most of existing resources through innovation."

This is promising news for clean energy systems – from clean coal technologies and nuclear to wind power and other renewables.

Mr. Krenkel says, "That's the area where people are looking to invest: clean and renewable technologies like biomass and bio-diesel that have minimal impact on the environment."

He notes while government incentives help, "Higher oil prices are perhaps the greatest incentive yet to boost interest in alternative energy."

Mr. Smith believes Canada is also well-positioned to capitalize on a global renaissance for nuclear energy, but has concerns.

"We have a world-class skill base in the research and development of nuclear reactors. But we've been managing this as a protected Crown operation."

"The concern I have is can we, will we, parlay that reputation and skill into the global nuclear industry as it grows to a scale many times its current size? We need to attract capital, skills, partnerships that will allow us to participate in the nuclear renaissance globally. That's hard to do with a protected, subsidized Crown corporation."

Mr. Langrish says Canada's emerging geopolitical significance in terms of energy security is leading to deepening policy considerations. "Now, policy makers and utilities need to review options within an international context. Canada needs to be seen as a choice location for investors who have a long view on energy and its returns." ■

Join the dialogue on energy

If you have an interest in Canada's energy future, or would like to, it can pay to keep abreast of the activities of The Energy Roundtable.

This annual event draws senior representatives from energy companies, utilities, engineering, financial service firms and other sectors for discussions on the major drivers of energy sector investment.

This year's Energy Roundtable takes place Tuesday, September 26 in Calgary, Alberta.

To learn more, visit www.energyroundtable.org.

Transmission and infrastructure

Initiatives to strengthen the integration of electrical grids are underway from Mexico to Canada

BY NICOLE DUNSDON

When we flick a switch, our lights go on. When a utility powers up, the transmission lines are there to deliver electricity to customers.

Little do we know just how much goes on behind the scenes to bring us the power we take for granted.

While in the past, electricity came from a local generator, today it could easily come from California. The reason: our continental energy grid is increasingly integrated, a measure that industry insiders say is vital to North American energy supply systems.

In the west, the British Columbia Transmission Corporation (BCTC)

grid has been linked with Alberta and the northwestern United States for more than three decades.

"Initially, electricity systems were built to serve the needs of the province or state only. Over time, these independent systems were joined together by transmission lines," says Jane Peverett, the CEO at BCTC. "Such integration has many benefits."

The Western Electricity Coordinating Council (WECC), of which BCTC is a member, represents the electric power systems engaged in bulk power generation and/or transmission in Alberta, British Columbia, the northern portion of Baja California, Mexico and all or portions of the 14 western states in between.

Donald Davies, senior technical engineer with WECC, says by sharing power across regions, less capacity needs to be installed in each area. "In the northwest, loads tend to peak in the winter time, whereas the southwestern loads peak in the summer time. One of the benefits of interconnection is that power available in the southwest can be sold to the northwest in the winter, and vice versa."

He says another benefit of interconnection is that a disturbance in one part of the Western Interconnection can be corrected from somewhere else in that region. "Moving electrons from one jurisdiction to another," as Ms. Peverett puts it.

In recognition of this mutually

beneficial relationship, power generation/transmission organizations are working together to both create and follow the same set of standards. WECC and seven other continental councils make up the North American Electric Reliability Council. Each area in North America is subject to the same reliability standards, which Mr. Davies says are under continuous review and revision.

While interconnections are a part of BCTC's history, Ms. Peverett says there is still more that can be done to reap the benefits of integration in the Pacific Northwest.

She says the regions need to pursue more physical ability to move

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INSIDE:

AN ENERGY SUPERPOWER

Remarks by DON MACKINNON, President, Power Workers Union, offer insight. EB2

REGULATORY MATTERS

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RISING STOCK

Energy. A redefining driver of Canada-U.S. relations. EB4

Edmonton: the global port to the oilsands



ENERGY BUILDERS

An Energy Superpower

Put to work, Canada could turn its assets into something powerful.

DON MACKINNON
President, Power Workers Union

Canada's success and strength as a nation is often attributed to its diversity of cultures. Going forward, this country has a tremendous opportunity to become an energy superpower by utilizing the diversity of its indigenous fuel resources and its highly educated and skilled labour force. Such a future can be accomplished by taking advantage of these resources, increasing co-operation between the federal and provincial governments and the private sector, securing more foreign investment and adopting successful approaches to energy sector development from other jurisdictions around the world.

A province-by-province scan of Canadian electricity generation by fuel type shows that, historically, water resources have played the largest role in our electricity fuel mix; however, it also demonstrates that not all provinces have been equally blessed with water resources. As a result, fossil fuels such as oil, gas and coal have played a key role in Alberta, Saskatchewan, Ontario, New Brunswick and Nova Scotia. Ontario and New Brunswick have also benefited from Canada's uranium resources and our own nuclear power technology.

This fuel diversity helped Canada overcome some significant disadvantages: a large geographic area and low population density; a climate with cold winters and hot summers; and an economy heavily weighted toward resource extraction and energy-intensive, primary industries. Canada has also been able to achieve a relatively high standard of living and to export revenue-generating electricity to our neighbours in the United States.



Today, we are facing an increasing demand for electricity, driven by a growing economy and population. At the same time, major investments in electricity infrastructure replacement and upgrades have not been made for decades. Ontario alone needs to replace 80 per cent of its existing generating capacity at an estimated cost of \$25 billion to \$40 billion. This represents a major challenge for Canada, and rapid economic growth in Alberta and Ontario has meant increased reliance on electricity imports.

To continue to succeed in the global marketplace, Canada must maintain and expand the diversity of its energy mix. All options – hydroelectric, nuclear, coal, natural gas, biomass and renewables such as wind – should be included. The real challenge is to maximize the unique technical, economic and environmental attributes of each option.

Coal is an important part of Ontario's energy mix; however, the province must commit itself to investing in proven clean coal technology. In Denmark and Germany, clean coal technology has played a critical role reducing air emissions. With coal as part of the energy mix,

not only would the reliability of the province's electricity system be maintained, but this affordable source of energy could be made available to Manitoba and Quebec at times of low water levels. As each province looks at its respective energy needs, the broader benefits that can accrue from increased co-operation cannot be overlooked.

The sheer scale of the financial and technological challenges associated with these investments suggests collaboration may be necessary to ensure success, such as Bruce Power's lease of the Bruce Nuclear Complex from Ontario Power Generation.

To attract investment, however, we need to establish clearer standards and streamline the approvals process. In Ontario, the current confusing mix of agencies and policies needs to be simplified. Recent expert reports and recommendations designed to deal with our challenges have largely been ignored or have been implemented in a piecemeal fashion. Experience in Europe shows that incentives such as tax credits, and market-driven mechanisms such as emission trading, encourage industry to meet and exceed standards. These approaches have enabled countries like Denmark to develop biomass co-firing using straw and wood pellets along with coal, expand district heating, and reduce greenhouse gas emissions. We must continue to make significant investments in training our labour force to equip them with the necessary skills and education needed to design, build, maintain and operate an integrated electricity system.

Canada will not achieve energy security or aspire to be an "energy superpower" if we ignore these fundamentals.

Land of opportunity

The rush to fully develop Alberta's oil sands has resulted in the largest engineering project on the planet today, creating opportunities across virtually all economic sectors.

Intent on helping Canadian manufacturers capitalize on this historic boom, Canadian Manufacturers & Exporters recently launched its Innovative Canadian Oil Sands Manufacturing Opportunities (www.icosmo.ca) initiative. This web portal provides a convenient way for Canadian companies to tap into Alberta's renaissance.

If the notion of setting up shop in Fort McMurray sounds daunting, don't let it stop you. Alberta's charming capital city, Edmonton, a longtime hub of the resource industry services sector, is teaming with activity.

According to the Conference Board of Canada, compared to 10 other major Canadian cities, Edmonton's GDP growth ranked No. 1 for the second time in two years.

"We are in the heart of one of Canada's biggest investment opportunities ever," says city spokesperson Robert Moyles. "For businesses, or people looking for a great place to work and live, this is the place to be."

How big is the potential? Edmonton's \$40-plus billion GDP is greater than Nova Scotia and New Brunswick together.

Transmission

From EB1

electricity back and forth by building more transmission lines. An example of this is the proposed Montana Alberta Transmission Line, an initiative of Tonbridge Power Inc. – a privately funded or "merchant" transmission line between Lethbridge, Alberta, and Great Falls, Montana.

Ms. Peverett says more such private industry initiatives are occurring in B.C., including a volume of independent power producers that are building new, small power generation projects.

This makes collaboration even more important, and Ms. Peverett says work is ongoing to eliminate seams. "We want the business rules to be reasonably similar across the regions."

BCTC is a member of the Northwest Power Pool, whose Transmission Planning Committee has created a subcommittee (called the Northwest Transmission Assessment Committee or NTAC) to involve every interested body – not just electrical utilities and regulators – in the planning process.

"Since 2003, organizations have seen a need for open planning forums with developers, merchants, load areas, tribes, environmental groups and any other interested parties, rather than just the pure reliability forums," says John Martinsen, chair of the Northwest Power Pool Transmission Planning Committee.

Their work has led to some great transmission initiatives. For example, the Canada-Northwest-California Transmission Options Study led to the proposal of a new tie between Fort McMurray, Alberta and Celilo, Oregon.

This report was produced by Randall Anthony Mang (www.randallanthony.com) in conjunction with the advertising department of The Globe and Mail, Richard Deacon, project manager • e-mail: rdeacon@globeandmail.com

BC Transmission Corporation

building connections



- ▶ **It's a long way** from the sources of our power to the places where it is needed. Moving electricity over an 18,000-kilometre grid to communities and businesses is the job of the British Columbia Transmission Corporation (BCTC). A dynamic, growing economy requires a strong electricity system to support its increasing needs. BCTC provides the innovation and operational excellence needed to help support the region's economic engine.



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Energy prices will drive infrastructure and conservation



DERYK KING
Chairman and CEO, Direct Energy

Over the last 18 months, devastating hurricanes, political turmoil in the Middle East and global economic growth have converged to produce increasing volatility in the energy prices seen by home and business owners on their monthly utility bills. While the temptation for political intervention and near-term amelioration of rising energy costs is substantial, our interests as energy consumers are best served when governments and regulators resist such temptation. Infrastructure investment and conservation, which are the resources needed to provide adequate supply, will result from real energy prices.

As North America's largest integrated energy company, servicing over five million business and residential customers with gas, power and home services, Direct Energy's experience operating in North America's diverse regulatory environments has shown us that competitive energy markets are in the best interest of consumers, the economy and the environment.

Establishing real wholesale and retail energy prices will attract private capital, thereby shifting the risks associated with large, capital-intensive energy infrastructure investment from ratepayers and taxpayers to investors. These substantial capital risks should belong to private investors who can more effectively and efficiently manage them.

Consumers should be exposed to the true cost of energy. Eliminating subsidized retail energy pricing, thus allowing retail prices to reflect the true value of energy consumed, will result in increased consumer interest in monitoring their energy usage, implementing conservation programs and investing in demand response technology.

Alberta, Ontario and more recently British Columbia, have each taken steps in the right direction.

The Alberta government's continued commitment to an open and competitive energy market has created upstream opportunities, a large green energy sector and a shift in investment risk away from ratepayers and taxpayers. However, the natural gas rebate program continues to distort price signals, deter conservation and channel government funds to consumers irrespective of need.

The Ontario government has taken positive steps to restore a competitive wholesale market with the Ontario Power Authority examining alternatives to government-backed, long-term power purchase contracts and providing some price transparency through wholesale power auctions. However, wholesale price caps and retail electricity rebate programs continue to shield consumers from the true cost of the electricity that they consume. Subsidizing retail electricity prices undermines

conservation as it must then be induced by spending additional funds to provide consumers with adequate incentives to conserve. It is Direct Energy's hope that the Ontario government will continue to support the restoration of competitive wholesale and retail electricity markets, so that energy prices are allowed to work for, rather than

against, the longer-term interests of Ontario's energy consumers.

In comparison, in Texas, the political and regulatory will to continue the transition to a fully functioning competitive electricity market has been repeatedly validated. Non-intervention by government or regulators and the resulting market-based pricing has prompted Direct

Energy to invest in over 1,200 MW of power generation capacity and sign off-take contracts for 443 MW of wind power.

Direct Energy is strongly encouraged by the actions taken by the British Columbia government to create an environment that will enable competitive retail prices to be brought to residential and small

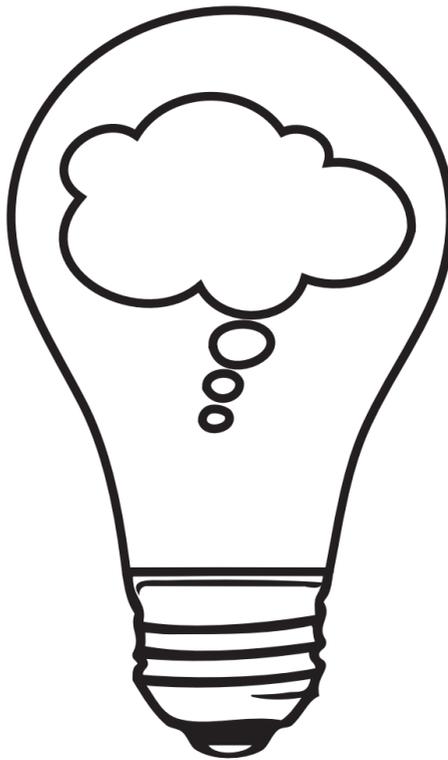
commercial natural gas customers in 2007.

In the coming year, Direct Energy is prepared to invest infrastructure capital in North American markets that offer stable investment climates and energy markets founded on competition and true wholesale and retail prices.

Creating an environment that

encourages infrastructure investment and energy conservation must remain a priority for Canadian policymakers. The most direct way to encourage investment and conservation is to let prices reflect true energy supply and demand fundamentals. Policymakers should not lose sight of this simple but very powerful economic principle. ■

ENERGY REQUIRES THOUGHT.



Think about it - our growing need for energy must overcome our aging infrastructure, broken promises and political rhetoric. Canada's prosperity lies in what we do now to establish a future that gives us energy security and greater economic opportunity.

Canada's varied energy resources are not equally shared among all provinces. British Columbia, Manitoba, Quebec and Newfoundland and Labrador, and to a lesser extent Ontario, have hydroelectric potential to develop. Apart from the oil and natural gas reserves in Alberta, Canada has enough coal to last 250 years. Saskatchewan has the world's largest high-grade uranium deposits.

The solution to maintaining our standard of living and global competitiveness starts with including all energy sources in the

plan - hydro, nuclear, fossil fuels like natural gas and coal, biomass, and renewable power like wind. This means investing in our energy future. Ontario, for example, needs to rehabilitate or replace 80 per cent of its existing generating capacity at an estimated cost of \$25 to \$40 billion by 2020.

Investment brings prosperity and growth. Canada's nuclear energy is a case in point - it is a \$5 billion a year industry that creates 21,000 direct and another 10,000 indirect jobs as well as \$1.2 billion in exports. For over 40 years nuclear energy has provided a significant portion of Ontario's electricity needs (currently 51 per cent). New Brunswick gets 25 per cent of its electricity from nuclear power as well. We need to build on the success stories from nuclear and apply them to other areas of expertise - like clean coal

technology, hydroelectric generation and transmission - industry will grow.

Increased investment and innovation requires the right conditions: increased cooperation between federal and provincial governments and the private sector; clear standards and streamlined approval processes that answer our energy challenges; and learning from the success of others. Europe, for example, is using incentives such as tax credits to encourage biomass projects.

Most importantly, we need to continue to invest in our greatest asset - a highly skilled and educated labour force needed to design, build, maintain and operate an integrated energy system.

A better energy plan ensures Canada's own security and creates the conditions to become an energy superpower. Albeit, in a Canadian sort of way, a humble one.

Power to the sands

Producing oil from Alberta's oil sands requires energy. The challenge: natural gas, today's most commonly used energy source, is widely considered unsustainable for economic and supply reasons.

Among the options under consideration is a nuclear facility. Energy Alberta Corporation says a Canadian-designed CANDU nuclear plant could supply electricity as well as steam and hydrogen for oil sands recovery and upgrading, not to mention a means of offsetting greenhouse gas emissions of oil sands operations.

For more information, send an e-mail to information@energyab.com.

www.abetterenergyplan.ca

POWER WORKERS' UNION



ENERGY BUILDERS

Energy assets



Statistics illustrate
Canada's potential.

Figures provided by the Alberta-based Centre for Energy Information, based on statistics from its own research and industry and government sources, provide a snapshot of the massive economic contributions and potential of key Canadian energy assets.

Coal

Canada has approximately 6,578 million tonnes of coal reserves. Production for 2004 totalled approximately 66 million tonnes. Coal provides about 56,000 direct and indirect jobs in Canada and contributes approximately \$5 billion to the Canadian economy.

Canada exported 27.1 million tonnes of primarily coking coal in

2004 and imported 19 million tonnes of coal in 2004, of which 15.6 million tonnes were thermal coal. Total domestic consumption for 2004 was 59 million tonnes, of which 55 million tonnes went to electricity generation.

Canada currently has almost 17,000 MW of coal-fired generating capacity, located primarily in Alberta, Saskatchewan, Ontario and New Brunswick. This represents about 18 per cent of the country's total generating capacity.

Crude Oil

With 175 billion barrels of crude oil, Canada is second only to Saudi Arabia in crude oil reserves. Canada's oil reserves comprise approximately 4.4 billion barrels of conventional oil and approximately 171 billion barrels in its oil sands deposits.

Canada produces 2.5 million barrels of crude oil daily and is currently the ninth-largest producer of crude oil in the world. Current Canadian oil exports total almost 1.578

million barrels per day, 99 per cent of which goes to the United States.

Canadian crude oil production is forecast to be 4.6 million barrels per day by 2015, with further potential growth to 4.9 million barrels per day by 2020. Oil sands could provide as much as 50 per cent of Canadian crude oil production by 2007 and up to 90 per cent by 2025.

Wind Power

Canada currently has almost 1,050 MW of installed wind power capacity and is estimated to have technical potential for more than 40 GW of wind power.

Canada's production target of 4 gigawatts of wind energy by 2010 would provide enough electricity for more than 250,000 Canadian homes.

The Canadian Wind Energy Institute (CanWEI) will open at North Cape, Prince Edward Island, in 2006. CanWEI will support the development of wind power generation in Canada and wind energy

related products and services for Canadian and export markets.

Nuclear Power

Nuclear energy in Canada is used for peaceful purposes such as electricity generation, medicine, agriculture, research and manufacturing. The nuclear power industry provides 21,000 direct jobs, 10,000 indirect jobs and employs 150 firms in Canada. In 2005, 17 of 22 CANDU reactors were in service, generating 15 per cent of Canada's electricity. Saskatchewan is the world's largest uranium producer. About 30 per cent of the world's uranium production comes from this province.

Hydro

Hydropower is Canada's number one renewable energy generation source, and is expected to remain that way into the foreseeable future. It contributes about 60 per cent of Canada's total generation capacity.

Canada currently has nearly 370 hydro-generating facilities and is planning to develop 17 more hydropower facilities across the country prior to 2015. Churchill Falls Hydroelectric Generating Station in Labrador is the largest underground powerhouse in the world with a rated capacity of 5,428 MW.

Natural Gas

The Canadian Association of Petroleum Producers estimates the combined marketable resource potential of conventional natural gas and coal bed methane to be 537 trillion cubic feet.

Canada produced an average of 17.3 billion cubic feet per day of natural gas in 2005, of which 10.2 billion cubic feet per day were exported to the U.S. The upstream petroleum industry employs more than 365,000 people directly and indirectly in activities related to finding, producing and processing oil and natural gas. ■

Canada's stock rising on oil sands

BY RANDALL ANTHONY MANG

Canada's growing reputation as an energy superpower is redefining our role in the world, a change perhaps no more strongly reflected than in the evolving dynamic between Canada and its largest trading partner, the United States.

Fuelling this change is Alberta's oil sands – an oil resource second in the world only to Saudi Arabia's.

Alberta already supplies the U.S. with 11 per cent of its energy. Intent on increasing oil sands production, interests on both sides of the border are focused on growth-related issues including labour mobility, research and development, investment, infrastructure and regulatory streamlining.

Scotty Greenwood, executive director of the Washington, D.C.-based Canadian-American Business Council, said, "The historic asymmetry of the Canada-U.S. trade relationship is getting flipped on its head.

"The U.S. is a net importer of energy; Canada is a net exporter,

and a much safer and more reliable partner than many U.S. suppliers. All things considered, it's much better value to get our energy from Canada."

Many of America's top business and political leaders are taking note.

This summer, when Prime Minister Harper visited George Bush in Washington, D.C., the President reportedly commented, "I see the Albertans are in town," gesturing to the 100-tonne oil sands truck parked in the National Mall.

The massive vehicle was part of Alberta's display at this year's Smithsonian Folklife Festival. It was the first time an international sub-national jurisdiction had been featured at this prominent American event, which drew close to a million visitors.

Murray Smith, Alberta's representative in Washington, D.C., says, "At a million barrels a day, we're getting noticed. We have the potential to produce five million barrels per day, which is half of current Saudi production."

Realizing this five-fold produc-

tion increase, however, will take decades and increasing bilateral co-operation.

Mr. Smith says in addition to stronger co-operation on building new pipeline capacity, increasing and diversifying refinery capabilities, regulatory efficiency, "We must work to create positive environments that will facilitate the financing and construction of these great energy products."

Among its efforts, the CABC is lobbying U.S. policymakers to support oil sands-related research and development.

"It's clear that in 2007, Congress is going to be spending huge money on alternative energy programs. They should include spending on cleaner, more efficient ways to develop the oil sands, but it will take some advocacy," says Ms. Greenwood.

Business interests well outside the energy sector have plenty to gain from oil sands development. The opportunities haven't escaped the attention of industry groups such as Canadian Manufacturers &

What we bring to the table is not only energy producers, but also the users – major industry that drive the economy and create jobs. It broadens the dialogue about what the needs are and what needs to be done.

Scotty Greenwood

Canadian-American Business Council

Exporters, which recently launched its Innovative Canadian Oil Sands Manufacturing Opportunities (www.icosmo.ca) initiative to match manufacturers with opportunities.

"It is estimated that over 60 per cent of the steel used in Fort McMurray is touched by Ontario hands. With trucks assembled in Illinois, tires sourced from the Carolinas and talent sourced from around the world, it has been said that a barrel of oil from the oil sands is the most value-added barrel of oil in the world," says Mr. Smith.

As great as Alberta's capacity may be, Mr. Smith cautions, (at five million barrels per day) the oil sands could provide the U.S. with "a 50 per cent solution. It can either satisfy declining production or economic growth, but it can't do both."

As such, he says the U.S. must also focus on efforts such energy conservation and the expansion of alternative energy assets. At the same time, Canada must continue to develop its other energy assets including coal, nuclear and renewables. ■

At a million barrels a day, we're getting noticed. We have the potential to produce five-million barrels per day.

Murray Smith

Alberta's representative in Washington, D.C.

Now Hiring. Energy sector grapples with labour shortfall

A recent Deloitte study found that while 80 per cent of energy companies had discussed concerns about the growing skilled labour shortage at the board level, only 39 per cent of oil and gas company respondents had identified the skills they need to grow their business going forward and only 18 per cent had begun active planning to deal with the labour shortfall.

"This is not just an oil sands issue," says Cheryl Knight, executive

director and CEO of the Petroleum Human Resources Council of Canada. "In the conventional oil and gas sector, there is a high degree of activity throughout Canada, particularly in the western provinces. The demand for skilled labour will continue to grow as people age and retire."

Ms. Knight sees the education partnerships between industry, government and education as vital to the solution, but says that the linkage

needs to extend further, into junior and high schools, where students are often unaware of the more than 70 occupations offered by the industry.

Another important element of the solution is interprovincial migration and immigration from other countries. Most immediately, she says, both government and industry are challenged to more effectively engage skilled Canadian and immigrants already in the country.

"We're also seeing shifts," says Ms. Knight, "that will change the nature of the oil and gas workforce to include more women, Aboriginals and other under-represented sources of skilled labour. Employers are working to engage these employees and to retain them through new human resources policies that make the work environment more attractive."

"We're starting to see significant investments in education," says

Deloitte partner Stephen Diotte, head of the new Human Capital Division in Calgary, "but there is a lag between getting those programs online and accessing the skills. We're encouraging our clients to first figure out what skills they need, and when; in the short term, we're advising them to focus on productivity."

Mr. Diotte cites a recent University of Calgary study that concluded employees in the sector were produc-

tive only 37 per cent of their day, not because they didn't want to work hard, but because of efficiency issues like equipment and transportation logistics. "Productivity is not a measure organizations have been concerned about as much as they need to be in the future. Even a 10 per cent improvement can have a significant impact."

- Lori Bamber

It takes a lot of energy to get Canada ready for work every day

Canadian energy supports our way of life and powers our economy.

Consider how much energy it takes to run Canada every day.

From your alarm clock (and its snooze button) to a hot shower, hot coffee, and hot breakfast, energy plays an essential part every step along the way. Whether it's natural gas for your water heater or electricity for your microwave, Canadian energy powers them all.

The Canadian Centre for Energy Information provides extensive information about energy resources from Canada. Visit us today to learn why stable and sustainable energy development is critical to the Canadian way of life.

To learn more about the essentials of energy, please visit www.centreforenergy.com



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