

Message from the Executive Director



In May, the government of British Columbia introduced legislation to update the province's greenhouse gas (GHG) reduction targets. [The Climate Change Accountability Act](#) is expected to set new targets of a 40 per cent and 60 per cent reduction from 2007 levels by 2030 and 2040, respectively, while maintaining the existing 2050 target. The proposed law enables the minister to set sectoral GHG emission reduction targets. It also signals a renewed commitment to action on climate change.

It is widely acknowledged that setting targets to reduce GHGs is a relatively easy step. Meeting them is the hard part. The magnitude of the challenge is stark as regions around the world strive to meet their reduction targets and prepare for the changing climate.

Drawing from a deep network across BC's four research-intensive universities, the Pacific Institute for Climate Solutions (PICS) convenes many actors from diverse sectors. Our collaborative approach pairs first-class academic knowledge with solutions-seekers to tackle real-life climate solutions. There is excellent expertise in BC, in both the public and private sectors, and we require continued collaboration to build new knowledge in order to drive change on the ground.

We are stepping up the ways we identify and focus on climate mitigation and adaptation solutions. PICS is in the process of implementing our five-year strategic

plan that is anchored by our mandate: to produce leading climate solutions research that is actively used by decision-makers to develop effective mitigation and adaptation policies and actions. PICS has a global remit, but a focus on BC.

We envision a collaborative research model that is powered by even stronger partnerships, matching researchers and end users, to meet the needs of stakeholders. Imagine the impact of research that is co-designed, co-developed, and is actively used by decision-makers to provide climate solutions.

Solutions-seeking partnerships are required for such a model to succeed. At the local level, we are excited to be the catalyst for convening researchers, stakeholders and other partners in BC and Canada. We also believe that sharing our knowledge and learning from others must include interaction at the global level. In the spring, I met with representatives from several climate solutions institutes in Switzerland and the Netherlands including the new Global Centre for Excellence in Climate Adaptation.

All these interactions confirm for me PICS' place—the interface between academia, government, the economy and the public. This is a powerful nexus of engagement and priority for PICS in the future.

Sybil Seitzinger
Executive Director of PICS

Cumulative impacts, policy and practice in northern British Columbia

More than 100 stakeholders and First Nations from across the province convened at the University of Northern British Columbia in January to discuss the future of resource communities in a shifting political landscape and a changing climate. UNBC's Cumulative Impacts Research Consortium (CIRC) led the symposium that attracted practitioners and community members from across various health, environment, and community-related sectors. CIRC, which began in 2014 with support from PICS, led the event. PICS raised questions about climate

solutions on topics including protection of wildlife habitat, the intersection of climate change, health and policy, as well as the future of cumulative effects and adaptation. Participants also explored topics including forest carbon management and how Indigenous leadership is contributing to the future of land-use planning.

In April, UNBC researchers held a followup meeting to focus efforts on addressing climate change related issues raised at the forum.

Bloomberg's Zindler on energy and mobility

Ethan Zindler, head of Americas for Bloomberg New Energy Finance, [spoke](#) in March about the future of clean renewable energy and mobility, as well as trends and economic factors driving the renewable transition. The event, hosted by SFU Renewable Cities and PICS, was very popular given broad interest in understanding financing in the clean sector. Zindler stated that investment has increased significantly in the past several years, with some US\$160 billion allocated to green bonds. Also on the rise is investment in clean energy, power storage, energy-smart technologies and biofuels. Zindler also spoke about the cost-competitiveness of electric vehicles given the growth of EV models, thanks in part to lower battery costs and new regulations on emissions standards. Bloomberg predicts about half of all cars sold will be EVs by 2040.

Advice to government

BC's 22-member Climate Solutions and Clean Growth Advisory Council provided public advice to government. In an [April letter](#) addressed to George Heyman, minister of Environment and Climate Change Strategy, the council expressed support for the government's carbon tax increase and emphasized the need to focus on creating economic opportunities for all British Columbians alongside decarbonization efforts. The council also provided guidance for government's Climate Solutions and Clean Growth Strategy, which is expected to be released in the fall. It also unveiled guiding principles for its work ahead. PICS' Executive Director Seitzinger sits on the council.

EVs and smart charging

Research involving SFU's Jonn Axsen and Curran Crawford of UVic reveals that smart charging, one avenue for boosting consumer uptake of EVs, won't likely increase sales. Smart charging enables people to recharge their electric vehicles in a way that supports renewable electricity, such as using wind- or solar-power suppliers. The effect would be to reap cost-savings for recharging when the supply is available. The study examined consumer behavior related to smart charging and concluded that the cost savings from smart charging amounted to between a one-half and one-per-cent-cut in overall energy prices—or about \$50 to \$100 per electric vehicle each year.



PICS interns study range of climate solutions

Ten PICS interns will tackle climate solutions projects across the province for the 2018-19 term to develop expertise in climate mitigation and adaptation. Topics range from methane reduction strategies to sea level rise to impacts on BC's health infrastructure. The successful candidates will work in seven different cities, from Victoria to Prince George.

The program, which began in 2010 contributes to PICS' broader strategic focus of improving BC communities. It gives undergraduate and graduate students from PICS' four collaborating research universities the opportunity to conduct hands-on work that impacts the community. Since inception, PICS has funded approximately 100 intern opportunities in

communities across BC. Examples of previous work include energy efficiency in buildings, assessing adaptive capacity in the agriculture sector and clean transportation research.

The intern call is open to local, regional and provincial governments, and First Nations, as well as BC-based non-governmental agencies. Organizations that have participated in the past include municipalities, Fraser Basin Council and various BC government ministries including the Climate Action Secretariat (CAS). Private-sector companies and Crown agencies are also eligible.

"PICS internships put students to work on important climate solutions projects that impact BC. The Climate Action Secretariat sees this program as a key part of building new knowledge that can be used by policymakers and decision-makers."

—Johanna Wolf, CAS

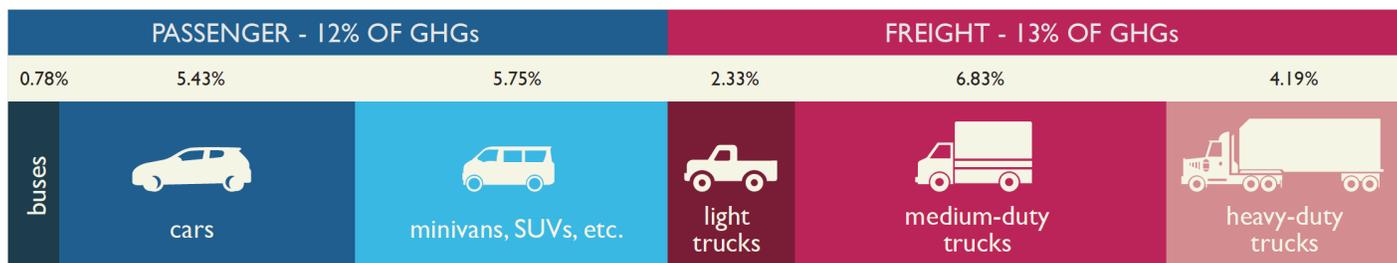


PICS Associate Director Ged McLean participated in UVic's Ideafest event in March. Panelists discussed challenges and opportunities presented by climate change from the perspectives of story narrative, governance, policymaking and engineering.

Lessons from Energiewende

Manfred Fishedick, German renewable energy expert and vice president at the Wuppertal Institute for Climate, toured Vancouver and Victoria in February. His visit, organized by University of Calgary in collaboration with PICS at UBC, included engagement with representatives from BC Hydro, provincial government, local government planners and decision-makers, as well as the academic community at UVic. He shared lessons on Germany's Energiewende, or energy transition, and opportunities for Canada's transition to renewable energy.

Climate-friendly trucking



Research from PICS' Transportation Futures in British Columbia project —that focuses on a case study of road freight electrification— suggests BC will need much more clean electricity and a wholesale change in commercial trucks operating in the province to meet its 2050 GHG emissions reduction target while supporting economic growth. To meet the province's total emissions target while supporting economic growth, emissions from road freight transport would need to decrease by at least 64 per cent by 2040, as a mid-term goal. That's achievable if all new trucks sold by 2025 are electric, according to the researchers. [Check out the full infographic.](#)



PICS UNBC fellow Heather Mitchell. Photo courtesy of UNBC.

Active transportation in the North

Heather Mitchell, PICS fellow at UNBC, is examining how active transportation such as cycling can play a bigger role in reducing GHGs. Climate change is forcing residents in the North to consider how citizens travel safely while limiting dependency on fossil fuels to build stronger, more resilient communities. Mitchell's focus is to understand how winter city cycling policies contribute to increased active travel in northern communities.

In February, Mitchell attended Moscow's Winter Cycling Conference. There, she engaged participants to understand how climate change and growing cities impact cyclists in northern communities, as well as issues around policy and traffic congestion. Closer to home, Mitchell studies other cities including Smithers, BC, Whitehorse, Yukon, and Jasper, AB, that are already embracing winter cycling.

"There's no such thing as bad weather, only bad winter clothes"

-Heather Mitchell told CBC Daybreak

Stanford keynote: Decarbonizing BC

In April, PICS' Seitzinger delivered a presentation at the Carnegie Institution for Science at Stanford. Her talk, *Waking up to the Challenge: Decarbonizing British Columbia*, highlighted how BC offers a unique case study for paths to decarbonizing the economy. Using a narrative anchored in PICS' Big 5 research projects, she emphasized the necessity of innovating across all sectors of the economy and applying an inter-disciplinary approach. During her two-day visit, Seitzinger engaged graduate students and faculty from Carnegie and Stanford University's School of Earth, Energy and Environmental Sciences, the department of Biology and the Woods Institute.

Water Game

Water conservation efforts are vital in places where water availability is becoming less predictable due to the impacts of climate change. To improve children's understanding of residential water consumption and encourage them to take water conservation actions at home, a new water conservation game, "Water Garden," was incorporated and tested in the PICS SFU energy and climate workshops. This game was developed by Yuhang Wu, graduate student with the School of Interactive Arts and Technology. The motivation of the PICS research is to explore how the game and the design of both bar chart and flower graphic visualizations can educate children in obtaining new knowledge, enhancing awareness and promoting actions in water conservation. Activities included watering gardens, taking showers or baths, as well as making decisions about how to do laundry.

Elizabeth May at UBC

PICS at UBC, along with UBC Sustainability and Irving K. Barber Learning Centre, hosted Elizabeth May, Leader of the Green Party of Canada and Member of Parliament as part of the UBC Reads Sustainability series. May gave a heartfelt and hope-filled [talk](#)—anchored in the motto "citizens can change things"—in presenting her recent book *Who We Are: Reflections on my life and on Canada*.