



Pacific Institute
for Climate Solutions
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PICS News Scan – 11 October 2011

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The PICS News Scan is a weekly summary of the major climate-change related science, technology, and policy advances of direct relevance to the BC provincial and the Canadian federal governments and more generally to businesses and civil society. The News Scan focuses on cutting edge climate issues and solutions gathered by the fellows and faculty of [ISIS, a research centre at the Sauder School of Business](#), in partnership with the [Pacific Institute for Climate Solutions \(PICS\)](#). Access to some referenced articles may require a journal subscription or purchase of the article, and appropriate links are provided for this purpose. To be added to the News Scan distribution list or to provide content feedback and/or suggestions about interesting news items, please email picsscan@uvic.ca.

Complementing the News Scan is the [PICS Briefing Note Service](#). This service provides timely and concise analysis, as well as suggested policy action, on issues related broadly to BC climate change mitigation and adaptation.

Research Theme I: The low carbon emissions economy

Keystone XL supporters are inflating job numbers – report

September 29, 2011. A [recent report](#) by [Cornell University's Global Labor Institute](#) suggests that the job creation figures and economic benefits resulting from the construction of the Keystone XL pipeline are inflated. The report points to errors in previous job assessment studies by TransCanada, the use of incorrect assumptions, and the mis-allocation of the total project's \$7 million budget to US job creation when only \$4 million will actually be spent on the US portion of the project. The report also suggests that a large portion of the steel piping required will not be produced in the US. Economic benefits may also be lower than expected given the project's potential for raising gas prices for some US markets and increasing spending to cover spills and other leaks. The Keystone XL pipeline, according to the report, locks the US, and by association Canada, into long-term infrastructure and dependence on fossil fuels.

In British Columbia (BC), similar support for the Northern Gateway Pipeline revolves around the economic and job creation potential of the project, particularly for northern and First Nations communities. The Cornell report from suggests that reported job figures and economic impacts cannot always be taken at face value. According to Enbridge, [the Northern](#)



[Gateway Pipeline will create 62,700 person-years of employment and over 1,000 long-term jobs.](#)

http://www.ilr.cornell.edu/news/092811_GLI_study_finds_Keystone_XL_pipeline_will_create_few_jobs.html

Research Theme II: Sustainable communities

Climate change could cost Canada \$43B a year by 2050: report

September 30, 2011. The latest in a series of government-sponsored reports suggests BC will face higher costs due to climate change, relative to the rest of Canada. [Paying the Price: The Economic Impacts of Climate Change for Canada](#) follows two previous reports in the Climate Prosperity series by the National Round Table on the Environment and the Economy, and is designed to help federal policy-makers choose investments for the benefit of Canadians. The report's authors note that the climate policy debate in Canada has tended to focus on the cost of mitigation (i.e. carbon-reducing incentives, such as pricing). This report instead highlights the cost of inaction (i.e. measuring the impacts of a changing climate) and suggests adaptation investments.

BC, and in particular Metro Vancouver, must make several changes to increase its resilience to the changing climate. The province's timber supply will be threatened, meaning more suitable tree species should be planted and pest prevention and control improved. Sea-level rises threaten to overwhelm Metro Vancouver's 127-kilometre dike system, so that more adaptation measures, such as strategic retreat, may be called for. Finally, increased urban heat and deteriorating air quality can be expected to impact the health of Vancouver residents and increase provincial healthcare costs. Green roofs and reduced fossil fuel use can reduce these risks.

<http://www.edmontonjournal.com/business/Climate%20change%20could%20cost%20Canada%20billions%20report/5476036/story.html>

New report calls for overhaul of 'crumbling water infrastructure'

October 4, 2011. A [new report](#) produced by Seattle's [Green For All](#) says that spending \$188 billion on "green" water infrastructure would generate billions more in economic activity and create almost two million jobs nationwide. The study, produced in partnership with American Rivers, the Pacific Institute, and the Economic Policy Institute, sets out the problem facing cities throughout the United States: aging infrastructure surrounding drinking water, waste water and storm water. The solution is a green infrastructure program including green roofs, urban tree planting, constructed wetlands, permeable pavements, rainwater harvesting, and greenways. For the Pacific Northwest, the report estimates that between 50,000 and 72,000 jobs would be created if the recommended infrastructure work were undertaken.

Water infrastructure is crucial to BC's climate change adaptation. The [IPCC Technical Paper on Climate Change and Water](#) says water resources will be strongly impacted by climate change. The BC government's [Living Water Smart website](#) acknowledges the threat, "Climate change is already impacting our forests, rivers and lakes, infrastructure, agriculture, industry,

and recreational opportunities.” Climate change is going to cause more extreme weather conditions, which means more intense rainfall and more flooding. Some of the report’s recommendations for improved green water infrastructure could provide valuable guidance for even greater action in BC. According to the report, green infrastructure can preserve and restore natural landscape features such as forests, floodplains and wetlands. Benefits include reduced storm water runoff and pollutants, enhanced groundwater recharge, increased carbon sequestration, and improved air quality.

<http://earthfix.opb.org/water/article/new-report-calls-for-overhaul-of-crumbing-water-i/>

Research Theme III: Resilient ecosystems

New study challenges carbon benchmark

September 29, 2011. [A study published in the journal Nature has demonstrated](#) that the amount of carbon dioxide (CO₂) that plants consume during photosynthesis might have been previously underestimated. Conventional wisdom has held that “soil and vegetation take in roughly 120 billion tonnes” of CO₂, yet the research suggests that it may be 25 to 45 percent higher. What, if anything, this could mean for climate change and models is still unknown, but the researchers suggest that this does not mean that the extra carbon is necessarily being stored. Instead the carbon is being cycled through the ecosystem faster than expected, and the additional CO₂ is likely returned to the atmosphere during respiration.

This research points to the immense natural carbon sinks (storage for CO₂) that exist in soil and vegetation, and also the potential for great loss should these carbon sinks disappear due to deforestation or land use changes. [The Province of BC has recently launched the Forest Carbon Offset Protocol](#), which will support the creation of BC forest-based carbon offsets from a variety of activities in an effort to stimulate new sustainable revenue sources from BC’s vast forest resources. The protocol covers conservation of forested lands (avoided deforestation), reforestation, afforestation, and improved forest management.

http://www.google.com/hostednews/afp/article/ALeqM5iW0kA7PTnBGatTddIJXOtLJ_FoJA?dclid=CNG.fc32c44ca0bc036286e4d286d16f1818.321

Research Theme IV: Social mobilization

Unleashing the power of green data

October 5, 2011. [Footprinted](#), a new web-based service developed in collaboration between KTH (Sweden), the MIT Media Lab (USA) and Sourcemap Inc., provides environmental research results free of charge. As [reported](#) by Science Daily, normally “the results of quantitative environmental research ... are found in closed, often expensive databases based on proprietary software. Alternatively, environmental information is presented in text documents (pdf-files) which cannot be processed.” By contrast, Footprinted stores data in an open-source, Creative Commons format which allows and encourages anyone to create, present, share and reuse the environmental impact information. In its current version, Footprinted provides a repository of 716 life-cycle assessments of different materials,

products and processes. The next step in Footprinted's development is to include the footprints of individual consumer products. The developers' stated goal is to make environmental impact and product life-cycle assessments freely available, easy-to-use and community-centered.

Understanding the environmental impact of products could significantly alter behaviour and mobilize action. The site is intentionally set up to make data meaningful to consumers. It is based on a semantic web structure that makes large amounts of data available together with a description of how the data are related. This allows different sources of information to be connected, compared and synthesized into a coherent collection. Currently the beta version of the site contains data about the [life-cycle greenhouse gas emissions of food](#) – a hot topic in BC. The flexible, open-source data from Footprinted, combined with the growing popularity of contests like [Apps4Good](#) and [Apps for the Environment](#) and funding sources like the [Canadian Media Fund's Experimental Fund](#), allows innovative consumer-oriented applications to be more easily created.

<http://www.sciencedaily.com/releases/2011/10/111005110900.htm>

A committed minority can threaten green energy projects

September 19, 2011. Scientists at New York's Rensselaer Polytechnic Institute have [published a report](#) that finds when just 10 percent of a population holds an unshakable belief, this belief will be rapidly adopted by the majority of society. The scientists used computational and analytical methods to discover the tipping point where a minority belief becomes the majority opinion. The finding has implications for the study and influence of societal interactions ranging from the spread of innovations to the movement of political ideals. "When the number of committed opinion holders is below 10 percent, there is no visible progress in the spread of ideas. It would literally take the amount of time comparable to the age of the universe for this size group to reach the majority," said Boleslaw Szymanski, a Professor at Rensselaer. "Once that number grows above 10 percent, the idea spreads like a flame."

These findings confirm a significant threat that BC faces when it comes to public acceptance of green energy projects – the vulnerability of public perception to swing against a project if it is opposed by a passionate few. There are two recent examples of this concept in BC, smart metering and distributed generation. BC Hydro's [Smart Metering Program](#) faces [concerns](#) over [radio frequency](#), despite what would appear to be [misinformation](#) from opponents, especially in light of [information](#) published by BC Hydro. Distributed generation projects, specifically biomass, also appear to [face opposition](#) from groups. Of course, committed opinion holders can also benefit green energy projects, a concept which dates to [Everett Roger's Diffusion of Innovation](#), whereby regions with a critical mass of staunch advocates could be best positioned to advance new technology projects.

<http://www.intelligentutility.com/article/11/09/hitting-tipping-point-smart-consumer-engagement>



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