

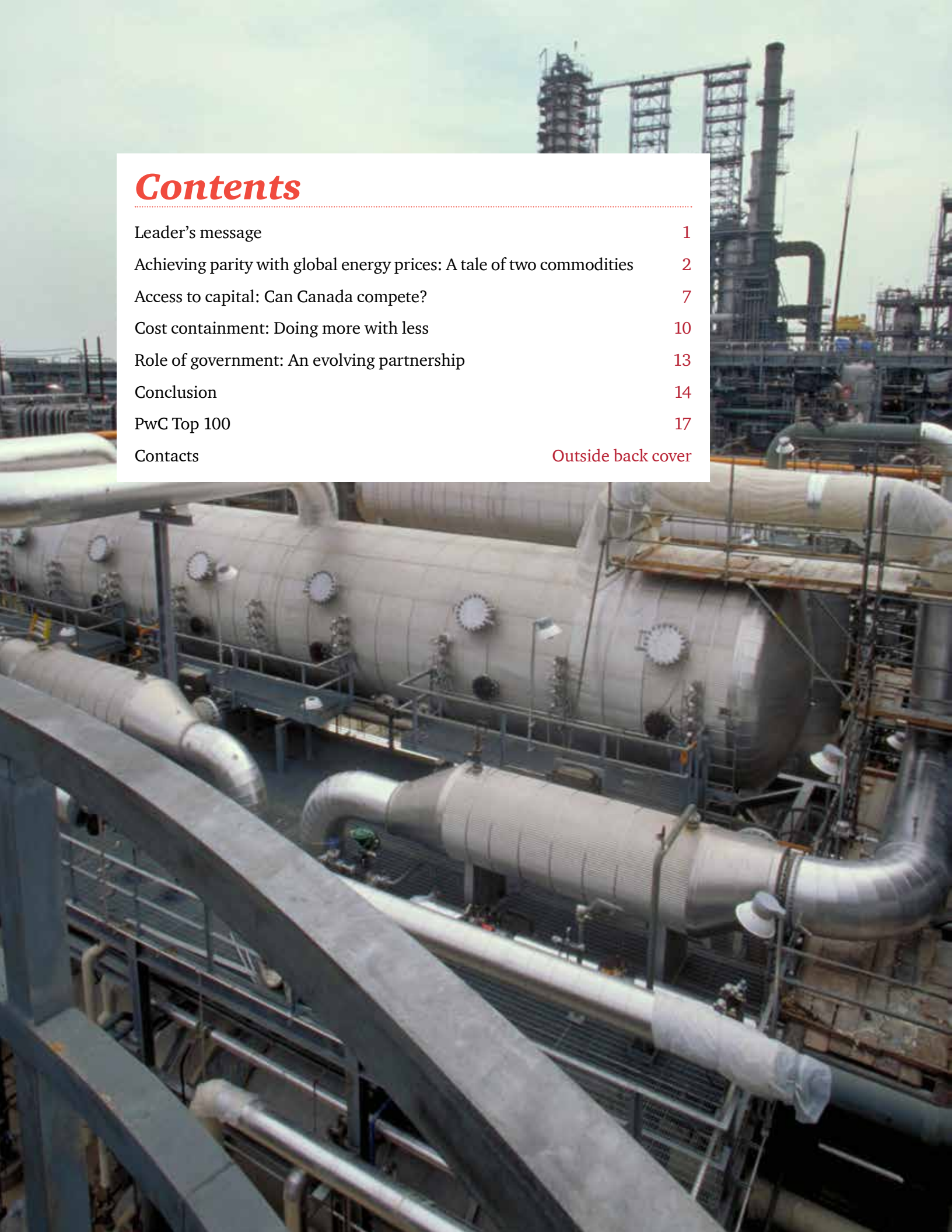
At a crossroads

Considered a high cost oil and LNG producer, can Canada compete for capital in today's post-peak oil world?



Contents

Leader's message	1
Achieving parity with global energy prices: A tale of two commodities	2
Access to capital: Can Canada compete?	7
Cost containment: Doing more with less	10
Role of government: An evolving partnership	13
Conclusion	14
PwC Top 100	17
Contacts	Outside back cover



Can Canada compete in the global market?

Leader's message



In last year's energy report, we explored key issues and areas of focus that could lead Canada to achieving energy superpower status. We now look back on these dialogues as rich sources of insight that are fundamentally direction-setting. Today, we see Canada at a crossroads.

A crossroads suggests the Canadian oil and gas industry is at a point where important decisions need to be made. The options are basically four-fold:

1. return back along the single-market path we've been on; 2. turn left and emphasize a west coast pipeline and tidewater strategy; 3. turn right and build a pipeline infrastructure to the east coast; or 4. head straight ahead north into the unknown, which is rich in unconventional resources. The dynamics of the global economy and the world's energy markets mean Canada must be very strategic in choosing which direction to take. Canada's shift from a continental to a global energy player will bring new market and geopolitical dynamics into play, including a range of new competitors. Our ability to understand market conditions and attract global investment will determine whether we prevail.

For this year's report, we've asked global analysts and industry leaders for their insights and perspectives on *Canada at a crossroads: Considered a high-cost oil and LNG producer, can Canada compete for capital in today's post-peak oil world?* Our report focuses on the implications of being a high-cost producer and provides context on:

- achieving parity with global energy prices
- the on-going global competition for capital
- cost containment
- the role of government

Their views suggest that the industry and government face new and critical challenges but that we shouldn't lose sight of the comparative advantages that'll continue to make Canada competitive in the long term. And while there are contrasting views on achieving parity with global energy prices and competition for capital, our experts are confident about Canada's prospects for overcoming market access barriers and of our ability to attract the investment resources required to become a global leader in unconventional production.

We also need to address cost containment in our areas of operation. In a world that's been concentrating on developing its known reserves for the last 20 to 30 years, global production costs have become higher as access to easy oil diminishes. Here too, our experts are impressed and encouraged by the track record and depth of Canadian ingenuity, especially related to technological innovation. They're also champions of our legacy and world reputation as a transparent, stable and rules-based market system. But at the same time, our unconventional oil and gas production is threatened as oil sands pipelines near capacity and shale gas for possible LNG feedstock is still in its infancy. All of which raises new questions and places new demands on the roles of our governments.

Our view at PwC aligns with these perspectives. Global economic and energy market dynamics have significantly changed the landscape over the last 12 months and we recognize the need to watch what our global counterparts are doing to enhance their own competitiveness. At the same time, the industry's existing strengths will be key waypoints in showing us how to move forward. In this report, we aim to provide a roadmap for negotiating these crossroads and identifying those waypoints.

Reynold Tetzlaff

National Energy Leader

PwC Canada

Achieving parity with global energy prices: A tale of two commodities

Canada's oil and gas industry remains a tale of two commodities, each with its own complex set of challenges and opportunities. Over the past few years, Western Canadian energy producers have watched the prices that they receive in North American oil and gas markets fall below global benchmarks, such as Brent for crude oil, as well as natural gas prices in Europe and Asia. To narrow these differentials, Canada will need to make clear direction-setting moves in the coming years in order to secure market access. Failure to do so will mean continued risk of resources becoming stranded, with prices received by existing Canadian producers lagging global benchmarks.

Oil

Canada's potential as an oil producer is almost unparalleled, with proven and recoverable reserves ranking near the top in the world. Overall, crude oil exports from Canada remains stable. In 2013, exports increased to more than 2.5 million barrels of oil per day (mmbopd). This was up from just over 2.3 mmbopd in 2012¹. The long-term view is even more encouraging, with approximately CA\$253 billion expected to be invested in new oil sands capacity over the next quarter century, raising production to

3.7 mmbopd of bitumen by 2021, more than double the current 1.8 mmbopd².

The risk of continued unfavourable price differentials would have significant downside for the Canadian energy industry. For one thing the technical challenges of exploiting our largest resource, the oil sands, can often put the per barrel cost of production near market prices for certain projects. A combination of weak markets and sustained discounts would put certain high-cost projects at risk.

As Canada moves from a focus on the US market toward exporting our oil production to world markets, it will fight for market share with nations that have strategic interests and the regulatory will to capture demand, particularly in the high-growth Asian market. It's also a global market in constant flux: as Eurasia Group principals point out, several of today's high-demand countries, such as China, currently lack the capacity to refine significant volumes

“You often hear people lament the fact that the countries of North America don't have an energy strategy, either individually or across the region. But when you push them a little bit on what they mean exactly, it's often unclear what they're actually referring to.”

Jason Bordoff,
Columbia University

of extra-heavy crude, and are witnessing growing movements within their populations to curb pollution. Additionally, they are importing new streams of light sweet crude from West Africa and East Siberia.

In the short-term, the key to achieving parity with global energy prices includes:

1. expanding access to markets;
2. consistently building a sophisticated perspective on global markets;
3. building an overall strategic plan that includes a national or even continental energy strategy and improved government-to-government relationships.

Expanded market access helps mitigate risk by offering producers a greater range of options. As Robert Hormats of Kissinger Associates, Inc. argues, even if we'll never be a low-cost producer, it's imperative that we actually get to play in the global market and earn a fair price for our product.

“If Canada has the capacity to export to a greater number of countries and finds more markets abroad, incentives for greater investment increase and the prospects for greater diversification of investors increase as well.”

Robert Hormats,
Kissinger Associates, Inc.

1. Statistical Handbook for Canada's Upstream Petroleum Industry. Canadian Association of Petroleum Producers. May, 2014.
2. 2013 CAPP Crude Oil Forecast, Markets & Transportation—Production & Supply Data. Canadian Association of Petroleum Producers.

At the same time, we have to continue looking for ways to streamline processes and build greater flexibility into the system. Recent changes to our immigration and review processes are steps in this direction and reflect a similar degree of responsiveness to market dynamics in other jurisdictions. An example of this is Brazil's review of its foreign investment approach after weak expressions of interest by international oil companies (IOCs) in their deepwater pre-salt play. The building of accommodating policies on unconventional oil and gas production in the US is another prime example.

Our government has also come to a crossroads around the efforts to establish new foreign relations and trade treaties in particular, which are helping to open up new markets and level playing fields in the process.

The simple fact is that market dynamics are always changing. The International Energy Agency may have recently tapped Iraq and Brazil to provide more than half of the extra 12 million barrels of oil per day in expected demand by 2035, but Canada is one of the fourteen countries that can export more than a million barrels a day, while Brazil is not even on that list at the moment. How Canada will compete with Iraq and Brazil, as well as with other countries that are able to export oil in significant volumes, is the key question that will determine our future success in this industry. While it's expected that global oil demand will continue to grow over the next decade, the rate of growth is slowing, and higher cost, less competitive producers risk getting priced out.

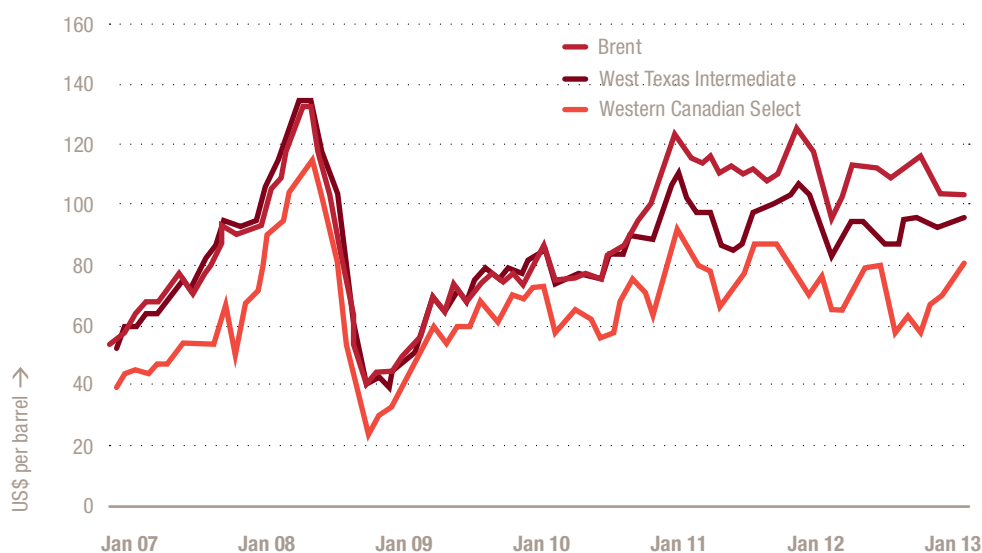
“We already have an integrated energy market system where pricing, supply, or other challenges in one part of North America affect prices throughout the continent, so it makes sense that we coordinate closely on our transmission grids.”

Jason Bordoff, Columbia University

“It really all comes down to having increased pipeline takeaway capacity. Having pipelines reach new markets, especially those with access to tidewater pricing, would help to ease price discounts in Canada.”

Harbir Chhina, Cenovus Energy

Benchmark oil prices



Source: National Energy Board

Achieving parity with global energy prices: A tale of two commodities

The LNG potential

Another story for Canadian producers is the growing international demand for liquefied natural gas (LNG), with a number of conflicting sub-plots along the way. Since 1997, world trade in LNG has tripled to more than 30 billion cubic feet per day (Bcf/d), with Qatar alone meeting a third of that demand. Australia also looms large with a number of LNG projects in development or construction, while Nigeria, Malaysia and Indonesia are strong incumbent competitors. Given that the world's overall consumption of natural gas is expected to exceed 500 Bcf/d by 2014³, and that international LNG pricing is pegged to oil or oil products pricing indices, we see strong upside potential for Canadian producers, the investment, technical and regulatory hurdles aside.

One challenge for Canada in its role as a natural gas producer and LNG supplier is that the vast majority of resources are tied up in unconventional gas plays. For example,

Canada's 70 trillion cubic feet (Tcf) in conventional reserves⁴ pales in comparison to the estimated 573 Tcf tied up in technically recoverable shale gas formations alone⁵. Eurasia Group's Robert Johnston sees further complicating factors, such as the British Columbia government's proposed two-tier tax regime for LNG projects, and especially competition from the US.

LNG development in British Columbia needs careful negotiation and coordination of efforts around regulation, support infrastructure and to earn the social license to operate if those projects are to deliver the estimated CA\$150 million in taxes and CA\$500 million in gross domestic product (GDP) growth across Canada over the next 25 years⁶.

We agree with industry proponents, such as Credit Suisse's Jan Stuart, who are emphatic in their support of the notion that adversity ultimately calls forth operational excellence and that it's only a matter of time before the industry finds ways to make things work.

3. *Executive Summary – World Energy Outlook 2013*. International Energy Agency.

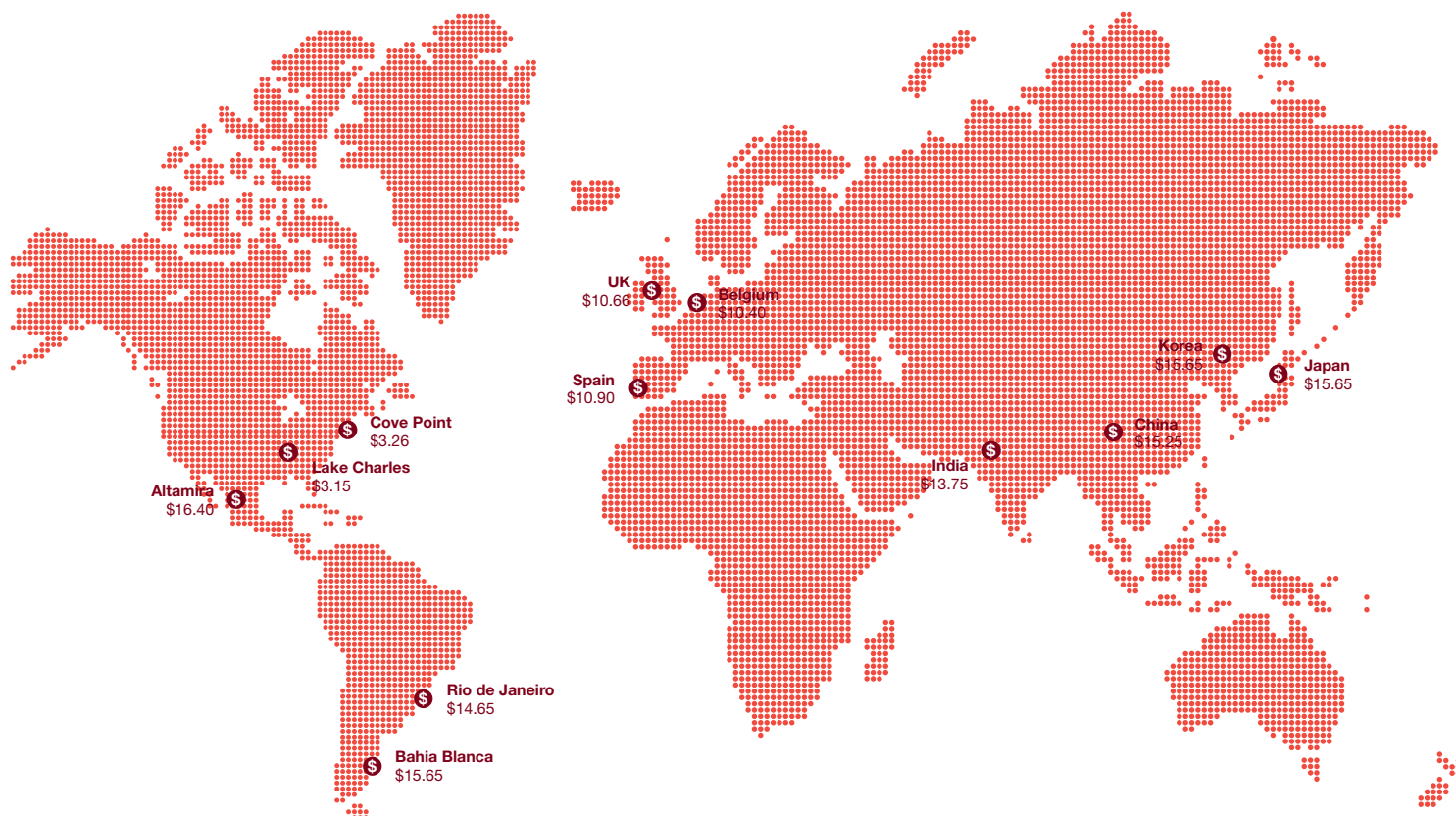
4. *BP Statistical Review of World Energy*. BP, 2013.

5. *Executive Summary – World Energy Outlook 2013*. International Energy Agency, 2013.

6. *North American Natural Gas Pathways*. Canadian Energy Research Institute, 2013.



World LNG estimated November 2013 landed prices

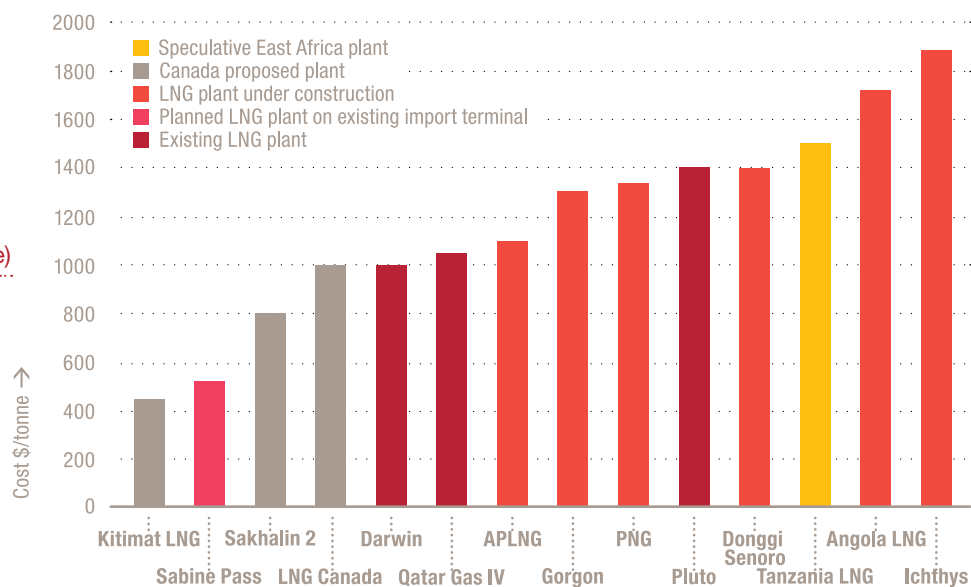


Source: Waterbourn Energy Inc., data in \$US/MMBtu

Risks: Liquefaction costs are rising

Projects developed between 2004 and 2011 experienced a capital cost of CA\$500 per ton (average)

Projects under construction or awaiting start of construction (2013–2016) are quoting CA\$1,100+ per tonne in capital cost (average)



Source: Canadian Energy Research Institute

Achieving parity with global energy prices: A tale of two commodities

US Department of Energy's order of precedence for US non-FTA LNG export applications

Project name	State	Company	Capacity (bcf/day)	Status	FERC
Sabine Pass	Louisiana	Cheniere Energy	2.2	Approved for non-FTA export	Approved
Freeport LNG	Texas	Freeport/Macquarie	1.4	Approved for non-FTA export	Proposed
Lake Charles	Louisiana	Southern/BG	2	Approved for non-FTA export	Proposed
Cove Point	Maryland	Dominion	1 (FTA) 0.77 (non-FTA)	Approved for non-FTA export	Proposed
Freeport LNG Expansion	Texas	Freeport/Macquarie	0.4	Approved for non-FTA export	Proposed
Cameron LNG	Louisiana	Sempra	1.7	Approved for non-FTA export	Approved
Jordan Cove (greenfield)	Oregon	Veresen, Inc.	1.2 (FTA) 0.8 (non-FTA)	Approved for non-FTA export	Proposed
Oregon LNG (greenfield)	Oregon	LNG Development Company	1.25	Non-FTA approval pending	Proposed
Corpus Christi	Texas	Cheniere Marketing (Corpus Christi Liquefaction)	2.1	Non-FTA approval pending	Proposed
FLNG facility	Texas	Excelerate Liquefaction Solutions	1.38	Non-FTA approval pending	Proposed
Carib Energy (existing liquefaction capacity)		Carib Energy (Crowley Maritime)	0.03 (FTA) 0.01 (non-FTA)	Non-FTA approval pending	No filling
Gulf Coast LNG Export	Texas	Gulf Coast LNG Export	2.8	Non-FTA approval pending	No filling
Elba Island	Georgia	Southern LNG (El Paso)	0.5	Non-FTA approval pending	Proposed
Gulf LNG Energy	Mississippi	Gulf LNG Liquefaction	1.5	Non-FTA approval pending	No filling
CE FLNG (existing liquefaction capacity)		Cambridge Energy	1.07	Non-FTA approval pending	Proposed
Golden Pass LNG	Texas	Golden Pass Products (ExxonMobil/Qatar Petroleum)	2.6	Non-FTA approval pending	Proposed
Pangea LNG	Texas	Pangea LNG	1.09	Non-FTA approval pending	No filling
Lake Charles	Louisiana	Trunkline LNG Export (Energy Transfer Equity/Energy Transfer Partners)	2	Non-FTA approval pending	NA
Main Pass Energy Hub (offshore)	Louisiana	Freeport-McMoRan Energy	3.22	Non-FTA approval pending	No filling
Sabine Pass LNG (5th train - Total)	Louisiana	Sabine Pass Liquefaction (Cheniere Energy)	0.28	Non-FTA approval pending	Proposed
Sabine Pass LNG (5th train - Centrica)	Louisiana	Sabine Pass Liquefaction (Cheniere Energy)	0.24	Non-FTA approval pending	Proposed
Venture Global LNG	Louisiana	Venture Global LNG	0.67	Non-FTA approval pending	No filling
FLNG facility	Texas	Eos LNG	1.6	Non-FTA approval pending	No filling
FLNG facility	Texas	Barca LNG	1.6	Non-FTA approval pending	No filling
Sabine Pass LNG	Louisiana	Sabine Pass Liquefaction (Cheniere Energy)	0.86	Non-FTA approval pending	Proposed
Magnolia LNG	Louisiana		0.54	Non-FTA approval pending	Proposed
Delfin LNG	-	-	1.8	Non-FTA approval pending	No filling
Waller LNG Services	-	-	0.16 (FTA) 0.19 (non-FTA)	Non-FTA approval pending	No filling
Gasfin Development	-	-	0.2	Non-FTA approval pending	No filling
Texas LNG	-	-	0.27	FTA approval pending	No filling
Louisiana LNG Energy	-	-	0.28	FTA approval pending	No filling
Total			35.55		

Source: Eurasia Group

Planned Canadian LNG export projects
(listed in order of NEB filing status)

Project	Companies	Planned capacity (mtpa)	Proposed start date	NEB approval
Kitimat LNG	Chevron, Apache	10	2017	Approved
BC LNG Export Cooperative (Douglas Channel)	LNG Partners, Haisla First Nations	1.8	2015	Approved
LNG Canada	Shell, Kogas, Mitsubishi, Petrochina	24	2019	Approved
Pacific Northwest LNG	Petronas, Sinopec, Japex, Indian Oil, Petroleum Brunei	12	2019	Approved
West Coast Canada LNG	Imperial Oil, Exxon Mobil	30	2021-2023	Approved
Prince Rupert LNG	BG Group, Spectra Energy	32	2020	Approved
Woodfibre LNG	Pacific Oil & Gas Group (Indonesia)	2.1	2017-2021	Approved
Triton LNG	AltaGas, Idemitsu	2.3	2017	Approved
Goldboro LNG*	Pieridae Energy	10	2020	Pending
Aurora LNG	Nexen, Inpex, JGC Corp	12	2021-2023	Approved
[Kitsault, BC]	Kitsault Energy	20	2017	Pending
Stewart Energy LNG	Stewart Energy	30	TBD	Pending
[Grassy Point, BC]	Woodside Petroleum	TBD	TBD	Not applied
Discovery LNG	Quicksilver Resources	TBD	2019	Not applied

* East Coast project with proposed location in Nova Scotia

Note: Projects in brackets do not have a name

Source: Eurasia Group, National Energy Board

“From a public policy point of view, the conditions in the US are becoming more bullish, particularly with approvals of LNG terminals and competing pipelines to places like Mexico. Throw in more natural gas vehicle usage and similar items, and there’s some negatives that will need to be addressed in Canada before you see a lot of capital flow in on the big final decisions about LNG.”

Robert Johnston, Eurasia Group

Achieving parity with global energy prices: Raising our game

Sophisticated responses to global market dynamics will be of importance to the long-term viability of Canada’s energy industry. Canadian producers need to continue integrating global market intelligence into their business and operational planning. Canada is contributing to a number of direction-setting ways to achieve parity with global energy prices through big projects, large-scale developments and the potential to open up markets. It means engaging in some interesting conversations, such as Robert Hormats’ call for better matching of supply to demand within the existing delivery system in North America, and even former Prime Minister Brian Mulroney’s highly-publicized call in April 2014 for an integrated North American energy strategy.

Access to capital: Can Canada compete?

Canada is well-positioned to make clear directional decisions on where and how we evolve our economy and overall global competitiveness.

Indeed, Canada's performance at the top of the G7 in job creation, economic growth and financial stewardship is what got us through the global economic crisis of 2008 and what makes ours one of the most stable economies in the world. The outlook is even stronger. In less than six years, Canada has successfully concluded nine free-trade agreements, many of those with South American countries. Negotiations with high-growth markets including India, the more robust parts of the European Union and the countries of the Trans-Pacific Partnership also bode well. And there's active work on several joint agreements with the United

States, involving security, regulation and economic competitiveness.

Not that the world hasn't thrown us a few curve balls. Change in the world's flow of investments has been dramatic in the recovery from the 2008 recession, with developing countries in particular attracting more of the action⁷. Still, Canada's numbers are encouraging. Our overall foreign direct investment has more than doubled since 2010 to CA\$64.2 billion in 2013, with the oil, gas and mining extraction sectors accounting for 8.1% of that inflow⁸.

The concept of peak world oil production is not considered such a relevant waypoint anymore. The view from Hubbert's peak has rapidly changed in recent times with the advent of new supply from sources such as US tight oil, Brazilian pre-salt plays, our own oil sands, Caspian reservoirs and increased recovery from heavier oil basins.

Against a backdrop of flat, declining or rising demand, depending on where you are in the world, these plays have helped to increase reserves replacement. In a relatively stable price environment this has also caused an escalation in the competition for capital.

Resource nationalism saw the tendency of governments to assert control over their own national hydrocarbon assets. However, the reverse is now taking place in some, but by no means all, of these governments. This reversal is both through more liberal investment terms for foreign companies in their home markets (Mexico's ongoing energy

reform is the strongest example), as well as through their national oil companies (NOCs) moving out of the home market to invest in foreign petroleum assets. And they have several choices, as have the IOCs who still continue to maintain portfolios across several international basins.

So the competition for capital has actually intensified in a post-peak global petroleum economy, as both NOCs and IOCs are able to select from a panorama of plays.

Now an investor has to choose between US or Canadian LNG projects, or an Australian or emerging East African LNG play, such as Mozambique. So there is heightened competition between plays in the same industry sector. Not only that, but many IOCs will still possess portfolios across several countries and have to decide where to invest their capital each year. In that respect, Canada faces competition from established operators with diverse international assets under development.

Many investors are cautious, particularly when looking at the specific challenges confronting the Canadian oil and gas sector. It remains to be seen whether government will be able to play an effective role in overcoming economic challenges such as labour, as well as social issues around First Nations engagement and environmental opposition. "It comes down to the small labour and capital markets and the fact Canada's probably not going to be able to provide enough capital on its own to fully exploit its resources. That's a big theme when you consider that only five years ago capital was flowing out of the US. Now it's flowing back, making for competition between the US and Canada," says Robert Johnston from Eurasia Group.

“When we talk about places that are reliable sources of energy supply, that have strong rule of law and transparency, that's a reason why the United States and Canada have attracted a lot of investment, notwithstanding the relatively high production cost of some of the barrels. Ultimately, you have to ensure people understand we welcome foreign capital and we think the free flow of goods and investment is only good for the global economy.”

Jason Bordoff, Columbia University

7. Canada's State of Trade: Trade and Investment Update 2013. Foreign Affairs, Trade and Development Canada. 2013.

8. Ibid.

The total amount of capital raised through debt and equity in the Canadian oil and natural gas industry decreased in 2013 to 22%, down to CA\$15.8 billion raised as compared to CA\$20.4 billion in 2012⁹. And only time will tell the impact of changes in 2013 to the Canada Investment Act as a result of the CNOOC-Nexen deal—changes that some observers worry have put a chill in Asian countries as to the perception of Canada as being open for business.

That said, China has remained Canada's second largest trading partner for over a decade, but only became Canada's second-largest export market in 2012, when Canada's exports to China reached CA\$19 billion—an increase of 15% year-over-year¹⁰.

There are significant challenges around the general cost of capital being higher than what's available to foreign NOCs and that our material, labour, tax and royalty costs and rates are not as low as in other countries. But we do agree with Robert Johnston that the perceived zero-sum game between the NOCs and IOCs is more of a media or political event; in fact there are opportunities for cooperation, particularly in building new trading relationships with Asia. Being at a crossroads means that we have to re-adjust to ever-evolving sets of investment circumstances.

“*Canada's political and regulatory stability is hugely advantageous in the competition for capital. What I see in Canada is industry excellence, political stability and a tax regime that by comparison reveals what are huge risks in other parts of the world. And so Canada begins with what I believe is a fantastic head start, in fact, from a cost stability and planning ability perspective alone. It's a healthy sector that is attracting lots of capital. And what I don't see is anyone in industry putting up a bunch of red flags and saying, 'Mr. Ottawa, you're going too far'.”*

Jan Stuart, Credit Suisse

9. www.dailyoilbulletin.com/article/2014/2/26/total-financings-down-22-cent-2013.
10. Foreign Affairs, Trade and Development Canada.

Access to capital: Raising our game

We believe it's imperative that industry continues to adopt a more global view of markets and competition. It means being better prepared to compete for capital that will be critical to Canada's capital-intensive LNG and next-generation oil sands projects in particular.

The global view suggests that we take cues from other industries and jurisdictions around the world that have demonstrated capacity to adapt to rapidly changing global markets. It suggests that while we have a solid global reputation and a strong relationship with the US, more can be done and now is the time to do it.

Canada needs to draw on all its strengths, especially at a time when investments by NOCs in Canada's resources are increasing in comparison to those of independent oil companies. It means leveraging our attractiveness in the global energy world to do business, while balancing the need to protect domestic interests.

Cost containment: Doing more with less

Canada is considered a high-cost environment for exploration and production (E&P) companies active in a vast resource basin which is both distant from tidewater and subject to remote and northern-climate conditions. However, there's still much to be done within that operating context to increase cash flow, drive shareholder value and ensure long-term business sustainability.

“From an efficiency perspective, the more alternatives there are on the North American continent, the greater the chances of matching oil supply to refining capacity and ensuring that various parts of the continent are adequately supplied from the most efficient and direct sources.”

Robert Hormats,
Kissinger Associates, Inc.

Canada should continue to make strides toward incremental but consistent improvements in managing the supply chain, finding creative staffing solutions and working smarter and simpler to reduce inefficiencies.

On the ground, industry faces several factors contributing to perennially high costs.

Administration: These include contractor and in-house capacities that are not always aligned or efficient.

Talent: The talent crunch still has many companies in a reactive mode instead of imposing standard job descriptions, pay grading, and streamlining process technologies for acquiring quality human resources to reduce labour costs and free up management time.

Productivity: Productivity remains an issue, with more companies needing to adopt key lessons learned from other industries to better align their resources with their key performance indicators and match them to their core business drivers and priorities.

The view from outside the industry is also instructive. To Eurasia Group's Robert Johnston, the sheer scale of Canada's projects going forward, including next-generation oil sands and LNG, is in many ways also its own driver of innovation. He points to possible new synergies between the more entrepreneurial juniors or intermediates and the majors and super majors, where effective collaboration around technology and operational best practices can naturally transpire. This will be critical, he adds, in areas such as the development of closed-loop systems for handling condensate through the use of bitumen-only rail cars, lowering steam-oil ratios that lead to lower operating expenditures and efficiency in supply chain management that is crucial to mitigating cost overruns.

Robert Hormats of Kissinger Associates says that the lessons of recent years are clear, particularly when it comes to supply chain management, where issues around the lack of transparency among certain suppliers result in supply uncertainty and unnecessary and expensive building of more storage.

For Cenovus Energy's Harbir Chhina, the quality and pace of development are themselves key factors and operators view efficiency as 'critical in all areas of the company.'

“ *The status quo is unacceptable. We need to work collectively to unlock challenging oil resources in a way that makes Canadians proud. Innovative thinking and new technologies will enable our industry to develop resources economically, environmentally and socially responsibly.”*

Harbir Chhina, Cenovus Energy

We also can't ignore the role of technology as a game-changer. Already a revolution in the oil sands industry, in situ and specifically SAGD-type technologies are showing enough promise in their evolution that some anticipate the day when pad drilling, solvent mixtures, thermal stimulation and other future innovations bring the cost of this production in line with or lower than conventional extraction. We see the same holding true for the role of technology on the environmental side. To paraphrase Harbir Chhina, whom we quoted in our recent *Innovation surge sparks oil sands opportunities* report, any technology that's good for the environment is also good for the business.

Credit Suisse's Jan Stuart, is perhaps singularly clear in his view that industry already has it within itself to overcome most of the barriers discussed in this report, including cost containment: "I think it helps that in Canada you start with operators who are already extremely experienced. The best a government can do is ensure that there is hard-core competition, because that drives costs down. We learned in the US that there is a regenerative process that needs to play out: Once established companies retrench (e.g. because of costs), new ones enter, they drill and complete better, and at lower costs; next you see production rise up again."

Cost containment: Raising our game

There are significant opportunities for cost containment in the industry and we believe the timing is right for fundamental shifts in our thinking and approach.

The Canadian energy industry has the potential to affect significant cost containment through operational excellence, including heightened attention to contractor and labour management and to productivity measures. The global market evolves under a complex array of drivers beyond our control in Canada but cost containment presents significant opportunities that can be used as a key innovation driver.



Role of government: An evolving partnership

Canada has been very active in recent months and years, undertaking proactive negotiations with foreign countries in both trade and investment. We see provincial governments actively encouraging industry, communicating the value of resource development and ensuring regulations are balanced and fair to protect workers, capital and the environment.

“What ties everything together, whether it’s China and the national oil companies, or whether it’s a question of how much US presence do we want or the best way to get to tidewater – all these things come back to a national energy strategy, and I think that if I was critical of industry and governments, it’s this sort of lukewarm approach they’ve had to embracing that over the last three or four years.”

Robert Johnston, Eurasia Group

Government in Canada can continue to do more to streamline resource planning and reduce political and systemic barriers to achieve effective resource development and flow of production. Government must play the crucial role as partner to industry in securing the social license to operate, whether in managing policy around climate change or establishing and maintaining public confidence in the safety of transportation options for oil and gas. And while the views on this are mixed, all agree government involvement is beneficial.

Governments in other jurisdictions have set an important tone by responding quickly to changing global market conditions. From Brazil, Mexico, Russia and the Middle East, global exporting countries, and especially those awash in strategic NOC capital reserves, are determining their go-forward strategy. In order to play, Canada needs access to new markets and a firm grip on the wheel to drive international business relations.

Ultimately, a key question for Canada going forward will be how to strike a balance between earning a place in the global energy market and managing public acceptance of this role at home. For some, it's a policy issue that starts on the continent. Robert Hormats argues that North America as a whole needs to be looked at "when the US forges its energy policy."

Others are less convinced it's up to government to play central or critical roles. Describing the whole matter of government involvement as "exquisitely difficult," Jan Stuart puts the onus back on industry.

“*When you look at the energy sector and the kinds of risk that companies deal with in lots of other parts of the world, there is something quite attractive about political stability and the rule of law that you find in a country like Canada.”*

Jason Bordoff, Columbia University

Role of government: Raising our game

We believe that the role of government is somewhere in the middle. For instance, free-market principles can be augmented with the kind of oversight and compliance measures a country needs to maintain regulatory stability while advancing long-term operational and environmental sustainability.

We agree that Canada has a nation-to-nation obligation both within the country, as it relates to federal and First Nations negotiations, and externally with the rest of the world. This will mean focusing even more on positive and proactive collaboration with communities in Canada where resource development presents both opportunities and challenges. It will mean staying the course in building stronger relations in key foreign market areas. And it will mean continuing to review and refine policy in critical areas, including immigration and foreign workers.

There will be challenges, changes and adjustments to make. The direction that Canada can take is to ensure our approaches and mindsets are effective in today's market climate to capitalize on our abundant resource base.

Conclusion

The global population is expected to reach 8.5 billion people by 2035. Barring a radical advance in energy technology or changes in patterns of energy use, the world will require 1.5 times the energy used in 2010. It's little wonder that the International Energy Agency estimates that the spending on tight oil, deepwater and oil sands projects that accounted for 30% of the industry's capital expenditure worldwide in 2012 will climb to at least 40% by 2020¹¹. Also of little surprise is the growth in LNG, the push for cleaner energy in high-demand Asian countries and the higher prices the commodity might fetch in certain international markets.

Rich in both oil and gas, Canada is poised to be a major player on the world stage. But it also stands at a crossroads and has some important decisions to make. The consensus among our contributors to this year's report is that global market complexity and dynamics strongly suggest there's no going back to traditional ways of planning and operation. The way forward, whichever paths are taken, will bring change and challenge but also opportunity. Here's where we see Canada taking action and raising our game to the next level:

Achieving parity with global energy prices:

Securing market access will help achieve parity with global energy prices and both the government and industry need to work together in this area. Ultimately, it will be nation-to-nation trade negotiations, globally-aware business intelligence, planning and ingenuity, as well as securing social and political pipelines approvals that will be critical to achieving this goal.

Competition for capital: Investment by NOCs in Canadian resources confirms our attractiveness as a place to do business, but the world is becoming more competitive as new opportunities such as US tight oil plays emerge. While offering attractive regulatory conditions for foreign investors, we also need to protect domestic interests that

include social, environmental and fiduciary transparency and responsibility. Suggestions for better coordination of energy markets and infrastructure within North America have merit as a means of reassuring prospective investors that their production can reach tidewater and earn global prices.

Cost containment: Next-generation oil sands and LNG plays impose challenges beyond the technology of extraction. Capital-intensive resource projects that place greater emphasis on strategic planning and execution places pressure on companies to be smarter, leaner and more efficient in all areas of operation. Ongoing improvements in the areas of operational excellence and overall productivity are critically important ways to contain costs and are factors that are within a company's control.

Role of government: Government needs to continue meeting its nation-to-nation obligations. This includes working with First Nations communities to secure partnerships in energy development and transportation, paving the way forward in key foreign market domains and refining immigration and foreign worker policies. Canada has all the right ingredients to be a global energy leader and continued proactive involvement by federal and provincial governments in Canada is critical to achieving that goal.

Can Canada compete for capital in today's post-peak oil world? We believe the answer is absolutely. But it will require a change in how we see ourselves as an energy-producing nation, and how we think and operate as an innovation and talent-driven industry that increasingly must compete on the world stage. It means looking carefully in all directions at the crossroads, and then taking actions based on longer-term objectives, supported by the best information and intelligence possible.

We're excited about the future of Canada's resources sector and we're equally committed to helping it reach its full potential in a responsible manner. We look forward to continuing the conversation with you.

11. Executive Summary – World Energy Outlook 2013. International Energy Agency.

Featured commenters



Robert Hormats is Vice Chairman of Kissinger Associates, Inc., the New York-based strategic international consulting firm that assesses and navigates emerging market geopolitical and macroeconomic risk for its clients. Previously Bob served as Under Secretary of State for Economic, Energy and Environmental Affairs. Before

this Bob was vice chairman of Goldman Sachs (International) for 25 years. Earlier, Bob served as Assistant Secretary of State for Economic and Business Affairs. He served as a senior staff member for International Economic Affairs on the National Security Council.



Jason Bordoff joined the Columbia faculty after serving until January 2013 as Special Assistant to the President and Senior Director for Energy and Climate Change on the Staff of the National Security Council, and, prior to that, holding senior policy positions on the White House's National Economic Council and Council on Environmental Quality. One of the United States' top energy policy experts,

he joined the Administration in April 2009. He is a member of the Council on Foreign Relations, a consultant to the National Intelligence Council, and serves on the board of the New York Energy Forum as well as the Association of Marshall Scholars.



Harbir Chhina is Executive Vice-President, Oil Sands of Cenovus Energy Inc., and is responsible for all oil sands activities, including operations at Foster Creek, Christina Lake, Narrows Lake and the Greater Pelican assets. He also leads the Research & Development, Technology Development and Environmental Technology Investments teams, as well as

the New Resource Plays team. Harbir was instrumental in the initial application of steam-assisted gravity drainage (SAGD) technology on a commercial basis. Harbir has over 30 years of experience in all aspects of enhanced oil recovery including technology, business and organizational development.



Jan Stuart is a Managing Director of Credit Suisse in the Investment Banking division, based in New York. He is the head of Global Energy Research, specifically covering markets for oil and natural gas. Mr. Stuart joined Credit Suisse in September 2011 after a combined six years as the Global Oil Economist at UBS and later Macquarie,

where he worked on equity sell-side research.



Robert ("RJ") Johnston is the CEO of Eurasia Group. He is also the director of the company's Global Energy and Natural Resources Strategy Group. Prior to joining Eurasia Group, RJ was a managing director of equity research at Medley Global Advisors.



Reynold Tetzlaff is PwC Canada's National Energy Leader. He has over 20 years experience with a focus in audit and related services. Reynold has assisted clients through complex transactions like initial public offerings (including the largest IPO in the Canadian energy sector in 2012), reverse takeovers and global expansion of their operations. Reynold is a frequent speaker

at energy events and provides insights into Canadian oil and gas industry trends.

Working with Canada's energy industry: Doing more with less

The phrase “doing more with less” has become a common phrase across the industry. More and more frequently we work with energy companies looking to cost containment as a way to increase cash flow, drive shareholder value and ensure long-term business sustainability. Three strategies continue to come to the fore in energy:

1.

Capital projects | Achieving schedule, cost and safety goals on major projects has never been more important in terms of the market impact of failing to meet major project milestones. As the scale and size of projects continue to increase, so do the failure rates. We see two leading practices that are making a difference:

- a. **Selectivity not velocity**—it's not how much you spend but what you spend it on that counts
- b. **Driving capital productivity**, owners oversight and regular contract and independent reviews of project performance, aligning project strategies with supplier performance and contractual frameworks

2.

Operational excellence | Increasing customer, joint venture partner and regulator expectations, budget pressures and productivity requirements mean that the pressure to perform and do more with less is increasing. To achieve breakthrough results, more energy companies are embarking on operation excellence journeys. However, these journeys are not just about process improvement, they are about culture change and leadership. We've helped companies achieve 25% capacity release within as little as 10 to 12 weeks by empowering staff through the application of a variety of lean tools, techniques and mindsets.

3.

Supply chain management | Third-party costs in the oil and gas industry can make up to 60-80% of budgets. Companies need to manage this spending by transforming the supply chain strategy, structure, process, people and technology, including categorizing external spending across the company. This will achieve balance between third party and in-house capability and drive value by better aligning the business requirements with supplier capability and focusing on performance. Effective category management also drives sustainable value and can create a higher level of compliance and visibility to enable contracts and commitments to be managed more effectively.






















PwC Top 100

Financial and operational statistics
Exploration and production companies

Financial statistics

Exploration and production companies

PwC's Top 100

Company ¹⁵	Gross revenues (\$000s) 2013 ⁴	Gross revenues (\$000s) 2012 ⁴	Change (%)	Net income/ (loss) (\$000s) 2013	Net income/ (loss) (\$000s) 2012	Change (%)	EPS 2013 ⁵	EPS 2012 ⁵	Cash flow from operations (\$000s) 2013	Cash flow from operations (\$000s) 2012	CFPS 2013 ⁶	CFPS 2012 ⁶
Suncor Energy Inc. 	19,452,000	17,978,000	8.20%	3,911,000	2,740,000	42.74%	2.61	1.77	10,100,000	8,859,000	6.74	5.72
Canadian Natural Resources Limited  ¹³	17,919,000	16,179,000	10.75%	2,270,000	1,892,000	19.98%	2.08	1.72	7,218,000	6,209,000	6.61	5.64
Imperial Oil Limited  ⁷	10,042,000	8,784,000	14.32%	2,828,000	3,766,000	(24.91%)	3.34	4.44	3,292,000	4,680,000	3.89	5.52
Husky Energy Inc. 	9,467,000	8,958,000	5.68%	1,829,000	2,022,000	(9.55%)	1.85	2.06	4,645,000	5,193,000	4.70	5.29
Cenovus Energy Inc. 	6,892,000	6,156,000	11.96%	662,000	995,000	(33.47%)	0.88	1.32	3,539,000	3,420,000	4.70	4.54
Encana Corporation  ^{3 7}	5,752,934	6,122,795	(6.04%)	243,009	(2,792,994)	108.70%	0.33	(3.79)	2,356,983	3,105,881	3.20	4.21
Talisman Energy Inc.  ^{3 7}	4,790,164	6,764,564	(29.19%)	(1,209,898)	131,952	(1016.92%)	(1.18)	0.12	1,819,480	2,395,137	1.78	2.18
Pacific Rubiales Energy Corp.  ^{3 7}	4,764,277	3,883,363	22.68%	433,459	527,539	17.83%	1.37	1.79	1,685,723	1,802,086	5.33	6.11
Canadian Oil Sands Limited	4,208,000	3,905,000	7.76%	834,000	973,000	(14.29%)	1.72	2.01	1,582,000	1,864,000	3.26	3.85
Crescent Point Energy Corp 	3,526,448	2,694,994	30.85%	144,876	190,653	(24.01%)	0.38	0.58	1,973,332	1,543,943	5.18	4.70
Penn West Petroleum Ltd.	2,827,000	3,235,000	(12.61%)	(838,000)	149,000	(662.42%)	(1.72)	0.31	1,039,000	1,193,000	2.13	2.48
ARC Resources Ltd.	1,624,300	1,389,400	16.91%	240,700	139,200	72.92%	0.77	0.47	801,700	703,500	2.56	2.38
Enerplus Corporation  [★]	1,616,798	1,365,542	18.40%	47,976	(270,697)	117.72%	0.24	(1.38)	766,478	535,689	3.83	2.73
Pengrowth Energy Corporation	1,593,400	1,458,200	9.27%	(316,900)	12,700	(2595.28%)	(0.61)	0.03	636,800	553,900	1.23	1.31
Baytex Energy Corp. 	1,363,874	1,215,606	12.20%	164,845	258,631	(36.26%)	1.33	2.16	638,476	577,305	5.15	4.82
MEG Energy Corp.	1,309,400	1,029,797	27.15%	(166,405)	52,569	(416.55%)	(0.75)	0.27	129,963	240,824	0.59	1.24
Vermilion Energy Inc. 	1,273,835	1,083,103	17.61%	327,641	190,622	71.88%	3.24	1.94	705,025	496,580	6.97	5.05
Lightstream Resources Ltd.  ⁸	1,250,491	1,104,983	13.17%	(1,384,450)	(85,634)	(1516.71%)	(7.07)	(0.87)	692,279	614,745	3.54	6.25
Harvest Operations Corp.	1,101,700	1,193,500	(7.69%)	(781,900)	(721,000)	(8.45%)	INA	INA	200,600	442,800	INA	INA
Bonavista Energy Corporation	964,312	832,491	15.83%	49,505	64,202	(22.89%)	0.25	0.37	486,605	407,481	2.46	2.35
Tourmaline Oil Corp. ⁸	759,153	441,888	71.80%	148,114	15,519	854.40%	0.81	0.10	479,239	273,477	2.62	1.76
Parex Resources Inc.  ³	655,483	523,326	25.25%	13,048	39,908	(67.30%)	0.12	0.37	214,743	254,425	2.03	2.36
TransGlobe Energy Corporation  ^{3 7}	654,370	633,764	3.25%	60,250	87,702	(31.30%)	0.81	1.20	205,433	93,958	2.77	1.29
Bankers Petroleum Ltd.  ³	583,208	431,982	35.01%	63,577	34,401	84.81%	0.25	0.14	231,314	161,688	0.91	0.64
Aurora Oil & Gas Limited  ³	579,480	294,953	96.47%	119,888	58,825	103.81%	26.74	13.60	296,790	144,070	66.20	33.30
Trilogy Energy Corp.	563,463	455,697	23.65%	11,467	(12,133)	194.51%	0.10	(0.10)	291,750	235,351	2.54	1.94
Peyto Exploration & Development Corp.	561,645	357,734	57.00%	142,627	93,951	51.81%	0.96	0.67	407,357	284,309	2.74	2.03
Legacy Oil + Gas Inc.  ⁸	554,493	435,388	27.36%	(12,070)	(2,577)	(368.37%)	(0.08)	(0.02)	260,920	238,877	1.73	1.85
Long Run Exploration Ltd.	475,562	276,605	71.93%	24,265	(42,652)	156.89%	0.19	(0.47)	234,256	136,036	1.83	1.50
Whitecap Resources Inc.	467,095	305,770	52.76%	39,228	52,471	(25.24%)	0.27	0.46	279,859	173,535	1.93	1.52
Crew Energy Inc.	430,627	417,763	3.08%	(79,311)	21,542	(468.17%)	(0.65)	0.18	161,949	213,591	1.33	1.78
Connacher Oil and Gas Limited ⁷	427,861	390,777	9.49%	(122,390)	(84,469)	(44.89%)	(0.27)	(0.19)	100,488	43,468	0.22	0.10
Ithaca Energy Inc.  ³	422,932	166,173	154.51%	148,983	93,365	59.57%	0.49	0.36	244,186	66,543	0.81	0.26
Twin Butte Energy Ltd.	394,588	304,729	29.49%	(115,633)	31,530	(466.74%)	(0.44)	0.15	130,738	131,767	0.50	0.63
Birchcliff Energy Ltd.	316,637	257,206	23.11%	65,417	13,196	395.73%	0.43	0.08	170,356	108,229	1.12	0.66
Bonterra Energy Corp.	295,675	142,770	107.10%	62,758	33,211	88.97%	2.08	1.68	173,896	74,325	5.76	3.76
Advantage Oil & Gas Ltd. ⁸	289,742	268,905	7.75%	(3,382)	(89,125)	96.21%	(0.02)	(0.53)	165,017	106,956	0.98	0.64
Bellatrix Exploration Ltd.	288,310	217,138	32.78%	71,675	27,771	158.09%	0.63	0.26	128,458	109,328	1.13	1.02
Spyglass Resources Corp.	273,014	212,353	28.57%	43,331	(152,991)	128.32%	0.39	(2.50)	21,561	64,038	0.19	1.05
Surge Energy Inc.	271,838	192,603	41.14%	(9,886)	(53,243)	81.43%	(0.10)	(0.75)	113,027	92,861	1.14	1.31
Renegade Petroleum Ltd. 	233,347	112,399	107.61%	(98,236)	(29,458)	(233.48%)	(0.48)	(0.32)	96,742	44,696	0.47	0.49
Paramount Resources Ltd.	230,722	173,367	33.08%	(59,085)	(61,912)	4.57%	(0.63)	(0.71)	44,913	55,220	0.48	0.63
BlackPearl Resources Inc.	222,157	204,525	8.62%	6,449	45	14231.11%	0.02	-	80,698	79,862	0.25	0.28
NuVista Energy Ltd.	213,469	242,012	(11.79%)	(61,144)	(195,200)	68.68%	(0.51)	(1.93)	83,262	58,521	0.69	0.58
Perpetual Energy Inc.	201,294	176,137	14.28%	7,620	(75,986)	110.03%	0.05	(0.52)	52,333	48,599	0.34	0.33
Chinook Energy Inc. 	189,252	193,795	(2.34%)	(26,700)	(91,028)	70.67%	(0.13)	(0.42)	79,633	83,944	0.39	0.39
Freehold Royalties Ltd.	181,578	168,134	8.00%	57,852	46,328	24.87%	0.86	0.71	93,235	138,132	1.39	2.12
DeeThree Exploration Ltd.	177,991	85,112	109.13%	18,048	7,181	151.33%	0.24	0.11	97,448	62,292	1.30	0.95
Raging River Exploration Inc.	175,808	49,964	251.87%	43,412	11,337	282.92%	0.27	0.10	131,149	35,876	0.82	0.32
TORC Oil & Gas Ltd.	164,074	32,711	401.59%	(10,084)	(18,767)	46.27%	(0.18)	(0.81)	78,785	8,514	1.41	0.37

Notes

1. INA: Information not available
2. Data obtained from Canoils. Companies not updated in the database as at May 15, 2014 were not included in the list
3. All USD balances were translated at closing rates per Oanda as at the respective year end dates. All USD transactional accounts were translated at average rates per Oanda for the respective years
4. Only upstream Revenue included in the Gross Revenues (Gross Revenues include Intersegment Revenues where applicable)
5. Earnings per Share are basic
6. Cash Flow per Share ("CFPS") is calculated by PwC based on weighted average number of shares (basic) and Cash Flow from Operations
7. Revenue presented are net of Royalties
8. NCI excluded from Income / (Loss) and Debt / Equity ratio
9. Year ended June 30, 2013
10. Year ended September 30, 2013
11. Year ended November 30, 2013
12. Capital Expenditures comprise Exploration and Evaluation asset ("E&E") and Property, Plant and Equipment ("PP&E") expenditures (or Capital expenditures) as disclosed in Cash Flow from Investing activities (excluding Acquisitions and Business Combinations)
13. Capital Expenditures are disclosed as Net proceeds (expenditures) on E&E and PP&E
14. "Debt" per "Total Debt as a % of Equity" and "Debt to Capital Ratio (%)" includes borrowings such as bank loans and interest-bearing debt securities
15. Canadian Public companies based in Canada
- * Reported under US GAAP
- o Canadian companies with international operations

Capital expenditures (\$000s) 2013 ¹²	Capital expenditures (\$000s) 2012 ¹²	Change (%)	Total assets (\$000s) 2013	Total assets (\$000s) 2012	Change (%)	Market capitalization (\$000s) 2013	Market Capitalization (\$ 000's) 2012	Change (%)	Working capital (\$000s) 2013	Working capital (\$000s) 2012	Total debt as a % of equity 2013 ¹⁴	Total debt as a % of equity 2012 ¹⁴	Debt to capital ratio (%) 2013 ¹⁴	Debt to capital ratio (%) 2012 ¹⁴
6,777,000	6,957,000	(2.59%)	78,315,000	76,401,000	2.51%	55,052,451	49,819,194	10.50%	4,088,000	4,529,000	27.8%	28.1%	21.8%	21.9%
7,067,000	6,104,000	15.78%	51,754,000	48,980,000	5.66%	39,078,353	31,276,942	24.94%	(3,018,000)	(2,062,000)	37.5%	36.0%	27.3%	26.5%
6,297,000	5,478,000	14.95%	37,218,000	29,364,000	26.75%	39,871,057	36,217,905	10.09%	(2,801,000)	(1,813,000)	32.2%	10.1%	24.4%	9.1%
5,028,000	4,701,000	6.96%	36,904,000	35,161,000	4.96%	33,139,875	28,877,539	14.76%	754,000	2,401,000	20.5%	20.4%	17.0%	17.0%
3,269,000	3,449,000	(5.22%)	25,224,000	24,216,000	4.16%	22,983,798	25,162,013	(8.66%)	1,831,000	1,309,000	65.6%	66.4%	39.6%	39.9%
2,792,546	3,474,749	(19.63%)	18,873,301	18,636,794	1.27%	14,210,462	14,475,658	(1.83%)	1,430,897	2,855,316	148.0%	144.5%	62.1%	59.0%
2,433,181	3,507,737	(30.63%)	20,491,348	19,271,641	6.33%	12,737,257	11,536,309	10.41%	(1,023,445)	(427,550)	64.8%	46.3%	39.3%	31.7%
2,215,159	1,511,346	46.57%	11,988,182	7,051,911	70.00%	5,914,719	7,357,510	(19.61%)	(105,636)	(287,550)	111.4%	29.9%	54.6%	23.0%
1,342,000	1,086,000	23.57%	10,190,000	10,171,000	0.19%	9,681,709	9,773,575	(0.94%)	219,000	893,000	33.9%	39.7%	25.3%	28.4%
1,746,873	1,509,029	15.76%	12,736,793	12,131,634	4.99%	16,293,485	14,096,299	15.59%	(620,893)	(427,011)	20.4%	17.2%	16.9%	14.6%
816,000	1,752,000	(53.42%)	12,644,000	14,437,000	(12.42%)	4,338,116	5,175,994	(16.19%)	(349,000)	(201,000)	31.9%	30.5%	24.2%	23.4%
874,200	607,700	43.85%	5,736,000	5,627,100	1.94%	9,286,961	7,549,223	23.02%	(185,900)	31,500	26.5%	23.2%	21.0%	18.8%
687,905	865,296	(20.50%)	3,681,799	3,618,418	1.75%	3,913,229	2,563,024	52.68%	(247,755)	(141,831)	53.1%	54.8%	34.7%	35.4%
695,800	467,400	48.87%	6,633,200	7,469,908	(11.20%)	3,429,744	2,533,431	35.38%	80,600	128,800	44.7%	42.2%	30.9%	29.7%
550,900	418,625	31.60%	2,698,334	2,538,077	6.31%	5,221,323	5,224,481	(0.06%)	(24,303)	(24,856)	54.1%	43.7%	35.1%	30.4%
2,188,353	1,598,514	36.90%	9,447,741	8,018,679	17.82%	6,810,936	6,702,586	1.62%	1,045,606	1,655,915	83.6%	51.1%	45.5%	33.8%
551,353	452,538	21.84%	3,708,719	3,076,257	20.56%	6,367,369	5,152,041	23.59%	240,339	(35,209)	57.9%	45.9%	36.7%	31.4%
760,094	956,356	(20.52%)	5,139,302	6,438,886	(20.18%)	1,174,673	1,972,633	(40.45%)	(140,131)	(535,648)	108.5%	51.6%	52.0%	34.0%
758,100	661,200	14.66%	5,289,900	5,654,600	(6.45%)	INA	INA	INA	(75,400)	(441,900)	119.3%	66.5%	54.4%	39.9%
443,829	402,090	10.38%	4,235,626	4,062,852	4.25%	2,602,511	2,630,876	(1.08%)	(118,900)	(74,607)	46.1%	38.9%	31.5%	28.0%
1,166,559	665,703	75.24%	4,696,471	3,580,253	31.18%	8,484,277	5,459,412	55.41%	(245,314)	(98,913)	17.6%	13.3%	15.0%	11.7%
227,958	267,592	(14.81%)	914,157	818,425	11.70%	715,323	629,163	13.69%	25,672	(12,597)	16.4%	16.0%	14.3%	14.8%
132,012	50,752	160.11%	722,721	651,216	10.98%	662,448	688,498	(3.78%)	258,769	261,331	17.5%	26.5%	14.9%	21.0%
241,200	222,583	8.36%	1,077,074	823,025	30.87%	1,117,330	814,790	37.13%	143,404	88,499	17.6%	20.5%	15.0%	17.0%
496,675	457,409	8.58%	1,702,625	1,107,640	53.72%	1,283,527	1,701,966	(24.59%)	(103,732)	(25,283)	117.0%	86.5%	53.9%	46.4%
399,767	352,717	13.34%	1,546,729	1,395,111	10.87%	2,741,742	3,396,371	(19.27%)	(65,523)	(44,460)	82.7%	121.8%	45.3%	54.9%
578,003	429,737	34.50%	2,555,156	2,203,524	15.96%	4,836,153	3,414,445	41.64%	(103,247)	(74,884)	72.9%	47.9%	42.2%	32.4%
321,182	315,073	1.94%	2,708,276	2,395,439	13.06%	963,889	983,300	(1.97%)	(6,265)	(23,284)	44.0%	31.6%	30.6%	24.0%
276,571	196,320	40.88%	1,403,344	1,193,272	17.60%	591,468	539,524	9.63%	(42,497)	(287,146)	68.6%	44.6%	40.7%	30.8%
190,100	246,156	(22.77%)	2,052,829	1,495,778	37.24%	2,177,771	1,106,335	96.85%	(46,978)	(22,631)	29.9%	34.1%	23.0%	25.5%
220,031	258,791	(14.98%)	1,843,027	1,833,802	0.50%	776,031	789,314	(1.68%)	(55,438)	(55,692)	30.8%	20.5%	23.6%	17.0%
93,727	37,129	152.44%	1,252,077	1,335,201	(6.23%)	78,803	80,882	(2.57%)	19,574	111,686	401.2%	247.9%	80.0%	71.3%
366,443	165,803	121.01%	2,116,067	930,350	127.45%	693,986	517,241	34.17%	(41,585)	23,738	50.6%	0.0%	33.6%	0.0%
106,806	57,197	86.73%	1,165,638	845,261	37.90%	775,361	640,645	21.03%	(64,538)	11,759	65.7%	39.1%	39.7%	28.1%
270,097	298,903	(9.64%)	1,586,531	1,430,324	10.92%	1,044,529	1,056,308	(1.12%)	(60,450)	(29,567)	48.5%	51.9%	32.7%	34.2%
121,641	84,775	43.49%	1,000,531	419,933	138.26%	1,696,096	908,671	86.66%	(35,895)	(29,876)	29.0%	118.7%	22.5%	54.3%
186,242	201,806	(7.71%)	1,765,244	1,913,796	(7.76%)	776,245	538,825	44.06%	(66,717)	40,248	32.9%	32.8%	24.8%	24.7%
303,659	185,348	63.83%	1,555,180	681,421	128.23%	1,335,437	460,600	189.93%	(127,103)	(880)	44.2%	53.7%	30.7%	35.0%
59,654	83,217	(28.32%)	892,328	581,521	53.45%	233,100	200,661	16.17%	(25,025)	(15,096)	63.7%	70.7%	38.9%	41.4%
125,546	180,714	(30.53%)	1,376,725	681,444	102.03%	1,124,167	391,695	187.00%	(40,249)	(24,628)	32.7%	55.4%	24.7%	35.7%
86,388	119,884	(27.94%)	766,433	894,142	(14.28%)	203,147	495,190	(58.98%)	(159,566)	(290,742)	72.4%	54.9%	42.0%	35.5%
736,172	623,631	18.05%	2,447,803	2,036,955	20.17%	3,771,088	2,875,424	31.15%	(240,848)	(30,274)	92.8%	82.4%	48.1%	45.2%
93,083	139,174	(33.12%)	652,216	620,725	5.07%	681,964	896,170	(23.90%)	(8,782)	(7,963)	0.0%	0.0%	0.0%	0.0%
224,389	115,622	94.07%	905,711	878,174	3.14%	963,839	696,288	38.43%	(50,011)	(9,406)	0.0%	3.0%	0.0%	2.9%
95,405	79,675	19.74%	742,288	729,888	1.70%	164,824	169,573	(2.80%)	(84,351)	15,818	379.3%	434.8%	79.1%	81.3%
83,228	79,714	4.41%	555,341	622,476	(10.79%)	248,458	308,431	(19.44%)	12,476	16,754	23.2%	25.9%	18.8%	20.6%
29,287	36,746	(20.30%)	427,865	448,237	(4.54%)	1,497,874	1,484,453	0.90%	3,615	(23,897)	16.7%	5.7%	14.3%	5.4%
200,191	137,296	45.81%	497,280	329,666	50.84%	780,532	462,732	68.68%	(122,011)	(76,736)	28.4%	29.8%	22.1%	22.9%
168,125	85,533	96.56%	550,746	316,287	74.13%	1,151,958	503,191	128.93%	(47,209)	(14,758)	13.3%	0.0%	11.8%	0.0%
162,713	134,664	20.83%	1,215,153	627,457	93.66%	965,431	447,593	115.69%	(60,123)	37,059	9.2%	0.0%	8.4%	0.0%

Financial statistics | CONTINUED

Exploration and production companies

PwC's Top 100

Company ¹⁵	Gross revenues (\$000s) 2013 ⁴	Gross revenues (\$000s) 2012 ⁴	Change (%)	Net income/ (loss) (\$000s) 2013	Net income/ (loss) (\$000s) 2012	Change (%)	EPS 2013 ⁵	EPS 2012 ⁵	Cash flow from operations (\$000s) 2013	Cash flow from operations (\$000s) 2012	CFPS 2013 ⁶	CFPS 2012 ⁶
Mart Resources Inc. ● ³	166,283	190,692	(12.80%)	36,514	58,025	(37.07%)	0.10	0.17	68,725	130,291	0.19	0.38
Canacol Energy Ltd. ● ^{3 8 9}	160,859	201,764	(20.27%)	(121,143)	18,617	(750.70%)	(1.62)	0.32	29,675	39,525	0.40	0.68
Zargon Oil & Gas Ltd. ●	158,648	157,945	0.45%	(5,900)	(5,377)	(9.73%)	(0.20)	(0.18)	56,999	58,871	1.93	1.97
Argent Energy Trust ●	154,356	22,255	593.58%	(87,228)	(5,703)	(1429.51%)	(1.65)	(0.42)	65,298	7,538	1.23	0.56
Longview Oil Corp.	149,652	139,774	7.07%	13,189	(8,268)	259.52%	0.28	(0.18)	65,651	66,396	1.39	1.45
Oando Energy Resources Inc. ● ^{3 8}	142,049	145,490	(2.36%)	(39,682)	17,150	(331.38%)	(0.37)	0.16	79,708	23,981	0.74	0.22
RMP Energy Inc.	138,091	84,688	63.06%	10,449	(7,819)	233.64%	0.10	(0.08)	80,996	47,660	0.78	0.49
Arcan Resources Ltd.	122,835	133,579	(8.04%)	(24,518)	(48,984)	49.95%	(0.25)	(0.50)	41,830	44,886	0.43	0.46
Athabasca Oil Corporation	120,298	25,797	366.33%	(126,138)	260,234	(148.47%)	(0.32)	0.65	(11,513)	(40,656)	(0.03)	(0.10)
Parallel Energy Trust ●	114,638	86,304	32.83%	10,088	(69,956)	114.42%	0.19	(1.46)	38,943	33,645	0.73	0.70
Crocotta Energy Inc.	111,459	80,518	38.43%	11,570	(5,254)	320.21%	0.12	(0.06)	65,513	47,449	0.68	0.54
Pinecrest Energy Inc.	108,872	98,204	10.86%	(171,046)	32,129	(632.37%)	(0.79)	0.15	55,704	75,692	0.26	0.35
Cequence Energy Ltd.	104,514	75,811	37.86%	(2,613)	(17,673)	85.21%	(0.01)	(0.10)	43,823	37,770	0.17	0.21
Painted Pony Petroleum Ltd.	103,086	74,849	37.73%	(5,722)	(48,111)	88.11%	(0.06)	(0.68)	49,113	39,732	0.51	0.56
Delphi Energy Corp.	100,430	85,754	17.11%	(11,627)	(58,030)	79.96%	(0.08)	(0.43)	31,383	31,078	0.22	0.23
Eagle Energy Trust ●	98,767	81,130	21.74%	4,914	6,117	(19.67%)	0.16	0.25	41,683	34,187	1.36	1.40
Arsenal Energy Inc. ●	97,811	82,168	19.04%	(2,714)	(112)	(2323.21%)	(0.17)	(0.01)	35,313	29,700	2.21	2.65
Gear Energy Ltd.	97,462	77,968	25.00%	(1,059)	547	(293.60%)	(0.02)	0.01	39,511	36,226	0.75	0.66
Calvalley Petroleum Inc. ● ³	95,721	102,100	(6.25%)	23,864	25,666	(7.02%)	0.29	0.27	31,262	37,905	0.38	0.40
Manitok Energy Inc.	85,950	37,349	130.13%	3,615	(2,657)	236.06%	0.05	(0.04)	37,166	16,622	0.51	0.25
Rock Energy Inc.	81,717	46,567	75.48%	(1,806)	(12,210)	85.21%	(0.05)	(0.31)	32,612	16,349	0.90	0.42
Strategic Oil & Gas Ltd. ●	79,945	56,512	41.47%	(22,316)	(4,788)	(366.08%)	(0.10)	(0.03)	18,493	19,785	0.08	0.12
Tamarack Valley Energy Ltd.	70,059	34,413	103.58%	14,813	(4,140)	457.78%	0.44	(0.16)	32,725	13,914	0.97	0.54
Sea Dragon Energy Inc. ● ³	63,947	44,982	42.16%	(7,937)	(28,098)	71.75%	(0.02)	(0.07)	2,157	7,340	0.01	0.02
Americas Petrogas Inc. ●	63,018	53,795	17.14%	(11,755)	(12,500)	5.96%	(0.06)	(0.06)	31,354	9,791	0.16	0.05
Southern Pacific Resource Corp. ⁹	61,578	84,651	(27.26%)	(12,580)	11,150	(212.83%)	(0.03)	0.03	21,758	46,158	0.05	0.12
Touchstone Exploration Inc. ● ^{3 10}	59,991	40,447	48.32%	(765)	1,775	(143.09%)	(0.01)	0.02	7,292	7,161	0.10	0.08
Artek Exploration Ltd.	57,678	41,105	40.32%	3,271	(2,172)	250.60%	0.05	(0.05)	27,318	15,667	0.42	0.36
Palliser Oil & Gas Corporation	57,580	47,547	21.10%	(13,680)	1,538	(989.47%)	(0.22)	0.03	14,111	16,738	0.23	0.33
Suroco Energy Inc. ● ^{3 7}	56,858	38,367	48.20%	1,138	1,744	(34.74%)	0.01	0.01	16,668	1,524	0.15	0.01
Santonia Energy Inc.	54,958	110,530	(50.28%)	(25,790)	(185,116)	(86.07%)	(0.25)	(1.80)	19,577	42,433	0.19	0.41
Anderson Energy Ltd.	53,983	77,806	(30.62%)	(105,601)	(31,493)	(235.32%)	(0.61)	(0.18)	10,520	29,839	0.06	0.17
Storm Resources Ltd.	49,578	32,313	53.43%	(26,203)	(6,574)	(298.59%)	(0.36)	(0.12)	24,282	11,425	0.33	0.21
Kelt Exploration Ltd.	46,656	-	0.00%	(5,115)	-	-	(0.07)	-	26,891	-	0.37	-
Marquee Energy Ltd.	45,295	37,405	21.09%	(9,873)	(10,529)	6.23%	(0.18)	(0.21)	12,423	8,740	0.23	0.17
Terra Energy Corp.	42,361	45,413	(6.72%)	1,891	(49,977)	103.78%	0.02	(0.49)	(96)	(6,339)	(0.00)	(0.06)
Questfire Energy Corp.	40,538	509	7862.23%	(2,178)	(3,525)	38.19%	(0.17)	(0.28)	9,778	(1,177)	0.76	(0.09)
Epsilon Energy Ltd. ● ³	40,037	33,837	18.32%	(13,924)	(4,128)	(237.29%)	(0.28)	(0.08)	33,194	28,607	0.66	0.55
Dundee Energy Limited ● ⁸	39,174	35,874	9.20%	(6,184)	(16,623)	62.80%	(0.03)	(0.10)	7,240	7,853	0.04	0.05
Tethys Petroleum Ltd. ● ^{3 8}	37,543	33,370	12.50%	(17,657)	(20,416)	13.51%	(0.03)	(0.07)	(804)	1,358	(0.00)	0.00
Pine Cliff Energy Ltd.	36,882	7,547	388.70%	10,910	(1,071)	1118.67%	0.06	(0.01)	16,062	1,773	0.09	0.02
Stream Oil & Gas Ltd. ● ^{3 11}	36,726	31,958	14.92%	(5,625)	1,980	(384.12%)	(0.08)	0.03	14,647	13,371	0.21	0.20
Exall Energy Corporation ●	36,263	31,485	15.18%	(16,428)	3,633	(552.19%)	(0.25)	0.06	13,763	17,924	0.21	0.30
Cardinal Energy Ltd.	35,750	3,985	797.11%	35,198	(3,820)	1021.41%	2.90	(0.82)	8,913	686	0.73	0.15
Yangarra Resources Ltd.	34,727	21,327	62.83%	2,586	(218)	1287.67%	0.02	-	27,077	17,016	0.21	0.14
Toscana Energy Income Corporation ●	34,572	18,014	91.92%	(8,107)	8,257	(198.18%)	(1.69)	3.84	11,658	3,178	2.43	1.48
Pan Orient Energy Corp. ● ⁸	32,196	55,162	(41.63%)	(93,362)	86,642	(207.76%)	(1.64)	1.53	21,675	34,323	0.38	0.61
Yoho Resources Inc. ¹⁰	29,947	23,177	29.21%	9,602	(8,899)	207.90%	0.19	(0.20)	14,421	9,271	0.29	0.21
Shoreline Energy Corp. ●	28,533	19,095	49.43%	(6,543)	(3,339)	(95.96%)	(0.80)	(0.59)	3,520	4,280	0.43	0.76
Lynden Energy Corp. ● ^{3 9}	24,869	15,229	63.30%	11,334	4,278	164.92%	0.10	0.04	11,491	10,384	0.10	0.10
Total	116,858,542	106,605,579	9.62%	9,030,675	9,845,388	8.28%			50,895,483	49,648,232		

Notes

1. INA: Information not available
 2. Data obtained from Canoils. Companies not updated in the database as at May 15, 2014 were not included in the list
 3. All USD balances were translated at closing rates per Oanda as at the respective year end dates. All USD transactional accounts were translated at average rates per Oanda for the respective years
 4. Only upstream Revenue included in the Gross Revenues (Gross Revenues include Intersegment Revenues where applicable)
 5. Earnings per Share are basic
 6. Cash Flow per Share ("CFPS") is calculated by PwC based on weighted average number of shares (basic) and Cash Flow from Operations
 7. Revenue presented are net of Royalties
 8. NCI excluded from Income / (Loss) and Debt / Equity ratio
 9. Year ended June 30, 2013
 10. Year ended September 30, 2013
 11. Year ended November 30, 2013
 12. Capital Expenditures comprise Exploration and Evaluation asset ("E&E") and Property, Plant and Equipment ("PP&E") expenditures (or Capital expenditures) as disclosed in Cash Flow from Investing activities (excluding Acquisitions and Business Combinations)
 13. Capital Expenditures are disclosed as Net proceeds (expenditures) on E&E and PP&E
 14. "Debt" per "Total Debt as a % of Equity" and "Debt to Capital Ratio (%)" includes borrowings such as bank loans and interest-bearing debt securities
 15. Canadian Public companies based in Canada
- ★ Reported under US GAAP
○ Canadian companies with international operations

Capital expenditures (\$000s) 2013 ¹²	Capital expenditures (\$000s) 2012 ¹²	Change (%)	Total assets (\$000s) 2013	Total assets (\$000s) 2012	Change (%)	Market capitalization (\$000s) 2013	Market Capitalization (\$ 000's) 2012	Change (%)	Working capital (\$000s) 2013	Working capital (\$000s) 2012	Total debt as a % of equity 2013 ¹⁴	Total debt as a % of equity 2012 ¹⁴	Debt to capital ratio (%) 2013 ¹⁴	Debt to capital ratio (%) 2012 ¹⁴
67,428	69,481	(2.95%)	299,845	280,555	6.88%	438,587	605,469	(27.56%)	(33,960)	(6,227)	65.9%	0.0%	39.7%	0.0%
74,406	175,269	(57.55%)	500,885	416,921	20.14%	253,463	28,473	790.18%	78,363	21,060	63.5%	18.3%	38.8%	15.5%
76,682	67,013	14.43%	452,977	445,105	1.77%	253,633	250,294	1.33%	(23,748)	(15,497)	53.3%	44.3%	34.8%	30.7%
104,295	52,669	98.02%	712,407	548,475	29.89%	469,681	447,567	4.94%	(29,842)	(49,903)	55.8%	8.1%	35.8%	7.5%
39,695	54,435	(27.08%)	455,701	489,786	(6.96%)	225,726	252,452	(10.59%)	(15,307)	(11,511)	48.8%	43.8%	32.8%	30.5%
101,018	38,281	163.89%	1,389,641	1,123,241	23.72%	180,291	180,291	0.00%	(706,898)	(555,924)	200.4%	142.7%	66.6%	58.7%
174,352	110,883	57.24%	446,133	317,204	40.65%	663,705	312,846	112.15%	(29,399)	(5,132)	29.3%	31.1%	22.6%	23.7%
42,733	181,881	(76.50%)	609,071	624,108	(2.41%)	33,272	99,817	(66.67%)	(4,155)	(1,731)	137.0%	122.4%	57.8%	55.0%
743,947	1,080,466	(31.15%)	4,342,325	4,458,635	(2.61%)	2,597,470	4,177,744	(37.83%)	1,418,180	1,150,012	15.8%	15.3%	13.6%	13.3%
9,241	25,042	(63.10%)	527,199	509,083	3.56%	214,897	210,366	2.15%	(6,341)	(4,346)	77.6%	73.7%	43.7%	42.4%
127,270	103,954	22.43%	373,301	300,980	24.03%	288,202	267,783	7.63%	(2,154)	(81,704)	54.2%	38.1%	35.1%	27.6%
84,639	201,806	(58.06%)	311,567	465,578	(33.08%)	91,229	319,323	(71.43%)	(5,193)	(40,436)	73.8%	18.0%	42.5%	15.2%
117,909	91,658	28.64%	597,674	519,324	15.09%	377,543	288,878	30.69%	(54,741)	(49,634)	18.2%	5.6%	15.4%	5.3%
142,577	118,577	20.24%	635,055	612,181	3.74%	613,890	924,543	(33.60%)	(16,348)	45,216	5.1%	0.0%	4.9%	0.0%
71,956	83,729	(14.06%)	451,680	401,649	12.46%	297,313	174,476	70.40%	(43,254)	(8,418)	51.5%	35.6%	34.0%	26.3%
30,117	43,183	(30.26%)	335,679	284,802	17.86%	259,442	225,079	15.27%	(20,572)	(3,048)	33.3%	17.9%	25.0%	15.2%
39,173	41,966	(6.66%)	191,922	182,457	5.19%	82,008	8,265	892.19%	(5,032)	(5,326)	130.7%	113.5%	56.7%	53.2%
53,604	50,385	6.39%	246,602	209,205	17.88%	174,278	-	-	(69,261)	(48,069)	51.5%	42.3%	34.0%	29.7%
9,752	6,930	40.72%	230,632	230,822	(0.08%)	140,439	169,792	(17.29%)	93,007	102,948	0.0%	0.0%	0.0%	0.0%
82,778	49,892	65.91%	192,580	126,322	52.45%	159,414	208,203	(23.43%)	(37,634)	(10,417)	14.9%	3.4%	13.0%	3.3%
46,619	31,176	49.53%	170,156	145,563	16.90%	136,407	43,012	217.14%	(18,038)	(2,591)	7.2%	0.0%	6.7%	0.0%
119,151	62,612	90.30%	274,221	159,718	71.69%	195,450	219,970	(11.15%)	(91,442)	(47,527)	47.0%	41.7%	32.0%	29.4%
57,841	36,989	56.37%	269,707	152,344	77.04%	177,750	75,752	134.65%	(84,610)	(47,836)	48.5%	51.2%	32.7%	33.9%
7,349	8,352	(12.01%)	42,273	51,830	(18.44%)	30,117	22,588	33.33%	10,565	6,623	0.0%	7.3%	0.0%	6.8%
84,172	75,864	10.95%	196,124	199,718	(1.80%)	365,625	638,185	(42.71%)	21,687	51,974	4.67%	0.0%	4.46%	0.0%
129,926	330,518	(60.69%)	1,004,119	916,826	9.52%	123,335	433,419	(71.54%)	(11,070)	(7,026)	101.5%	108.5%	50.4%	52.0%
9,571	14,395	(33.51%)	136,212	121,637	11.98%	27,791	21,786	27.57%	(7,203)	(2,274)	45.4%	52.3%	31.2%	34.3%
84,248	59,942	40.55%	269,335	180,467	49.24%	238,314	166,736	42.93%	(68,851)	(48,896)	32.1%	26.9%	24.3%	21.2%
24,038	28,700	(16.24%)	104,597	99,407	5.22%	19,814	37,706	(47.45%)	(50,618)	(34,850)	107.0%	69.1%	51.7%	40.9%
28,872	18,499	56.08%	89,852	60,801	47.78%	45,672	52,389	(12.82%)	(956)	394	58.3%	20.6%	37.7%	17.1%
45,320	63,843	(29.01%)	370,190	398,991	(7.22%)	126,191	143,632	(12.14%)	(1,751)	(6,885)	7.33%	2.94%	6.83%	2.86%
16,171	34,901	(53.67%)	171,077	343,478	(50.19%)	25,020	40,549	(38.30%)	9,536	(65,628)	315.6%	101.4%	75.9%	50.4%
71,939	32,169	123.63%	250,550	248,792	0.71%	354,306	119,321	196.94%	(2,680)	1,565	4.9%	22.7%	4.7%	18.5%
96,452	-	-	485,201	-	-	1,034,244	-	-	20,500	-	0.0%	0.0%	0.0%	0.0%
33,255	45,131	(26.31%)	237,961	162,645	46.31%	63,367	42,636	48.62%	(75,815)	(44,507)	60.2%	41.0%	37.6%	29.1%
2,253	4,907	(54.09%)	143,499	198,788	(27.81%)	29,482	23,383	26.09%	(10,172)	27,808	15.9%	84.5%	13.7%	45.8%
8,194	2,571	218.71%	133,177	5,613	2272.61%	13,352	6,407	108.40%	(47,554)	(1,531)	2203.1%	-256.5%	104.8%	163.9%
46,661	77,052	(39.44%)	184,018	169,369	8.65%	169,308	191,891	(11.77%)	(11,939)	7,002	45.4%	32.3%	31.2%	24.4%
12,948	13,710	(5.56%)	172,595	169,606	1.76%	62,107	49,395	25.73%	(64,435)	(63,890)	112.0%	110.5%	52.8%	52.5%
24,516	17,495	40.13%	250,908	251,101	(0.08%)	129,401	149,088	(13.20%)	166,020	(9,912)	2.5%	8.2%	2.5%	7.6%
11,813	2,303	412.94%	180,486	80,689	123.68%	208,201	134,932	54.30%	13,621	35,077	0.2%	4.3%	0.2%	4.1%
15,762	30,025	(47.50%)	94,685	68,088	39.06%	40,133	53,977	(25.65%)	(34,827)	(14,389)	78.0%	65.3%	43.8%	39.5%
11,373	48,118	(76.36%)	104,408	128,242	(18.59%)	7,330	31,652	(76.84%)	(37,631)	(38,705)	150.7%	98.9%	60.1%	49.7%
9,535	5,309	79.60%	403,174	81,933	392.08%	402,115	-	-	(484)	(13,370)	2.8%	18.4%	2.7%	15.5%
47,022	24,449	92.33%	169,798	138,894	22.25%	85,328	42,599	100.30%	(40,778)	(34,242)	41.7%	40.3%	29.4%	28.7%
6,657	3,022	120.28%	108,557	90,672	19.72%	73,394	48,172	52.36%	(25,499)	(30,365)	74.1%	61.2%	42.6%	38.0%
101,280	78,011	29.83%	286,535	382,118	(25.01%)	112,385	166,190	(32.38%)	45,635	114,210	0.0%	0.0%	0.0%	0.0%
30,438	34,697	(12.27%)	181,222	154,496	17.30%	136,238	85,061	60.17%	(31,228)	(18,506)	23.4%	13.6%	18.9%	12.0%
5,998	23,656	(74.64%)	116,083	111,934	3.71%	16,454	21,419	(23.18%)	(40,052)	(31,611)	162.5%	140.7%	61.9%	58.5%
56,159	24,451	129.68%	77,628	55,775	39.18%	77,354	50,538	53.06%	(23,596)	(12,383)	61.8%	47.5%	38.2%	32.2%
58,496,252	56,149,610	4.18%	425,584,036	394,023,469	8.01%	346,985,292	313,018,973	10.85%						

Operational statistics

Exploration and production companies

PwC's Top 100

Company ¹²	Oil & liquid production bbls/d 2013	NG production mmcf/d 2013 ¹¹	Total production boe/d 2013	Total production boe/d 2012	Change (%)	Liquids price per bbl 2013 ^{4,7}	NG price per mcf 2013 ⁴	Proved reserves (mBOE) 2013 ⁵	Proved reserves (mBOE) 2012 ⁵	Change (%)	Probable reserves (mBOE) 2013 ⁵	Probable reserves (mBOE) 2012 ⁵
Suncor Energy Inc. ●	530,400	192	562,400	549,100	2.42%	87.83	3.42	4,804,000	4,100,167	17.17%	2,902,000	2,773,667
Canadian Natural Resources Limited ●	478,240	1,158	671,162	654,665	2.52%	73.81	3.58	5,137,000	5,018,000	2.37%	2,854,000	2,868,000
Imperial Oil Limited ● ★	261,000	201	294,500	282,000	4.43%	70.48	3.27	4,027,333	4,130,833	(2.51%)	2,057,000	1,993,500
Husky Energy Inc. ●	226,500	513	311,950	301,533	3.45%	78.12	3.19	1,265,000	1,192,000	6.12%	1,862,000	1,723,000
Cenovus Energy Inc. ●	179,275	529	267,442	264,403	1.15%	67.01	3.20	2,284,167	2,175,167	5.01%	923,000	893,333
Encana Corporation ● ★ ³	53,900	2,777	516,733	527,833	(2.10%)	69.77	4.21	1,930,333	2,514,167	(23.22%)	933,333	1,520,667
Talisman Energy Inc. ● ³	131,327	1,451	373,160	425,971	(12.40%)	97.46	5.73	1,104,400	1,090,717	1.25%	536,000	618,967
Pacific Rubiales Energy Corp. ● ³	311,177	INA	311,177	246,575	26.20%	101.99	6.40	454,900	389,800	16.70%	247,100	209,800
Canadian Oil Sands Limited	98,037	INA	98,037	105,680	(7.23%)	99.55	-	735,000	801,000	(8.24%)	923,000	895,000
Crescent Point Energy Corp. ●	109,129	67	120,288	98,751	21.81%	86.32	3.61	432,767	400,373	8.09%	230,990	208,424
Penn West Petroleum Ltd.	85,098	300	135,093	161,195	(16.19%)	68.29	3.45	415,000	445,000	(6.74%)	209,000	231,000
ARC Resources Ltd.	37,846	349	96,087	93,546	2.72%	72.21	3.45	373,976	363,904	2.77%	259,888	243,079
Enerplus Corporation ● ★	41,722	288	89,793	82,098	9.37%	68.12	3.26	260,844	223,853	16.52%	139,875	117,220
Pengrowth Energy Corporation	45,892	232	84,527	85,748	(1.42%)	69.12	3.26	306,446	299,251	2.40%	170,196	211,655
Baytex Energy Corp. ● ★	50,198	42	57,196	53,986	5.95%	67.57	3.32	159,524	143,444	11.21%	158,592	148,152
MEG Energy Corp.	35,317	0	35,317	28,773	22.74%	49.28	INA	1,446,000	1,284,000	12.62%	1,451,000	1,360,000
Vermilion Energy Inc. ●	27,471	81	41,005	37,803	8.47%	104.46	6.83	128,952	105,262	22.51%	69,609	59,605
Lightstream Resources Ltd.	37,443	54	46,438	42,784	8.54%	86.75	3.29	124,151	130,637	(4.96%)	74,897	75,044
Harvest Operations Corp	33,921	111	52,473	59,327	(11.55%)	79.61	3.63	231,800	252,383	(8.16%)	231,150	241,550
Bonavista Energy Corporation	27,132	278	73,406	69,250	6.00%	63.47	3.35	256,216	248,409	3.14%	142,313	123,811
Tourmaline Oil Corp.	8,548	397	74,796	50,804	47.23%	83.25	3.65	316,308	249,077	26.99%	273,595	188,792
Parex Resources Inc. ● ★ ³	15,854	0	15,854	11,407	38.98%	107.29	-	17,155	10,063	70.48%	14,270	6,037
TransGlobe Energy Corporation ● ³	18,284	0	18,284	17,432	4.89%	98.54	101.95	31,634	32,768	(3.46%)	13,644	15,951
Bankers Petroleum Ltd ● ³	18,169	0	18,169	15,020	20.97%	87.93	82.10	146,700	139,400	5.24%	85,500	86,300
Aurora Oil & Gas Limited ● ³	17,140	25	21,304	10,678	99.51%	78.99	3.92	164,892	94,688	74.14%	58,943	8,181
Trilogy Energy Corp.	15,002	117	34,509	33,510	2.98%	67.75	3.55	77,498	70,633	9.72%	27,692	26,326
Peyto Exploration & Development Corp.	6,376	318	59,313	44,527	33.21%	70.97	3.54	304,438	276,346	10.17%	163,319	115,645
Legacy Oil + Gas Inc. ●	16,911	13	19,013	16,440	15.65%	69.02	3.37	66,709	55,407	20.40%	50,449	38,751
Long Run Exploration Ltd.	13,232	71	25,094	13,189	90.26%	77.55	3.70	62,692	53,657	16.84%	34,990	29,509
Whitecap Resources Inc.	13,583	37	19,769	14,052	40.69%	69.76	3.36	94,580	60,889	55.33%	37,842	26,560
Crew Energy Inc.	13,400	84	27,451	27,963	(1.83%)	65.23	3.47	115,224	85,087	35.42%	82,078	67,889
Connacher Oil and Gas Limited	11,783	0	11,783	11,881	(0.82%)	53.93	-	212,063	214,009	(0.91%)	234,314	237,394
Ithaca Energy Inc. ● ³	10,392	INA	10,392	4,673	122.38%	112.24	7.21	31,997	26,023	22.96%	26,022	25,833
Twin Butte Energy Ltd.	15,490	13	17,585	14,681	19.78%	72.36	3.47	38,690	31,675	22.15%	29,536	24,517
Birchcliff Energy Ltd.	4,877	126	25,829	22,802	13.27%	89.17	3.41	220,049	185,950	18.34%	149,998	131,820
Bonterra Energy Corp.	8,531	22	12,190	6,703	81.86%	70.84	3.46	54,096	33,134	63.26%	20,885	11,898
Advantage Oil & Gas Ltd.	5,255	121	25,452	27,917	(8.83%)	77.21	3.11	191,884	191,349	0.28%	128,599	114,546
Bellatrix Exploration Ltd.	6,489	92	21,829	16,686	30.83%	69.82	3.71	124,111	55,215	124.78%	87,372	48,518
Spyglass Resources Corp.	7,450	47	15,215	13,223	15.06%	66.53	3.23	54,675	41,077	33.10%	27,772	20,142
Surge Energy Inc.	8,489	14	10,769	8,873	21.37%	81.87	3.64	43,493	28,137	54.58%	29,966	17,987
Renegade Petroleum Ltd. ●	7,203	1	7,443	3,930	89.38%	82.81	1.74	INA	23,867	0.00%	INA	15,319
Paramount Resources Ltd. ●	3,224	106	20,914	19,917	5.01%	81.17	3.57	87,677	50,857	72.40%	46,136	35,985
BlackPearl Resources Inc.	9,491	1	9,730	9,366	3.88%	65.09	3.16	63,829	15,885	301.82%	226,777	197,439
NuVista Energy Ltd.	5,357	72	17,329	22,577	(23.24%)	53.59	3.28	80,457	59,154	36.01%	58,775	34,918
Perpetual Energy Inc.	3,860	89	18,696	20,142	(7.18%)	66.48	3.53	33,935	36,099	(5.99%)	28,282	38,695
Chinook Energy Inc. ●	4,256	35	10,155	12,184	(16.65%)	79.51	3.70	20,866	28,949	(27.92%)	12,356	22,703
Freehold Royalties Ltd.	5,721	19	8,913	8,850	0.72%	77.26	2.55	3,430	3,516	(2.44%)	3,271	2,893
DeeThree Exploration Ltd.	5,537	10	7,184	4,223	70.13%	65.89	3.42	26,285	14,357	83.07%	13,128	5,831
Raging River Exploration Inc.	5,457	1	5,665	2,277	148.79%	87.55	3.16	31,376	11,544	171.80%	11,353	5,620
TORC Oil & Gas Ltd.	5,004	7	6,121	1,285	376.34%	70.52	3.31	30,417	10,526	188.98%	16,645	8,394

Notes
























1. INA: Information not available
2. Data obtained from Canoilis. Companies not updated in the database as at May 15, 2014 were not included in the list
3. All USD balances were translated at closing rates per Oanda as at the respective year end dates. All USD transactional accounts were translated at average rates per Oanda for the respective years.
4. Prices are presented after hedging
5. Reserves are gross
6. Calculated by PwC based on Cash Flow from Operations
7. Liquids Price (per bbl) is the average of Oil, NGL price (per bbl) and /or Bitumen price (per bbl)
8. Year ended June 30, 2013
9. Year ended September 30, 2013
10. Year ended November 30, 2013
11. NG Production mmcf/d 2013 rounded to zero decimal
12. Canadian public companies based in Canada
- ★ Reported under US GAAP
- Canadian companies with international operations

Change (%)	Gas leverage based on proved reserves 2013	Gas leverage based on proved reserves 2012	Operational costs per boe 2013	Operational costs per boe 2012	Change (%)	Royalties per boe 2013	Royalties per boe 2012	G&A costs per boe 2013	G&A costs per boe 2012	Depletion costs per boe 2013	Depletion costs per boe 2012	Cash flow per boe 2013 ^a	Cash flow per boe 2012 ^a
4.63%	0%	3.49%	46.02	44.39	3.67%	9.77	11.55	INA	INA	20.64	18.42	49.20	44.20
(0.49%)	13.97%	13.74%	18.61	17.78	4.66%	7.35	6.72	1.37	1.13	20.38	18.65	29.46	25.98
3.19%	2.07%	1.09%	49.19	43.30	13.61%	INA	INA	10.07	10.50	10.33	7.39	30.63	45.47
8.07%	34.61%	35.05%	16.28	15.49	5.10%	7.59	6.30	4.90	4.07	19.67	19.20	40.80	47.18
3.32%	6.31%	7.32%	18.42	17.27	6.63%	3.44	4.01	3.58	3.63	18.78	16.42	36.25	35.44
(38.62%)	85.63%	88.76%	4.69	4.12	13.85%	INA	INA	2.40	2.03	8.54	10.15	12.50	16.12
(13.40%)	73.82%	71.50%	11.75	15.90	(26.13%)	16.00	12.03	3.28	3.28	15.88	16.12	13.36	15.40
18%	INA	INA	36.11	39.76	(9.17%)	INA	INA	7.05	6.98	28.90	23.90	14.84	20.02
3.13%	0.00%	0.00%	41.75	38.91	7.30%	4.85	5.21	1.16	0.94	13.36	10.41	44.21	48.32
10.83%	8.27%	8.45%	11.50	11.65	(1.27%)	14.67	12.95	1.41	1.30	33.27	34.72	44.95	42.83
(9.52%)	30.40%	28.95%	17.30	17.26	0.22%	10.29	10.07	3.24	2.91	21.29	21.17	21.07	20.28
6.92%	64.71%	65.04%	9.66	9.40	2.76%	6.36	5.72	2.77	2.84	15.74	16.73	22.86	20.60
19.33%	51.23%	40.52%	10.48	10.62	(1.33%)	10.21	8.95	2.54	2.61	18.10	18.65	23.39	17.88
(19.59%)	34.89%	43.04%	15.64	13.87	12.75%	8.92	8.84	2.85	2.87	18.62	18.08	20.64	17.70
7.05%	11.46%	9.21%	13.20	11.77	12.13%	12.07	9.85	2.18	2.26	15.76	15.11	30.58	29.30
6.69%	0.00%	0.00%	10.01	9.98	0.30%	3.14	2.46	7.20	6.72	14.67	13.80	10.08	22.93
16.78%	39.90%	38.63%	12.84	13.10	(1.98%)	4.47	3.82	3.28	3.21	21.54	21.45	47.11	35.99
(0.20%)	21.04%	18.33%	13.19	12.39	6.48%	10.16	9.89	2.67	2.88	30.73	28.43	40.84	39.37
(4.31%)	20.53%	20.88%	18.05	16.54	9.13%	8.04	7.60	3.56	2.99	27.67	26.69	10.47	20.45
14.94%	61.82%	61.79%	8.93	9.07	(1.56%)	4.65	4.90	1.15	1.10	13.04	13.06	18.16	16.12
44.92%	85.52%	88.18%	4.35	4.43	(1.81%)	2.11	1.63	0.74	0.79	11.84	13.04	17.55	14.75
136.38%	0.00%	0.00%	10.25	8.40	22.01%	13.86	8.31	5.71	7.45	38.33	43.35	37.11	61.11
(14.46%)	0.00%	0.00%	10.20	8.18	24.79%	49.65	49.38	4.26	4.40	7.66	7.33	30.78	14.77
(0.93%)	0.00%	0.00%	13.74	14.37	(4.44%)	14.64	14.45	3.32	2.96	15.46	11.99	34.88	29.49
620.53%	23.03%	25.14%	5.57	6.27	(11.12%)	19.79	19.85	3.17	3.87	11.08	10.02	38.17	36.97
5.19%	60.79%	63.05%	10.82	8.33	29.85%	5.85	4.61	0.79	0.94	18.13	18.29	23.16	19.24
41.22%	85.58%	83.04%	2.09	1.92	8.93%	1.87	1.89	0.24	0.24	10.38	10.56	18.82	17.49
30.19%	18.30%	18.10%	14.27	14.34	(0.49%)	12.91	11.79	2.44	3.02	32.01	34.56	37.60	39.81
18.57%	55.20%	59.39%	13.83	14.57	(5.10%)	6.02	6.03	2.77	7.61	18.65	25.35	25.58	28.26
42.48%	28.45%	30.49%	9.96	10.97	(9.22%)	8.28	6.82	1.67	1.80	21.12	22.63	38.78	33.83
20.90%	66.89%	58.75%	11.14	11.54	(3.47%)	8.53	8.87	1.86	1.79	18.98	19.80	16.16	20.93
(1.30%)	-	-	21.32	19.14	11.39%	3.58	2.42	6.79	9.47	19.25	19.32	23.36	10.02
0.73%	34.10%	41.20%	40.66	49.72	(18.22%)	INA	INA	2.74	2.54	42.86	32.44	64.38	39.01
20.48%	23.86%	32.70%	21.83	18.55	17.67%	12.78	11.97	1.95	1.97	20.99	18.51	20.37	24.59
13.79%	88.22%	86.21%	5.68	6.06	(6.33%)	2.92	2.90	2.19	2.75	11.54	11.48	18.07	13.00
75.54%	25.59%	24.78%	12.77	16.88	(24.34%)	8.52	5.61	2.35	2.48	20.63	13.70	39.08	30.38
12.27%	88.42%	88.30%	7.14	8.73	(18.26%)	3.64	3.34	2.36	2.05	11.97	12.94	17.76	10.50
80.08%	63.70%	64.40%	8.74	8.73	0.15%	5.80	6.35	2.03	2.34	10.77	12.40	16.12	17.95
37.88%	44.80%	41.31%	18.89	16.15	16.95%	10.21	9.70	3.01	3.69	14.03	52.94	3.88	13.27
66.60%	24.41%	33.59%	12.57	11.61	8.31%	12.64	10.81	3.10	3.34	20.98	21.33	28.76	28.67
-	INA	6.75%	17.74	14.00	26.71%	14.04	12.64	5.61	5.62	30.21	32.74	35.61	31.16
28.21%	57.27%	66.17%	9.52	9.58	(0.63%)	1.42	2.27	2.55	2.49	19.01	20.81	5.88	7.60
14.86%	0.04%	0.25%	20.84	17.82	16.95%	12.62	13.68	2.49	2.25	20.80	20.90	22.72	23.36
68.32%	68.46%	71.61%	11.70	11.17	4.75%	3.31	3.40	3.24	2.58	13.12	14.45	13.16	7.10
(26.91%)	86.81%	85.79%	11.05	11.09	(0.36%)	2.79	1.72	3.59	3.68	13.61	14.33	7.67	6.61
(45.57%)	52.45%	47.39%	20.07	19.24	4.31%	4.14	2.70	2.85	3.42	20.02	22.16	21.48	18.88
13.07%	19.37%	19.35%	5.95	4.82	23.56%	1.96	2.00	2.35	2.39	18.85	19.94	28.66	42.76
125.16%	24.73%	22.39%	9.91	10.53	(5.83%)	15.39	10.14	2.48	2.82	19.57	20.23	37.16	40.42
102.01%	3.82%	4.59%	12.57	12.82	(1.97%)	7.56	7.26	1.85	2.78	26.54	29.11	63.43	43.17
98.29%	17.28%	26.95%	11.83	12.83	(7.77%)	10.90	7.06	3.17	7.68	26.81	39.05	35.26	18.15

Operational statistics | CONTINUED

Exploration and production companies

PwC's Top 100

Company ¹²	Oil & liquid production bbls/d 2013	NG production mmcf/d 2013 ¹¹	Total production boe/d 2013	Total production boe/d 2012	Change (%)	Liquids price per bbl 2013 ^{4,7}	NG price per mcf 2013 ⁴	Proved reserves (mBOE) 2013 ⁵	Proved reserves (mBOE) 2012 ⁵	Change (%)	Probable reserves (mBOE) 2013 ⁵	Probable reserves (mBOE) 2012 ⁵
Mart Resources Inc. 	4,000	0	4,000	5,039	(20.63%)	113.91	-	12,791	13,927	(8.16%)	5,675	5,367
Canacol Energy Ltd.  ^{3 8}	5,310	9	6,817	12,034	(43.35%)	67.65	5.03	22,264	11,305	96.94%	12,429	6,489
Zargon Oil & Gas Ltd. 	4,870	16	7,468	8,117	(8.00%)	79.71	2.93	17,060	18,269	(6.61%)	10,461	12,691
Argent Energy Trust 	3,853	10	5,591	2,609	114.30%	67.10	3.43	25,889	17,731	46.01%	16,076	14,602
Longview Oil Corp.	4,748	7	5,953	6,235	(4.51%)	81.25	3.35	19,405	21,162	(8.30%)	18,232	16,714
Oando Energy Resources Inc.  ³	4,179	2	4,577	4,051	12.98%	113.58	110.16	11,434	10,415	9.79%	7,514	4,636
RMP Energy Inc.	3,653	19	6,872	5,356	28.31%	83.06	3.60	19,759	14,858	32.98%	14,390	10,232
Arcan Resources Ltd	3,781	0	3,848	4,503	(14.55%)	88.71	2.86	24,961	23,410	6.62%	14,044	15,319
Athabasca Oil Corporation	3,156	19	6,397	1,684	279.85%	76.59	3.56	65,500	62,600	4.63%	416,700	301,600
Parallel Energy Trust 	4,715	15	7,147	5,926	20.61%	59.41	3.87	42,506	39,705	7.05%	6,994	7,505
Crocotta Energy Inc.	2,488	37	8,724	6,911	26.23%	71.67	3.40	28,568	22,176	28.82%	17,659	15,937
Pinecrest Energy Inc.	3,258	0	3,332	3,142	6.04%	70.68	2.76	6,818	9,476	(28.05%)	4,736	6,765
Cequence Energy Ltd.	1,399	53	10,183	8,990	13.27%	69.22	3.57	55,166	46,391	18.92%	57,765	44,695
Painted Pony Petroleum Ltd.	1,551	43	8,693	6,589	31.93%	77.78	3.45	59,878	42,978	39.32%	230,391	148,165
Delphi Energy Corp.	2,224	36	8,241	8,276	(0.42%)	86.53	3.61	36,094	23,738	52.05%	25,507	19,250
Eagle Energy Trust 	2,777	1	3,004	2,596	15.70%	69.19	3.60	10,922	10,612	2.92%	3,407	5,023
Arsenal Energy Inc. 	2,949	6	3,973	3,723	6.73%	80.83	3.11	8,812	9,691	(9.07%)	5,602	5,209
Gear Energy Ltd.	3,786	2	4,079	3,476	17.34%	69.18	3.11	8,941	7,270	22.99%	6,715	6,165
Calvalley Petroleum Inc.  ³	2,516	0	2,516	2,434	3.37%	112.66	-	11,464	12,724	(9.90%)	11,704	12,818
Manitok Energy	2,149	12	4,113	2,389	72.16%	83.91	3.61	9,457	8,030	17.77%	7,263	6,833
Rock Energy Inc.	3,195	2	3,559	2,377	49.72%	68.03	3.45	6,828	5,799	17.74%	4,054	3,087
Strategic Oil & Gas Ltd. 	2,339	6	3,270	2,106	55.29%	82.73	3.30	6,694	4,017	66.64%	6,021	4,167
Tamarack Valley Energy Ltd.	1,911	8	3,276	2,166	51.28%	85.80	3.42	9,992	6,603	51.33%	8,693	4,583
Sea Dragon Energy Inc.  ³	1,645	1	1,783	1,147	55.41%	91.52	1.03	2,956	3,792	(22.04%)	793	2,752
Americas Petrogas Inc. 	2,132	2	2,412	2,049	0.00%	80.27	INA	2,035	1,717	18.56%	8,188	9,119
Southern Pacific Resource Corp. ⁸	2,778	0	2,778	3,648	(23.84%)	60.73	INA	123,001	120,422	2.14%	153,147	128,520
Touchstone Exploration Inc.  ^{3 9}	1,727	0	1,727	1,159	49.01%	94.42	INA	8,327	6,590	26.36%	5,576	4,953
Artek Exploration Ltd.	1,374	14	3,697	2,768	33.57%	68.51	3.73	21,393	17,053	25.45%	21,134	12,586
Palliser Oil & Gas Corporation	2,303	0	2,340	2,124	10.19%	68.18	3.06	5,491	5,579	(1.57%)	3,919	2,342
Suroco Energy Inc.  ³	1,517	0	1,517	991	53.08%	91.53	-	2,067	1,734	19.20%	1,070	1,086
Santonia Energy Inc.	1,069	19	4,293	11,880	(63.86%)	64.50	3.35	16,321	16,898	(3.42%)	7,891	8,372
Anderson Energy Ltd.	1,296	13	3,500	6,078	(42.41%)	72.47	2.93	5,311	10,297	(48.42%)	3,512	7,473
Storm Resources Ltd.	996	16	3,637	2,254	61.31%	78.73	3.63	20,764	13,822	50.22%	19,777	13,509
Kelt Exploration Ltd.	813	19	3,961	-	-	69.77	3.51	35,175	-	-	23,858	-
Marquee Energy Ltd.	1,369	5	2,196	2,283	(3.83%)	71.30	3.42	11,461	6,493	76.53%	5,727	5,452
Terra Energy Corp.	678	19	3,876	5,078	(23.67%)	78.49	3.21	11,698	13,258	(11.77%)	5,663	13,313
Questfire Energy Corp.	758	17	3,591	68	5180.88%	76.16	3.24	18,972	151	12464.24%	6,715	168
Epsilon Energy Ltd.  ³	41	39	6,542	6,391	2.36%	84.52	2.97	110,192	139,608	(21.07%)	77,806	21,357
Dundee Energy Limited 	634	10	2,333	2,428	(3.91%)	71.58	4.49	15,543	12,919	20.31%	3,821	3,439
Tethys Petroleum Ltd.  ³	2,743	12	4,822	5,549	(13.10%)	31.61	1.83	14,133	14,842	(4.77%)	11,225	11,308
Pine Cliff Energy Ltd.	280	27	4,787	775	517.41%	75.85	3.04	14,426	2,493	478.77%	4,848	1,347
Stream Oil & Gas Ltd.  ^{3 10}	1,009	0	1,009	1,019	(0.98%)	67.89	-	23,242	19,506	19.15%	7,888	8,855
Exall Energy Corporation 	1,077	0	1,138	1,082	5.19%	64.55	3.84	2,147	2,569	(16.46%)	1,427	2,060
Cardinal Energy Ltd.	1,321	0	1,374	279	392.41%	73.43	3.03	13,749	2,682	412.54%	7,416	834
Yangarra Resources Ltd.	978	7	2,206	1,914	15.25%	73.20	3.53	8,878	6,548	35.59%	7,738	5,058
Toscana Energy Income Corporation 	889	10	2,496	1,336	86.79%	73.65	3.14	5,943	5,716	3.97%	2,621	2,138
Pan Orient Energy Corp. 	887	0	887	1,430	(37.97%)	99.47	-	621	405	53.33%	888	682
Yoho Resources Inc. ⁹	673	10	2,337	2,207	5.87%	73.09	3.29	11,738	10,661	10.10%	40,860	16,584
Shoreline Energy Corp. 	597	8	1,997	1,614	23.76%	82.65	3.25	4,273	4,409	(3.08%)	3,683	2,874
Lynden Energy Corp.  ^{3 8}	630	2	1,039	546	90.44%	89.39	4.82	7,773	7,629	1.89%	268	1,533
Total	3,198,410	11,018	5,034,843	4,837,058	4.09%			29,663,797	28,388,381	4.49%	19,717,944	19,091,427

Notes

1. INA: Information not available
 2. Data obtained from Canolls. Companies not updated in the database as at May 15, 2014 were not included in the list
 3. All USD balances were translated at closing rates per Oanda as at the respective year end dates. All USD transactional accounts were translated at average rates per Oanda for the respective years.
 4. Prices are presented after hedging
 5. Reserves are gross
 6. Calculated by PwC based on Cash Flow from Operations
 7. Liquids Price (per bbl) is the average of Oil, NGL price (per bbl) and /or Bitumen price (per bbl)
 8. Year ended June 30, 2013
 9. Year ended September 30, 2013
 10. Year ended November 30, 2013
 11. NG Production mmcf/d 2013 rounded to zero decimal
 12. Canadian public companies based in Canada
- ★ Reported under US GAAP
 ○ Canadian companies with international operations

Change (%)	Gas leverage based on proved reserves 2013	Gas leverage based on proved reserves 2012	Operational costs per boe 2013	Operational costs per boe 2012	Change (%)	Royalties per boe 2013	Royalties per boe 2012	G&A costs per boe 2013	G&A costs per boe 2012	Depletion costs per boe 2013	Depletion costs per boe 2012	Cash flow per boe 2013 ⁶	Cash flow per boe 2012 ⁶
5.74%	0.00%	0.00%	26.87	12.83	109.53%	17.95	15.96	12.28	8.86	18.38	14.34	47.08	70.84
91.54%	45.65%	0.00%	29.87	17.12	74.52%	5.04	3.70	8.79	4.03	19.05	14.30	11.93	9.00
(17.57%)	24.90%	27.30%	16.96	15.92	6.55%	10.76	10.14	4.22	4.56	16.64	16.22	20.91	19.87
10.09%	34.33%	38.31%	17.86	4.07	338.82%	14.68	4.36	7.37	6.07	29.61	8.90	32.00	7.92
9.08%	22.07%	21.60%	21.08	20.35	3.58%	12.10	11.71	1.25	1.25	17.97	18.32	30.21	29.18
62.09%	31.42%	21.81%	18.47	16.95	8.96%	6.62	7.00	26.25	12.03	19.42	16.22	47.71	16.22
40.65%	52.00%	56.52%	7.22	7.97	(9.42%)	9.63	3.78	2.57	2.87	21.93	23.52	32.29	24.38
(8.33%)	3.66%	6.20%	17.84	20.08	(11.15%)	16.64	12.60	7.25	8.33	26.37	26.87	29.78	27.31
38.16%	11.78%	11.45%	15.27	16.47	(7.30%)	4.96	2.02	28.05	81.86	58.24	40.85	(4.93)	(66.14)
(6.81%)	36.37%	33.56%	7.42	7.16	3.73%	8.12	7.33	3.67	3.77	13.24	14.43	14.93	15.55
10.81%	75.46%	68.44%	6.33	5.83	8.59%	2.64	3.52	1.89	2.17	14.01	14.50	20.57	18.81
(29.99%)	-	0.70%	20.10	12.26	64.00%	8.29	6.49	5.69	6.04	35.66	28.80	45.80	65.99
29.24%	83.89%	86.16%	7.66	7.43	3.13%	2.32	1.45	1.95	2.16	11.01	12.02	11.79	11.51
55.50%	88.65%	84.50%	9.17	8.34	9.91%	2.14	2.78	2.73	2.09	13.37	16.52	15.48	16.52
32.50%	72.00%	76.56%	8.47	7.80	8.67%	4.37	4.41	2.06	2.25	11.97	14.28	10.43	10.29
(32.17%)	10.25%	9.41%	10.41	12.37	(15.85%)	25.13	23.58	8.21	8.50	28.29	32.28	38.02	36.08
7.55%	19.93%	19.94%	19.80	20.28	(2.35%)	14.53	12.52	2.88	3.03	17.87	18.02	24.35	21.86
8.92%	13.28%	17.83%	17.90	17.32	3.34%	15.27	14.16	3.94	3.47	21.50	23.31	26.54	28.55
(8.69%)	0.00%	0.00%	20.24	18.15	11.52%	42.07	41.52	6.47	6.93	8.99	7.72	34.04	42.67
6.29%	57.66%	63.10%	7.62	9.14	(16.63%)	13.69	5.60	4.68	6.81	13.09	14.30	24.76	19.06
31.33%	8.52%	15.88%	19.33	24.21	(20.14%)	16.21	10.99	3.16	5.67	21.77	23.97	25.11	18.84
44.48%	38.01%	14.24%	24.02	17.62	36.31%	14.51	12.55	5.19	9.64	23.49	27.03	15.49	25.74
89.67%	41.16%	36.22%	13.14	12.10	8.59%	6.00	3.39	3.63	3.97	21.40	24.12	27.37	17.60
(71.18%)	13.81%	11.13%	13.55	8.77	54.60%	51.72	56.69	9.64	11.13	8.21	10.04	3.32	17.53
(10.22%)	13.48%	9.53%	25.73	16.74	53.70%	10.85	16.74	23.75	20.31	43.63	37.67	35.61	13.09
19.16%	0.00%	0.00%	15.12	10.66	41.84%	10.43	10.82	12.98	8.84	20.74	18.77	21.46	34.67
12.58%	0.00%	0.00%	16.06	16.80	(4.37%)	27.33	25.62	10.86	15.54	14.46	6.00	11.48	17.01
67.92%	73.97%	73.65%	10.59	10.13	4.51%	7.52	7.28	2.36	3.12	12.26	28.83	20.24	15.51
67.34%	1.42%	2.13%	28.64	23.04	24.31%	16.79	14.26	5.14	5.43	19.85	21.10	16.52	21.60
(1.47%)	0.00%	0.00%	37.37	41.19	(9.29%)	8.32	8.49	11.28	15.41	19.50	18.66	30.11	4.21
(5.74%)	80.99%	73.45%	11.11	7.69	44.47%	4.89	2.16	5.38	4.09	16.75	15.95	12.49	9.79
(53.00%)	63.82%	56.84%	13.25	10.90	21.60%	4.02	3.59	5.35	4.12	21.85	19.96	8.23	13.45
46.40%	79.14%	71.14%	10.86	11.48	(5.38%)	4.55	4.36	2.98	4.49	14.26	16.46	18.29	13.88
-	73.53%	-	7.86	-	-	4.37	-	1.15	-	16.14	-	18.60	-
5.05%	54.09%	39.44%	18.03	16.51	9.19%	6.05	4.63	6.15	7.36	22.43	20.94	15.50	10.49
(57.46%)	76.00%	80.15%	15.01	19.13	(21.55%)	5.13	2.31	5.30	4.85	9.85	11.91	(0.07)	(3.42)
3897.02%	80.89%	54.30%	12.79	7.31	74.97%	4.05	1.25	4.03	122.53	6.43	12.09	7.46	(47.41)
264.32%	99.90%	99.91%	5.38	5.46	(1.52%)	INA	INA	3.05	1.55	7.33	10.16	13.90	12.26
11.10%	89.77%	85.83%	17.60	15.18	15.94%	7.00	6.07	6.93	7.95	14.75	16.93	8.50	8.86
(0.73%)	58.25%	30.09%	7.02	5.05	39.11%	INA	INA	10.94	9.35	7.38	9.83	(0.46)	0.67
259.93%	95.83%	74.06%	9.39	9.42	(0.31%)	2.02	4.74	1.85	7.34	9.24	9.95	9.19	6.27
(10.91%)	8.26%	8.99%	16.80	14.83	13.28%	9.97	8.64	9.40	3.50	15.84	8.67	39.77	35.95
(30.70%)	3.82%	7.71%	11.82	12.88	(8.21%)	28.24	13.99	5.38	4.90	28.37	24.01	33.12	45.38
789.25%	8.56%	-	27.93	19.86	40.62%	8.71	10.08	10.19	18.83	22.09	22.33	17.77	6.74
52.97%	3.08%	2.81%	6.30	6.81	(7.45%)	2.23	1.51	2.06	2.52	17.50	20.67	33.63	24.36
22.58%	66.94%	66.76%	13.70	14.85	(7.74%)	5.65	3.63	4.92	9.05	13.91	13.43	12.80	6.52
30.21%	0.00%	0.00%	13.27	13.37	(0.75%)	4.91	5.31	14.23	11.26	45.26	24.84	66.95	65.76
146.38%	69.73%	73.19%	11.25	10.70	5.09%	3.31	2.84	3.19	3.29	14.01	13.93	16.91	11.51
28.15%	70.86%	70.58%	12.84	13.28	(3.31%)	4.81	2.26	4.90	5.10	15.00	13.12	4.83	7.27
(82.51%)	38.19%	34.64%	8.00	9.18	(12.86%)	15.98	17.47	2.65	4.85	25.10	23.93	30.30	52.15
3.28%													

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