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Enbridge pipe dreams and nightmares

By Marc Lee

In March, the CCPA–BC published my study Enbridge Pipe Dreams and Nightmares, in which I review the economic costs and benefits of the proposed Northern Gateway Pipeline (NGP).

The media framing of the pipeline project has been a “jobs vs. the environment” story. But the reality is that very few jobs will be created by the pipeline.

Enbridge claims that the NGP will create 63,000 person years of employment during the construction of the pipeline, and 1,146 full-time jobs once it’s completed.

But these estimates are based on flawed modeling and questionable assumptions. A large share of the estimated jobs come from induced employment, i.e. the economic impact of expenditures by Enbridge workers and governments. These “induced” impacts are particularly difficult to estimate and notoriously easy to overstate.

In fact, if we just look at direct employment, we can bank on no more than 3,000 jobs per year for three years during the construction phase. Enbridge’s own numbers say 1,850 per year for three years laying the pipe, and if we assume that the steel and pipe will be manufactured in Canada that would be, generously, another 1,000 jobs for three years. Once the project is complete, Enbridge estimates only 217 direct jobs in pipeline operations. This comes as no surprise: the oil and gas industry is one of the most capital (but not labour) intensive in the world, employing less than one per cent of Canadian workers.



Labour shortages in the construction sector suggest that if the pipeline were not built the vast majority of workers would likely be working somewhere else. This is an important point because the economic modeling invoked by Enbridge essentially assumes that workers would otherwise be unemployed.

My report considers alternative investments of \$5 billion, particularly in green economic development that would also reduce our GHG emissions and our reliance on fossil fuels. Spending \$5 billion on public transit, building retrofits, renewable energy and so forth would generate many times more jobs than investing in the pipeline. A modest carbon tax of \$10 a tonne applied nationally would generate this \$5 billion every year.

To make an assessment of a potential project, we must consider not only benefits but also costs. Two to three hundred super-tankers travelling up the inlet to Kitimat every year will have an adverse impact on commercial and traditional fishing in the region—even if there are no spills. The local Gitga’at First Nation gets 40 per cent of its food supply from traditional sources. Fewer people will want to plan an eco-tourism adventure to Kitimat if the pipeline is built. A full consideration must account for these impacts.

As for spills, the question is not if there will be a spill but when it will happen and how bad it will be. Diluted bitumen or “dilbit” (unrefined tar from the Alberta tar sands mixed with toxic solvents) is highly corrosive and breaks pipes.

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What are the alternatives to investing in the Northern Gateway Pipeline?

By Marc Lee

The proposed Northern Gateway Pipeline would certainly bring economic benefits: profits for oil and gas companies, revenues for government, and some (mostly temporary) jobs. But the choice for policy makers is not between the NGP and the status quo.

One alternative consideration, raised by labour interests in the oil and gas sector, is the potential for employment gains from upgrading and refining the tar sands bitumen in Canada, rather than exporting it by pipeline for processing elsewhere. As part of the National Energy Board's hearings, economic consulting firm Infrometrica estimated that about 26,000 additional jobs would be created if bitumen were upgraded and refined in Canada. Environmental impacts aside, an industrial policy focused on value-added job creation is far more likely to achieve the federal government's objective to "ensure the financial security of Canadians and their families" (as stated by Natural Resources Minister Joe Oliver).

But, given the realities of climate change, the national interest may in fact be to shift away from oil and gas production and consumption in favour of renewable

sources of energy, greater energy efficiency, and a shift to more walkable and bike-able communities with abundant public transit options.

In that case, what would the employment impact be if, instead of building the NGP, investments were made in other parts of the economy to create green jobs? Green investments would create anywhere from three to 34 times the number of jobs per million dollars of new investment, compared to oil and gas.

The shift to a low-carbon economy is tantamount to a green industrial revolution, and requires large investments in infrastructure. These include:

- Switching from use of fossil fuel powering electricity grids to clean sources of electric power (Enbridge itself has a growing portfolio of green energy investments);
- Building alternative transportation options (including public transit and inter-city high-speed rail infrastructure);
- Retrofitting homes and commercial buildings for major improvements in energy efficiency; and

- Developing advanced recycling and waste recovery facilities that can displace the need for GHG-intensive virgin materials.

All of these initiatives would involve the creation of thousands of jobs. A number of possible revenue sources could be considered to fund such a program, including increased corporate income taxes on the oil and gas industry, higher royalties on extraction, and export taxes on minimally processed bitumen. But the case for a carbon tax is compelling, as it would raise the cost of GHG emissions while providing a source of revenues. Even a very low carbon tax of \$10 per tonne, applied nationally, would yield approximately \$5 billion per year in government revenues. That is, it would raise the equivalent of the NGP investment every year, to be invested in ways that create more employment opportunities while putting Canada on a path to reducing emissions and reliance on fossil fuels.

Marc Lee is Senior Economist at the BC Office for the Canadian Centre for Policy Alternatives and the author of Enbridge Pipe Dreams and Nightmares: The Economic Costs and Benefits of the Proposed Northern Gateway Pipeline.

*Continued from cover
Enbridge pipe dreams*

Enbridge alone has had more than 800 leaks in its pipeline network going back just over a decade. In the US, more than 5,000 pipeline spills have occurred going back to 1990. Spills are a just a cost of doing business from the company's perspective. Some 18,000 regional jobs in affected sectors (such as fishing, tourism and others) are potentially at risk.

In terms of GHG emissions the pipeline would facilitate the release of 80-100 million tonnes of CO₂ into the atmosphere every year, which is more than BC currently emits in total. If we put a price on those emissions of \$50-200 per tonne, reflecting some recent estimates of the external costs of

carbon emissions, we get a range of \$4-20 billion in environmental costs just from GHG emissions. Given that the pipeline is anticipated to create about \$4 billion per year in profits to the Enbridge shareholders and oil sands producers, these are odious profits that come at the expense of people in other countries and in future generations.

Enbridge Pipe Dreams and Nightmares: The Economic Costs and Benefits of the Proposed Northern Gateway Pipeline was published on March 21 and was covered extensively in the news, including by CTV, CKNW, CBC Radio, CFAX Radio and others. You can download the study at www.policyalternatives.ca/pipedreams.

Time to do away with financial barriers to higher education in BC

By Iglia Ivanova

For many grade 12 students spring is university application season. But in Western Canada, youth living in families with an annual income over \$100,000 are still more than twice as likely to attend university than youth with family income under \$25,000.

This is hardly surprising, given average tuition fees run over \$4,800 a year these days, but it's fundamentally inequitable. It undermines social cohesion and there are real economic costs to all of us when we don't fully utilize the skills and capabilities of all our citizens.

Reducing upfront costs for students will improve access to higher education and ensure that BC can reap the benefits of a well-educated workforce. And it's more affordable than you think.

Conventional wisdom says that higher education in BC is heavily subsidized because tuition fees don't cover the full cost of education. But this misconception ignores a second way students pay: through higher taxes after graduation. When these tax payments are added up over graduates' careers, it turns out that university students fully repay the cost of their degrees and then some.

Despite the stereotype of arts majors serving lattes at Starbucks, higher education remains a great investment in today's economy. University graduates experience shorter periods of unemployment, are more likely to work full-time and earn higher salaries than their peers with high school diplomas. Census data shows that BC women in their 30s working full-time earned \$56,000 if they had a bachelor's degree, \$40,000 with a college degree and only \$33,000 with a high school diploma. For men, the corresponding figures are \$74,000 for a bachelor's degree, \$58,000 for a college diploma and \$50,000 for high school.

With higher earnings come higher income taxes and less need for government cash transfers like welfare and employment insurance. A new study I've authored—*Paid in Full: Who Pays for University Education in BC?*—finds that the value of these extra income taxes (net of transfers) paid by female university graduates over their careers adds up to \$98,400, and \$155,400 for men. This is more than twice the actual cost of a four-year undergraduate degree in one of BC's public universities, \$50,630, and tuition fees already cover 40 per cent of that.

In fact, graduates in virtually all programs, including humanities and social sciences, contribute considerably more to government coffers over their working lives than their education costs.

This reality should urge us to rethink how we fund our colleges, institutes and universities. Higher education in BC has always been funded through a mix of government spending and tuition. But fees have more than doubled since 2000 and now make up 40 per cent of university operating revenues. This has put tremendous pressure on BC students and families, with a growing number of students graduating with heavy debt loads of over \$25,000.

It's economically feasible and much more fair to ask graduates to pay for their degrees once they start reaping the payoffs of their investment, than to charge them high tuition fees up front.

While those with post-secondary degrees earn more on average, some individuals with higher education will earn less than the average high school graduate. A progressive income tax system is sensitive to these individual differences. It also guarantees the public treasury will recoup its investment because the risk is pooled among graduates.

In addition, low tuition fees allow graduates to make career decisions freely. Those who opt to pursue careers with high social value, but lower pay like the fine arts or the non-profit sector,

When we add up the higher taxes students pay after graduation, it turns out that over the course of their careers, graduates fully repay the cost of their degrees and then some.

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HOW SHOULD WE PAY FOR UNIVERSITY EDUCATION IN BC?



- Creates barriers to education.
 - Leads to large and unfair debt loads:
 - Low-income graduates take longer to repay their student loans, so they pay more in interest than their higher-income peers, and
 - Graduates with student loans are less likely to have savings or own a home, even long after graduation.
 - Forces individual students to bear the risk of their education not improving their standard of living.
 - Distorts students' career choices because of this risk.
 - We all bear the cost of not using the skills and capabilities of all citizens.
- or
- Reduces barriers to education.
 - Delays payment until after graduation, when education starts to result in higher income.
 - Spreads the financial risk of education over the pool of all graduates, as opposed to making individual students bear this risk.
 - Allows graduates to choose careers in fields with high social value but lower financial reward.
 - BC reaps economic and social benefits when education is accessible to all.

Health care reform in BC and the need for an integrated approach

By Marcy Cohen, Margaret McGregor, Iglia Ivanova and Chris Kinkaid



Research shows that activity based funding's narrow focus on increasing "activity" fails to address the system-level changes needed to control health care costs and improve patient care.

There is no doubt that BC is in urgent need of health care reform. Like the rest of Canada, BC faces significant health care challenges, including:

- Lack of coordination between the three parts of the system (primary, acute and community health care);
- Inadequate funding for community health care;
- Hospital beds taken up by patients—most often the frail elderly—who cannot be discharged because of the shortage of community services like residential care and home support;
- Patients with chronic conditions going to emergency for problems that could be treated by a family physician, or through community-based services.

All of these examples point to ineffective and inappropriate use of the most expensive part of our health system—hospitals—and to the importance of creating more adequately funded and better integrated primary and community care services. Such a shift would reduce problems like overcrowding in emergency rooms and long wait times for surgical procedures. It could also reduce the need to expand hospital services in the future.

Health Care in Canada

Canada's health care system is made up of three intersecting parts:

- primary care (family doctors);
- acute care (e.g., hospitals and emergency services, the most expensive part of the system); and
- home and community care (e.g., residential care for seniors, home support services).

BC's competing approaches to health care reform: integrated care and activity based funding

BC has experimented recently with two very different approaches to improving health care. On the one hand, the province has made small steps toward integrating all three parts of the health care system—acute, primary and community—in order to reduce hospital use and provide better continuity of care. These efforts have not been adequately funded, however, and have been hampered by ongoing reductions in access to community-based services.

In contrast, the province has put most of its focus on changing the way it funds hospitals. In April 2010, BC's Ministry of Health announced a plan to shift approximately 20 per cent of hospital funding from the current "global funding" model to a new "activity based funding" (ABF) model.

Under global funding, hospitals receive a fixed yearly budget to cover all of the services they provide. To stay within budget, hospitals sometimes reduce activity levels or close operating rooms and beds during holidays or over the summer. These measures may save money, but can result in longer surgical waitlists and inefficient use of hospital resources. Under activity based funding, health care providers like hospitals are funded based on the number and type of "activities" they perform. In the case of BC, the focus is primarily on encouraging more surgical procedures.

Research evidence from the US, UK and Europe shows that ABF's narrow focus on increasing "activity" fails to address the system-level changes needed to control health care costs and improve patient care. Problems with ABF include:

- ABF fails to address the root causes of overcrowding and long waitlists: lack of accessible, effective community-based services for people with chronic illnesses, such as the frail elderly or mental health patients, who often end up in hospital, "blocking" beds.
- ABF is designed to increase volume (by rewarding "activity") but does not focus on improving patient care. In fact, ABF creates an incentive to focus on lower-risk patients and procedures and can lead to the under-treatment of people with higher and more complex needs.
- ABF is complex to administer; the international evidence that it improves cost-efficiencies in hospitals is at best mixed, and in many jurisdictions it has led to increased costs.
- ABF can be used to encourage competition among hospitals and private clinics, creating barriers to collaboration and service integration.

Innovate, co-operate to improve health services for Canadians

By Kimberlyn McGrail

Canada's premiers met in Victoria in January to discuss different approaches to health system reform. The major outcome of the summit was the formation of an "innovation working group." This is a welcome idea, and the formal announcement promises collaboration, transformation—and innovation, with a focus on health professional scope of practice, limiting cross-provincial competition for those professionals, and clinical practice guidelines. The trouble is that the list of topics selected by the premiers will do little (except indirectly) to address the fundamental challenge facing health care systems everywhere: controlling expenditure increases.

Existing research very clearly shows the greatest driver of increasing health costs is an ever-growing intensity of service use. People at all ages are seeing more doctors and receiving more services than ever before. Some of this increasing use may be beneficial, but research evidence also shows that there is waste and inappropriate care in the system as well.

If we want to innovate and transform our health care system, we need to have some sense of the direction we are moving toward. What does the ideal health system for Canada look like?

There is a general consensus emerging that Canada should be moving toward a system of integrated care with a patient-centred focus, paying particular attention to people as they move across the different parts of the system. There is also general agreement that this re-orientation can happen in Canada—indeed has been happening already, though in small steps.

This description of an ideal system has been articulated by stakeholders from across the country and across the political spectrum, from voices as diverse as Don Drummond, former chief economist with Toronto-Dominion Bank, to the Canadian Centre for Policy Alternatives. Even more encouraging is the increasing evidence that moving toward this ideal is one way to control health care expenditures.

There is, or at least can be, a happy coincidence of higher quality, more patient-centred care that actually costs less overall.

The origins of a desire for a truly integrated, seamless, patient-focused system are probably obvious. The need for health care often arises when people are in vulnerable positions, when individuals and their families are confronted with difficult news and hard choices. People deserve to be supported well in these situations by a system that is tailored to address an acute event or a new, chronic reality.

The system's need for a patient-focused orientation is also clear. A small number of people account for a large share of health care expenditures. This is true in health care systems everywhere. These expenses are not driven by trivial use, but by complex conditions—for example, frail older people or people with complex mental health conditions. Given the expense for these groups, even small improvements in care resulting in (for example) decreased emergency department and acute care use, would have a significant impact on overall expenditures. This is precisely why better care and lower costs can go hand in hand.

So, what hinders innovation? One key factor is Canada's habit of being—as one former politician once described us—a nation of pilot projects.

There are plenty of innovative projects going on, but these are typically small-scale, often region-specific, and can suffer from not having clear plans for permanence if what is tried proves successful.

Enter the premiers' announcement of an innovation working group. If the premiers are committed to an innovation agenda, and the innovations they envision are to have an impact on controlling costs, the mandate for this group needs to be expanded as soon as possible.

And there are key things an inter-provincial innovation working group on health care ought to do, such as catalogue the current experiments across health authorities and provinces that are aimed at "bending the cost curve," particularly for identified population groups like the frail elderly. It should then find the evidence of success (or failure) for these initiatives, and clearly articulate what is needed to help the successful innovations spread.

Finally, it could agree on how future experiments could be shared across the country. The last point is particularly important because this is where it could achieve economies of scale for innovation.

There is, or at least can be, a happy coincidence of higher quality, more patient-centred care that actually costs less overall.

Integrated health care reform: a better way to think about care

Successful health care systems reform initiatives in other jurisdictions have focused on integrating hospitals with primary care (family doctors) and community care (seniors' homes, community clinics, etc). These systems have prioritized collaboration across sectors, coordination of services, improving patient experience and clinical outcomes, and reducing the inappropriate use of high-cost emergency and in-patient hospital services. These more integrated systems have been most effective in improving quality of care and controlling cost increases.

Some of the best examples of how to apply a systems approach to health services transformation can be found in the 2008 report, *High Performing Healthcare Systems: Delivering Quality by Design* by Ross Baker et al. The report was part of a project designed to inform Canadians about regional health systems that have been recognized as outstanding in providing both efficient and equitable care. The report featured five case studies: Jonkoping County Council (Sweden), Birmingham East and North Primary Care Trust (England), and three not-for-profit regional health organizations in the US.

Two related system changes were central to the quality improvement strategies in all five case studies:

- A commitment to decision-making at all levels (the practitioner, service, and system level) based on quality guidelines/performance measures that are evidence-based and focused on clinical outcomes, care co-ordination and patient experience; and
- A focus on service integration to improve care for people with ongoing chronic conditions and/or complex needs in the community, and to reduce the inappropriate use of high-cost emergency and in-patient hospital services.

Throughout the case studies there are examples showing that improved quality of care leads to more effective use of health care dollars, such as:

- A 50 per cent reduction in hospital readmission rates as a result of lowering the levels of post-operative infections in Intermountain Healthcare in Utah.
- A 50 per cent decline in unplanned hospital visits by mental health clients receiving more consistent and comprehensive care in the community in Birmingham, UK.

- A 20 per cent reduction in hospital utilization due to improved care co-ordination for people with chronic conditions in Jonkoping County, Sweden.

There are many opportunities for BC to improve quality and access to health care, while also controlling cost increases. Health reform in BC can build not only on the experience of high performing health systems internationally, but also on a number of successful smaller-scale initiatives already underway in BC (such as the regional improvement strategy in the Northern Health Authority and hip and knee programs in the Lower Mainland). What is needed now is provincial leadership to support system-wide transformation and the scaling up of successful local and regional initiatives.

This is an edited excerpt from Beyond the Hospital Walls: Activity Based Funding Versus Integrated Health Care Reform, by Marcy Cohen, Margaret McGregor, Iglia Ivanova and Chris Kinkaid, available at www.policyalternatives.ca/abf

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Innovate, cooperate

Health care services are not now, nor do they need to be, organized and delivered in precisely the same way across provinces. But all provinces do face similar challenges, and it is wasteful in the extreme to think that they all have to do all of their own experimentation and learning independently.

Provincial co-operation for modernizing our health care systems is an exciting—and timely—announcement. A commitment to co-operation is especially encouraging given the federal government's indifference to how the provinces manage their health care systems. Let's hope the premiers follow through and work on issues that could actually make a difference, in both the short and longer terms, for improving health care delivery.

Kimberlyn McGrail is an expert advisor with EvidenceNetwork.ca and associate director of the UBC Centre for Health Services and Policy Research and assistant professor in the UBC School of Population and Public Health. This oped was first published on ipolitics.ca on March 1, 2012.

What is needed now is provincial leadership to support system-wide transformation and the scaling up of successful local and regional initiatives.

A toxic spill and communications chill

By Ben Parfitt

Here's the little that we know about a pipeline break that occurred more than half a year ago and that BC's Oil and Gas Commission (OGC) feels, for whatever reasons, the public is best kept in the dark about.

The incident occurred on August 19, 2011, when a 35-year-old pipeline broke and spilled its poisonous contents onto a nearby property.

In three separate interviews with three different people who have knowledge of the incident and who spoke on an "information only" basis, it was confirmed that whatever burst from the broken pipeline that day killed at least one cow and sickened others.

The toxic spill occurred just outside the city limits of Fort St. John, near a liquids waste facility, which takes toxic liquids produced by the oil and gas industry and pressure pumps them—untreated—deep underground for disposal.

Despite the disposal well being located close to residences that rely on wells for their drinking water, the OGC disclosed nothing publicly when the spill occurred. Six months later, it has yet to issue a press release or any other documents relating to the incident. It won't even release a copy of a report it filed with the local Ministry of Environment's offices detailing what occurred and what it ordered the pipeline operator to do to clean up the spill and remediate the private landowner's property. Furthermore, no documents will be released until, the OGC says, its "investigation is complete."

One of the more curious things about the OGC's reticence to speak about the event is that this was a relatively small spill. Just 20 cubic metres or roughly the equivalent of half a tanker truck's contents was involved. Which quite naturally begs questions: Why the tight-lipped response? And what does such a response say about where the OGC sees its loyalties lying, as the Commission is tasked with both approving oil and gas company activities and also ensuring public health and safety and protecting the environment?

A quite reasonable response to the first question is that there may be more going on than just a small spill. Or perhaps the OGC just wants to keep a lid on things given the mounting concerns residents inside and outside the region have with the amount of water being contaminated by the gas industry in its water-and energy-intensive hydraulic fracturing or "fracking" operations.

Fracking involves the pumping of immense amounts of water deep underground at high pressure, which opens cracks in the surrounding gas-bearing rock allowing the trapped gas to flow out. With more and more fracking underway in northeast BC, there is increased potential for spills such as the one that occurred on August 19.

Here's why.

After a gas well is fracked, much of the water pumped below ground returns to the surface. Such water is by then heavily contaminated with traces of gas, heavy metals, minerals, radiological compounds and chemicals. With up to 600 Olympic swimming pools worth of water used in fracking operations at well pads in northeast BC, the waste water that flows back to the surface quickly amounts to a lot of toxic material. If it cannot be reused it is typically destined for "deep well disposal," meaning it is pumped deep below the earth's surface where, it is hoped, it stays.

Last August's spill involved a pipeline operated by Orefyn Energy Advisors Corp. The contents of that pipeline were destined for a disposal well operated by the same company.

In response to written questions, the OGC's manager of communications disclosed in an email that "the pipeline, operated by Orefyn" was carrying "produced water." Produced water is water that flows back up out of a gas well after it is drilled and that may or may not be associated with fracking. In this case, Friedrich wrote, the water originated from a "sweet" gas well, as opposed to a sour gas well. Sour gas contains hydrogen sulfide, or H₂S, a neurotoxin that has killed or seriously injured gas industry workers—and nearby residents—in BC and Alberta when it has leaked or escaped.

When the pipeline broke, Friedrich wrote, "approximately 20 cubic metres of produced water spilled onto private lands and the pipeline was shut in. Permit holders are required by law to contain and eliminate spills and remediate any land or body of water affected by the spillage."

The OGC felt the spill was serious enough that it issued a directive to Orefyn. "General Order 2011-20" was issued on September 29, six weeks

Despite the disposal well being located close to residences that rely on wells for their drinking water, the OGC disclosed nothing publicly when the spill occurred.

or so after the pipeline spill, and was signed by the OGC's deputy commissioner of operations engineering. The order directed Orefyn to clean up the site where the cattle had been killed or sickened and to repair the pipeline. Since that time, undisclosed amounts of contaminated soil have apparently been hauled away from the property.

As for the pipeline itself, Friedrich reports it is "inactive." But the OGC remains firm that it will not release any written materials relating to the incident, including the order.

All of which is rather curious. When a truck carrying gasoline tipped over last April on the Island Highway outside Victoria and disgorged its contents onto the road and subsequently into the adjacent Goldstream river, provincial Ministry of Environment and Ministry of Transportation officials had no qualms about speaking to the media and disclosing what enforcement actions they were taking and that they contemplated. It mattered not one iota that the investigation was then only in its infancy.

The big difference between the Goldstream event and that outside of Fort St. John is that the former occurred on the doorstep of the provincial capitol, disrupted traffic on a busy stretch of road and could not have failed to come to the public's attention, while the Orefyn spill occurred in a more sparsely populated region of the province.

But this hardly justifies withholding information. Especially in BC's northeast, where oil and hazardous goods spills are distressingly common and where there is good reason to believe there is a heightened risk of more pipeline breaks and more spills in the years ahead, given the intense ramp-up in natural gas industry water-use now underway.

would not have their choices distorted by the threat of unmanageable debt. And we'd all have richer lives for it.

There's no better time than now to make higher education more accessible in BC. In this decade alone, more than three quarters of new jobs will require some form of post-secondary education. We don't graduate anywhere near the numbers of people we'll need to ensure these jobs can be filled. Expanding our investment in post-secondary

In 2009, the Ministry of Environment's Environmental Emergencies Program released what it called an "annual report," covering spills in various regions of the province. Due to budgetary restraints it was the first such report released in several years. There has been no such report since. In it, the ministry noted that there were a total of 587 spills in the Fort St. John region during 2008. In just the first quarter of 2009, 191 spills were recorded, a 28 per cent increase over the year before. The compilation of regional statistics ended by noting that a further "30 reports came in during [the] first 20 days of April 2009, alone."

The 2009 spills report predates the significant upsurge in fracking operations that now characterize gas well developments in northeast BC. Such operations have already set global gas industry records for water usage and are certain to herald an increase in the volumes of toxic wastewater that must be moved either by truck and/or pipeline to injection wells for disposal.

All of which is of note when considering the question of whose interests—those of the general public, or those of the oil and gas industry—are served when the regulator withholds information on a small but nonetheless deadly spill. With regard to this incident, at least, it appears that the interests of the OGC's industry clients take precedence over that of the public.

With more toxic waste spills a certainty in the months and years ahead, such loyalty does not inspire confidence.

We are continuing to follow this situation; stay tuned.

Ben Parfitt is resource policy analyst with the BC Office of the Canadian Centre for Policy Alternatives.

education now will pay dividends in higher tax revenues, lower unemployment and better social mobility for decades to come.

Does this mean that those who can afford it or the children of the wealthy shouldn't have to pay for their university education? Not at all. They should pay, like everybody else, but they should do so through progressive taxation tied to their income.

Iglika Ivanova is an economist and author of Paid in Full: Who Pays for University Education in BC? released in January by the Canadian Centre for Policy Alternatives: www.policyalternatives.ca/paidinfull.

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