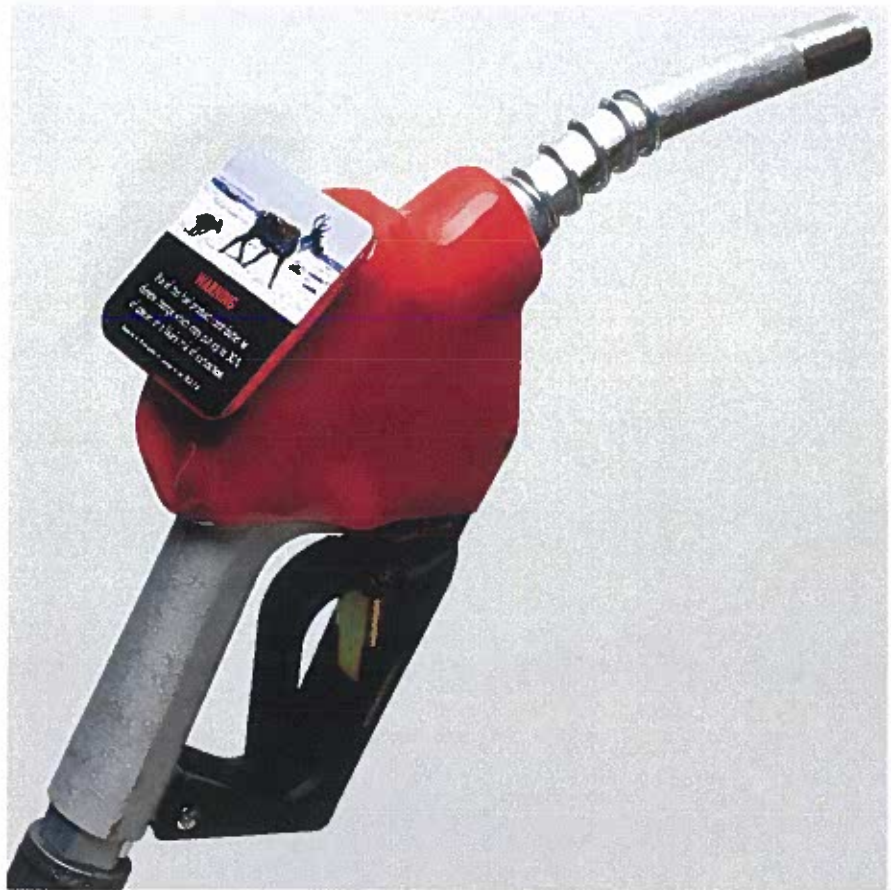


Creating a New “Normal”

Using air pollution labels on gas pumps as a step in addressing climate challenges

In early 2013, I launched a not-for-profit organization that’s asking municipalities to require gasoline retailers to place climate change and air pollution information labels on gas pump nozzles. The idea is similar to the risk disclosures we see on many common products. In a short period, the concept has received media attention across North America and the world and is now beginning to get traction in local government. Recently, municipal councils in West Vancouver, Berkeley, and San Francisco have all directed staff to pursue the concept.

Over a hundred academics from disciplines including the natural sciences, social sciences, public policy, health, and business at universities across North America have all endorsed the concept.¹ Canadian non-governmental organizations such as the David Suzuki Foundation, the Canadian Association of Physicians for the Environment, and the Clean Air Partnership have similarly endorsed the idea.² The gas pump label idea even made it to the United Nations Climate Change Conference in Warsaw, Poland (COP19) where a delegate said, “I’ve been to all 19 COP meetings and I’ve never seen an idea so simple yet so powerful.”



Climate change and air pollution information on gas label

Despite this progress, the idea is still fairly new, and decision makers may wonder what impact a seemingly simple proposal will have on complex challenges like climate change and air pollution. Research from psychology, sociology, economics, and communications theory provides insight.



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1 Our Horizon, Endorsements from Academics and Experts, <<http://ourhorizon.org/academic-endorsements>>.

2 Our Horizon, Endorsements from NGOs, <<http://ourhorizon.org/endorsements>>.

Climate change is also a problem of negative externalities. Externalities are costs or benefits that result from the use of a product, but are not reflected anywhere in its price.

Psychology: The Labels Create Immediate Feedback

Climate change can be understood as a feedback problem: there is a delay between cause and effect. We get little to no feedback from our actions today, so there is no indication that we need to change our behaviour.

Psychologists observe that we tend to prefer interests that are small and near in time relative to those that are significant but experienced farther in the future. This effect is known as “hyperbolic discounting” or the “current moment bias.”

The warning labels counteract this effect by bringing future consequences – extreme weather, property damage, and ocean acidification – into the here and now. In doing so, they create immediate feedback to provide greater impetus to address climate change.

Sociology: The Labels Address a Problem of Diffusion of Responsibility

Climate change can also be understood as a problem of diffusion of responsibility. As individuals, our contributions to the problem are small; but, collectively, our actions alter the chemistry of our planet. Social psychologists observe that when responsibility is shared among many, we’re actually less likely to act. It’s the paradox of “everyone is responsible, so no one is responsible.”

The labels address this problem by locating responsibility. The placement of the image on the nozzle takes a problem

of diffuse origins and locates responsibility right in the palm of your hand. As simple as the concept is, there is actually nothing else that currently connects us to the problems of climate change in such a direct way.

Economics: The Labels Communicate Externalities in a Qualitative Way

Climate change is also a problem of negative externalities. Externalities are costs or benefits that result from the use of a product, but are not reflected anywhere in its price. In the context of fossil fuels, we often hear negative externalities expressed as “hidden costs.” Carbon taxes and cap-and-trade regimes seek to internalize these harms to convey the “true cost” of fossil fuels to the market.

Gas pump warning labels are simply a qualitative way of capturing and communicating externalities to the marketplace: what price seeks to convey in quantitative terms (using dollars and cents), the label communicates in qualitative terms (using image and text). In the abstract, both approaches achieve the same thing. On the ground, the warning label nurtures a focus that engages our sense of humanity in a way that a price signal never could. This qualitative approach is particularly important, as behavioural economists observe that pricing externalities can sometimes switch off moral cues that otherwise regulate human behaviour.³

Communication: The Medium Is the Message

As renowned communications theorist Marshall McLuhan observed, “The medium is the message.” The way in which people typically consume information on climate change is through media such as newspapers, internet, television, and film. While these media are important vehicles for communication, they unavoidably

present the problem as distant or separate and are consumed in a passive manner by virtue of their form. By contrast, the labelling proposal directly links the consumption of fossil fuels to the impacts of climate change: the medium – the gas pump nozzle – is the message. It engages the reader in a manner that transitions them from *passive observer* to *active participant*.

How These Labels Change the Conversation

Discourse on climate change in Canada tends to focus on points of extraction (e.g., oil sands and offshore drilling) or means of transportation (e.g., pipelines and shipping). But, these areas of focus appear to be misplaced if our true concern is greenhouse gas emissions. A well-to-wheel lifecycle analysis reveals that the vast majority of greenhouse gas emissions come from end use; emissions from extraction and processing pale in comparison to emissions from vehicle combustion.⁴ When it comes to oil, the problem is in cities and towns where the end product is actually being used.

Unfortunately, we rarely question the simple act of pumping gas. There is a complete disconnect – one that is perhaps compounded by the distancing effect of our upstream focus. The act of going to a gas station and filling up a car has been normalized for several generations. The warning labels take this unexamined act and de-normalize it. By creating a sense of dissatisfaction with the prevailing mobility solution, they stimulate demand for alternatives and shape a social environment that favours reform. The labels disrupt the status quo, shake us out of our sense of complacency, and provide impetus for us to do better.

While the labels will likely cause some individuals to reduce their emissions through carpooling or modal shifts,

3 Diana Zlomislac, “Daycare late fees no deterrent, study finds,” *Toronto Star*, 4 July, 2008. <www.thestar.com/life/health_wellness/2008/07/04/daycare_late_fees_no_deterrent_study_finds.html>.

4 Natural Resources Defense Council, “Setting the Record Straight: Lifecycle Emissions of Tar Sands,” (November 2010), <http://docs.nrdc.org/energy/files/ene_10110501a.pdf>.

they will more importantly result in a shift in our collective demand to facilitate meaningful action on climate change and air pollution. Politicians will have more support to pass climate legislation, invest in public transit, build bike lanes, and develop complete communities. Businesses will also innovate to meet the needs of a shifting market. The idea is a catalyst for a community-wide conversation about how to transition to a more sustainable future.

Do Municipalities Have Legal Authority to Pursue It?

Environmental lawyer Dianne Saxe wrote about the idea in the September 2013 issue of *Municipal World* and concluded that the combined effects of local air pollution and climate change on communities “could be enough of a municipal nexus to support a labelling by-law.” She added that there’s no way of knowing until a community tries it and concludes by asking, “Where is the next Hudson?”

Since the article was published, Our Horizon has produced a 40-page research

document that provides the legal foundations for municipal jurisdiction.⁵ While this research is Ontario-focused, the general arguments would still be relevant for municipalities in other provinces. Our Horizon is currently working with law students and lawyers in other provinces to help adapt this report.

If a council wishes to pursue the concept but is unsure about its authority to do so, it can simply request that the province amend its municipal legislation to specifically empower municipalities to pass the by-law, instead of relying on its existing powers.

A Final Question: Why Wouldn't We Have These Labels?

I’ve spent close to two years answering the question, “Why should we have these labels?” but lately I’ve been asking others to consider the question, “Why wouldn’t we have these labels?” All we’re asking is for the producers of a product to disclose the risks of its consumption to consumers. While this may ruffle a few

feathers, the proposal really shouldn’t be controversial. Scientists have identified that the burning of fossil fuels is altering the basic chemistry of our planet. When I was born, the world was at 337 parts per million (ppm) of carbon dioxide in our atmosphere; we’re now at 400 ppm. Take a moment to think about that: *we are altering the fundamentals of our biosphere.*

If there is any product that merits a warning label, this is it. Climate change is the greatest challenge of our time; if we don’t even have the courage to put a simple sticker on a gas pump, what hope do we have in actually addressing the problem?

Citizens from all over the world have contacted us to replicate this campaign in their own communities. The idea is primed to go global, but it will take leadership from Canadian municipalities to make it happen. *MW*

5 Our Horizon, “#FaceTheChange Changing Communities in a Changing Climate: Climate Change & Air Pollution Warning Labels on Gas Pumps,” <<http://ourhorizon.org>>.

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Update on Pump Handle Labelling

District of West Vancouver unanimously passes resolution requesting legislation

In the last issue of *Municipal World*, I wrote about how climate change information labels on gas pumps draw on psychology, sociology, economics, and communications theory to provide greater impetus to transition to a more sustainable future. I was advocating that municipalities use their licensing powers to implement the idea in their communities and, to that end, invited the reader to review a 40-page legal research document on OurHorizon.org.

As an alternative pathway, I also suggested that a community wishing to pursue the concept – but unsure about its authority to do so – could simply request that the province amend its municipal legislation to specifically empower cities and towns to pass the by-law. Since writing that article, a new pathway has emerged that is now getting traction in communities across Canada.

West Vancouver Resolution

On January 26, 2015, the District of West Vancouver unanimously passed a resolution “... that all vendors of retail petroleum products in Canada be legislated to provide warning labels on all pump handles ...”¹ This resolution will be voted on at the annual conference of the Union of British Columbia Municipalities (UBCM) this September and the annual conference of the Federation of Canadian Municipalities



(FCM) in June 2016. This resolution represents a way for communities to support the concept with little to no exposure to legal, financial, or political risk that might otherwise be invited by passing the concept directly into law.

In reporting on the resolution, Global TV called West Vancouver’s vote a historic Canadian first. When Mayor Michael



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¹ District of West Vancouver, “Council Briefs – January 26 Council Meeting,” <<http://west-vancouver.ca/news/council-briefs-january-26-council-meeting>>.

In addition to West Vancouver supporting the labels, Mayor Smith is personally leading the way by voluntarily implementing climate change and air pollution information labels at his gas stations.

Smith was asked why he supported the initiative, he replied, "West Vancouver is always at the leading edge of things like this. It's the nature of our community."² Mayor Smith's support is a particularly noteworthy example of leadership as he has been a petroleum distributor in the Metro Vancouver area for close to 30 years.

During the Global TV interview, Mayor Smith also said, "I think the industry realizes that climate change is real. There are a lot of efficiencies in the petroleum industry in terms of using less product and using it more efficiently. This will help move that along. I think it's something the industry will not object to."

In addition to West Vancouver supporting the labels, Mayor Smith is personally leading the way by voluntarily implementing climate change and air pollution information labels at his gas stations. Students from Capilano University's IDEA School of Design are now designing labels that reflect local climate impacts, while students from University of British Columbia's Sauder School of Business will be conducting a study to gather feedback on the various designs. I left B.C. feeling inspired by the leadership in that province.

Positive Response across Canada

A couple of weeks after the vote, I was at FCM's Sustainable Communities Conference in London, Ontario to share news of West Vancouver's resolution with mayors, councillors, and municipal staff from across Canada. The idea was positively received by delegates from all of our provinces and territories (yes, even Alberta). When speaking to a councillor from a community in Alberta, he men-

tioned how he appreciated the downstream, consumer-facing nature of the intervention. In a province that's frequently vilified simply for delivering a product that we all use, the idea of shared responsibility resonated. The feedback I got from the FCM conference left me feeling very positive about the future success of the campaign.

At the time of writing, the District of Saanich, Vancouver Island's largest municipality, just passed a resolution to endorse West Vancouver's resolution. Several communities across Canada are now in the process of actively considering these labels, and I anticipate many more will endorse the West Vancouver resolution in the near future. Up until now, my biggest challenge has been getting a community to pass the idea into law using their licensing powers. I think there will be much greater uptake now that there is an easier pathway forward.

As an unfunded, not-for-profit organization, it's been a challenge to advance the effort without any budget or staff. Even so, the campaign has come a long way. I'm incredibly grateful for the support of ordinary Canadians: It was a generous citizen in B.C. who paid for my flight there in January. I then spent three weeks couch-surfing with Canadians who opened up their homes and became fast friends. I'm incredibly heartened by the ways in which people have been supporting this project.

While Our Horizon is still working to build support for this idea at the local level, we've also reached out to federal and provincial parties to get this item on the radar, since successful outcomes at the FCM and provincial equivalents would bring the idea before other orders of government. While

the labels are intended to challenge the status quo and encourage a transition to more sustainable solutions (which resonates with parties with strong environmental values), they do so in a way that is non-prescriptive and market-friendly (which resonates with those who identify with the right side of the political spectrum). There is potential for broad political support.

Setting a Path for the World to Follow

Ultimately, the hope is that we will all be a part of a story about Canadian leadership for the world to follow. In 2000, Canada became the first country in the world to develop picture-based warning labels for tobacco packages. The innovation spread to approximately 60 countries and studies show that the labels have helped to change both attitudes and behaviour.³ Canada has done this before; as a result, people all over the world have been cognitively primed to adopt our labelling idea.

Communities across Canada now have an easy, tangible way to come together to support a national precedent for the world to follow. Imagine if a simple, inexpensive Canadian policy idea ended up transforming the world. **MW**

2 Global TV, "West Vancouver unanimously votes to support warnings on gas pumps," <<http://globalnews.ca/news/1795333/watch-west-vancouver-unanimously-votes-to-support-warnings-on-gas-pumps>>

3 Sambrook Research International, "A review of the science base to support the development of health warnings for tobacco packages," <http://ec.europa.eu/health/tobacco/docs/warnings_report_en.pdf>

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A Canadian Climate Change Idea For The World To Follow



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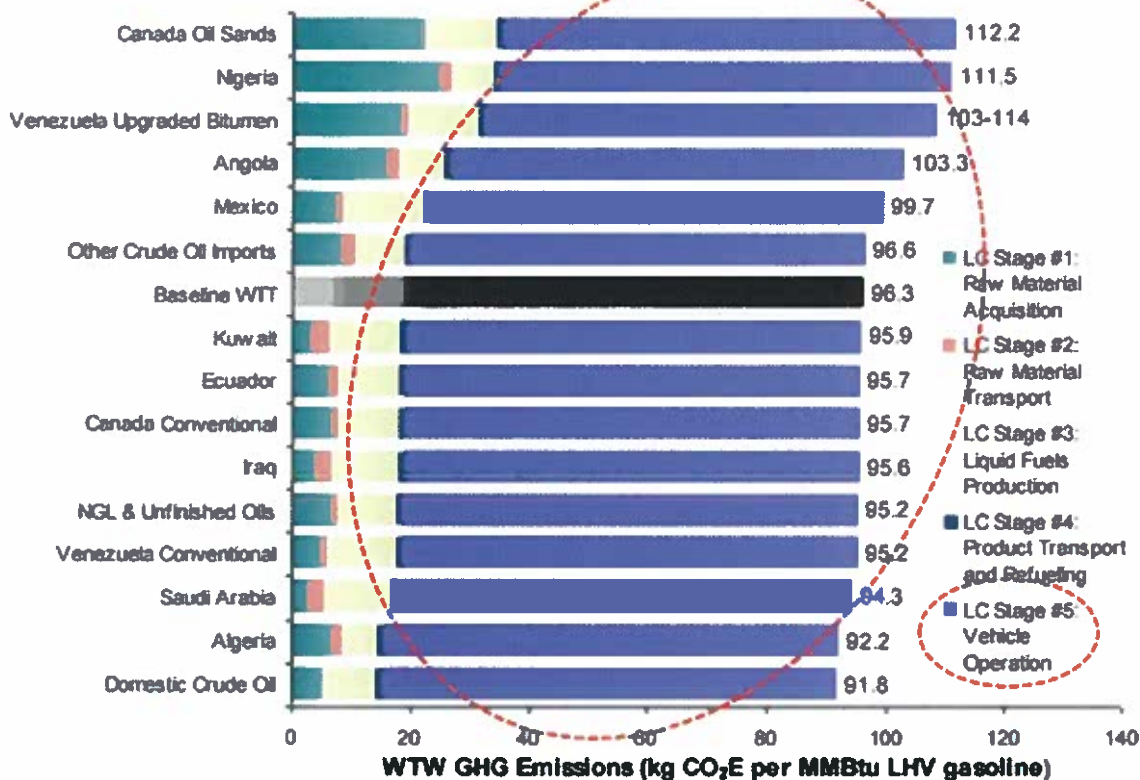
On Nov. 16, 2015, the City of North Vancouver made world history when its council unanimously voted to mandate climate change risk disclosures on gas pumps. It's an idea that my organization developed and launched in early 2013 and it has since been [endorsed by](#) over a hundred academics from a variety of disciplines at universities across North America, including some of the top climate change researchers in the world.

North Vancouver's vote was covered by the [CBC](#), [Global News](#), [CTV](#), [VICE](#), [The Atlantic](#), [Business Insider](#), and many more. These articles were shared via social media around the globe. While North Vancouver was the first to actually require the labels by law, numerous municipal councils across Canada have passed [resolutions in support](#) of the proposal. We're now working to share these examples of Canadian leadership with the world and we're asking for volunteers to help us make it happen.

Why climate change labels on gas pumps?

Discourse on climate change tends to focus on points of extraction (e.g., oil sands and offshore drilling) or means of transportation (e.g., pipelines and shipping), but a well-to-wheel lifecycle analysis reveals that the vast majority of greenhouse gas emissions from this sector actually come from end use. Note the chart below [from](#) the U.S. Department of Energy that compares lifecycle emissions from a variety of fuels. Regardless of fuel source, emissions from extraction and distribution pale in comparison to emissions from vehicle combustion. Unfortunately, we rarely question the simple act of pumping gas. There is a complete disconnect - one that is perhaps compounded by the distancing effect of our upstream focus.

Contribution of Feedstock Source to the 2005 Baseline WTW GHG Emissions for Gasoline



Our greatest obstacle to transitioning to a more sustainable future is the systemic inertia of the status quo. The simple act of pumping gas is a habitual, automatic behaviour that has been normalized for several generations. Complacent, disconnected markets don't drive change. While we may not be actively saying, "Give me oil," we have the perfect downstream environment to perpetuate the status quo.

The New Economics Foundation, a leading think tank on behavioural economics, [observes that](#) "Psychologists' theories on changing habits generally involve first unfreezing the subconscious action and raising it to a conscious level where we can consider the merits of alternative behaviours." The warning labels take the unexamined act of gassing up and disrupt it. They de-normalize the status quo. By communicating hidden costs to end-users in this way, the labels create a sense of dissatisfaction with the status quo solution and stimulate broader demand for alternatives. This drives change upstream as businesses and governments deliver solutions to meet this shift in demand. To learn more, please watch my TEDx talk below:

How many city and town councils support this idea? What's your end game?

This past January, the District of West Vancouver led the way by unanimously passing [a resolution](#) "...that all vendors of retail petroleum products in Canada be legislated to provide warning labels on all pump handles...". Councils in communities on the lower mainland and on Vancouver Island began to pass similar resolutions in support of the idea. These endorsements eventually led to mayors and councillors from across the province [voting in favour](#) of the labelling proposal at the Union of British Columbia Municipalities' annual convention this September.

In Ontario, Councils in Oakville, Waterloo, and Guelph have all passed [similar resolutions](#). On the east coast, Councils in Moncton and Beaubassin East were early supporters. A resolution in support of the idea then passed at the Association of Francophone Municipalities of New Brunswick, a group made up of 53 member municipalities.

Several other communities have passed resolutions endorsing the concept and we expect more to do the same. We're able to leverage these votes in our discussions with the provinces and the federal government. We're particularly encouraged by Prime Minister Justin Trudeau's Mandate Letter to Minister Catherine McKenna calling for constructive dialogue with non-profits like ours and have already [contacted them](#) about our campaign.

A review of our [legal research](#) conducted by Lidstone & Company, a local government law firm based in Vancouver, concludes: "In our opinion, a requirement to place labels on gas nozzles could be validly imposed pursuant to a municipality's power to regulate business." Our research paved the way for North Vancouver, Port Moody, and Tofino all recently voting to implement the labels locally. It looks like the City of Vancouver [may also implement](#) the labels in 2016. We expect these examples to encourage other municipalities to do the same. In the United States, Berkeley, San Francisco, Santa Monica, and Seattle are all at various stages in pursuing the concept.