



SUMMER 2010

Associate Director's Message

FutureGrid sparks debate on BC's energy options and export potential



PICS Associate Director, Dr Lawrence Pitt speaking at the opening reception for FutureGrid on June 14, 2010 at the Morris J. Wosk Centre for Dialogue in Vancouver.

FutureGrid, the second annual PICS Forum, was held in Vancouver on June 15-16, and generated vigorous discussion and follow-up action on three key issues relevant to British Columbia (BC) – expanding clean energy electricity exports, increasing energy efficiency and smart-grid investments, and implementing carbon-neutral government. More information is available at <http://pics.uvic.ca/futuregrid.php>.

The aim of the two-day forum, "FutureGrid: BC's Energy Options in a Changing Environment," was to bring much-needed constructive debate on the province's future electricity regime, especially given the recent passage of BC's controversial Clean Energy Act that opens the door to the expanded electricity exports.

To set a global context for the forum, participants heard from Hans-Holger Rogner from the International Atomic Energy Agency on the Global Energy Assessment and from Professor Roger Pielke Jr., Professor of Environmental Studies at the University of



Former BC Premier Mike Harcourt addresses FutureGrid delegates on the Quality Urban Energy Systems of Tomorrow (QUEST) project.

Colorado, on the challenges of carbon emissions reduction targets. Alan Hamlet, Research Assistant Professor, University of Washington, provided a synopsis of mid-century hydrological projections for BC's two major electricity production watersheds - the Peace and the Columbia. Professor Mark Jaccard, from the School of Resource and Environmental Management at Simon Fraser University (SFU), then gave an overview of BC's Clean Energy Act, which had received royal assent only the week before.

With this as prologue, UBC Political Science Professor George Hoberg led the forum's 125 participants under a world-cafe dialogue format to address the key question: "Under what conditions should BC consider becoming a major exporter of electricity?" The dialogue's results were summarized and presented later that evening to a public forum that attracted more than 230 people. Under the effective guidance of the moderator, Tyseer Aboulnasr, UBC Dean of Engineering, a distinguished panel consisting of Vaughn Palmer, Vancouver Sun; Paul Kariya, Independent Power Producers of BC; Judith Sayers, former Chief, Hupacasath First Nation; and Josh Paterson, West Coast Environmental Law, debated the issue and responded to many questions and concerns from attendees. Using the results from the Forum dialogue, the public forum discussion, as well as a post-forum workshop with some key FutureGrid participants, Professor Hoberg is drafting a PICS white paper on the electricity export question for release later this fall.

On the second day, FutureGrid participants heard from Mike Harcourt, former Premier of British Columbia, on his vision of Sustainable Cities including the deployment of integrated energy services and energy efficient strategies.

Another topic on the agenda was the Clean Energy Act, which emphasizes energy efficiency targets as well some emerging aspects of the so-called smart-grid. A panel of experts - David Chassin, Pacific Northwest Labs on the smartgrid; Parminder Sandhu, Willis Energy Services, on demand-side management, and Nat Gossman, University of Victoria (UVic), on energy efficiency policy - lead the FutureGrid participants in a wide-ranging discussion about the challenges and opportunities of implementing demand-side management and smart grids.

The final forum session was devoted to the experience of the four PICS Universities (UNBC, UBC, SFU and UVic) in reporting and achieving the public sector carbon neutrality requirements of the carbon pricing policy in BC. Currently, the four institutions face an annual charge of over \$2 million in offsets, and the Forum heard about some of the innovative ways they are trying to reduce these costs. A PICS white paper on the economic aspects of the public sector carbon neutrality policy is in preparation. This topic is also now the focus of a PICS Fellow, Kim Lau, working under the supervision of Hadi Dowlatabadi at UBC.



June 15, 2010: FutureGrid delegates engaged in a world cafe-style discussion on the topic of “under what conditions should BC consider becoming a major exporter of electricity?” Led by UBC Professor George Hoberg, the session’s findings were distilled into six principles—the conditions would have to be: economically advantageous; reliable; lead to greenhouse gas reductions; respectful of First Nations rights and title; foster public legitimacy and promote sustainability, and be reversible.

Overall, FutureGrid was a success thanks to the hard work of the key presenters and organizers and the contributions of the many participants. However, FutureGrid’s true success will



The FutureGrid June 15th debate over whether BC should be a major electricity exporter carried on that evening at an intense public panel discussion that was attended by over 230 people. The findings will also contribute to an upcoming PICS white paper on the topic.

be judged by the quality and impact of the follow-up action starting with white papers this fall.

Climate and Landscape Changes in the Cariboo Prince George Region

On June 21, PICS-UNBC hosted an interactive evening asking people to “tell their stories” of a changing landscape in the Prince George region. To kick off the event, Joe Shea, UNBC Postdoctoral Fellow, gave an engaging presentation on the melting glaciers in the BC north and the impacts this may cause. UNBC Professor Dr. Dezene Huber provided a display of impressive photographs of the region that showed the changes in our northern environment.

In addition, the public offered anecdotes based on living in the region for a great number of years and observations of the changes that have come over time. The best story prize was given to Barb Coupe, a professional forester of more than 30 years, who provided a poem to the audience regarding the pine beetle epidemic in the North. The engagement that characterized the evening resulted in a very productive examination of landscape changes in the Cariboo-Prince George region; changes that are having a clear impact on the North.

By Kyle Aben, PICS Campus Coordinator, University of Northern BC

Shale Gas Development and BC's Climate Targets

The potential rise in emissions from shale gas development in BC will make it extremely difficult for the province to achieve its CO₂ reduction targets, according to research commissioned by PICS and spearheaded by Professor Mark Jaccard and researcher Brad Griffin from SFU's School of Resource and Environmental Management.

The findings, compiled in the PICS White Paper entitled, "Shale Gas and Climate Targets: Can They Be Reconciled?" show that increased shale gas development would increase provincial emissions by almost 10% relative to where they should be in 2020 under the legislated emissions targets. The BC government is currently committed to reducing provincial greenhouse gas (GHG) emissions 33% below their 2007 level by 2020.

Shale gas in northeast BC particularly in the Horn River Basin near Fort Nelson, is a very large resource with the potential development of trillions of cubic feet of natural gas. However, this gas is associated with high concentrations of CO₂, which, if not controlled by strict regulations or high financial penalties, will be vented by industry to the atmosphere as the gas is processed to market standards. BC faces a serious trade-off between its GHG emissions targets and the development of this resource. Under the current regulations, each new investment in shale gas increases the likelihood that the BC government will sustain a 20-year Canadian climate policy tradition – failure to meet its GHG emissions reduction targets.

Key findings from the report indicate that if BC is to achieve its GHG emission targets the provincial government would need to either ban shale gas development in BC entirely or only allow such development if it includes Carbon Capture and Storage (CCS) to prevent CO₂ venting. Even in this latter case, it is likely to be difficult to achieve BC's GHG emissions reduction targets.

New Approaches to Mobilizing Climate Action

On June 8, 2010, PICS hosted an interactive evening at UVic that focused on "New Approaches to Mobilizing Climate Action." The public event included theatre skits and local-expert presentations on key issues related to climate change including sustainable energy, alternative transportation, compact land use, green buildings and food security. The



Panelists at the June 8th event answer audience questions after their presentations. (L to R) Lawrence Pitt (PICS), Ellen Pond (UBC), Sue Hallatt (CRD), Richard Iredale (IGA) and Aleck Ostry (UVic).

event was attended by more than 100 people and was held in conjunction with a two-day climate-action mobilization event co-sponsored by the BC Climate Action Secretariat (CAS) and PICS. These sessions brought together climate action leaders from across

Vancouver Island and the Sunshine Coast on June 9th and 10th at UVic.

PICS 2010-11 Fellowships Announced

In September 2010, PICS announced 16 new fellowships, worth \$684,000 over the next three years, to help spur climate change innovation, mitigation and adaptation. The new fellowships will focus research on a variety of cutting-edge climate change issues that span the province.

All fellowship recipients are based at the four collaborating universities that comprise PICS. Since 2008, PICS has awarded 43 fellowships totalling over \$1,000,000 in funding to pursue research on topics across a spectrum of climate change issues that span multiple disciplines.

This broad range of PICS-funded research will result in solutions not just from a science and engineering perspective, but across the full breadth of human endeavour.

PICS fellowships are worth up to \$12,000 a year for master's students, \$18,000 a year for PhD students, and \$50,000 a year for post-doctoral fellows. PICS has allocated \$700,000 annually for fellowships support at the three academic levels.

A full list of PICS fellowships since 2008 can be viewed online at: <http://www.pics.uvic.ca/fellowships.php>

PICS Launches Briefing Program

The PICS Briefing Program, launched in May 2010, produces briefing notes on timely policy, scientific, technological, or social issues related to climate change. More than 20 briefs have now been released, with typically at least one being distributed each week. Issues examined to date include: green data centers; transportation sector emissions and reduction measures; biofuels and BC's low carbon fuel standard; protecting aquatic species from climate change impacts; integrating a public health perspective into municipal climate change policies; solar radiation management responses to climate change; and ocean acidification.

Authors receive an honorarium for each note published and the final product is approved by the PICS editorial team prior to distribution. Notes are produced in partnership with ISIS, a research centre at UBC's Sauder School of Business. Dr. Alison Shaw, Dr. James Tansey and Ivan Watson, PICS Communications Officer serve as editors.

To pitch an idea for a briefing note, please email picsbp@uvic.ca.

The briefing notes are posted publicly on our website, and made publicly available after initial distribution to key policy-makers in the BC Government. A full list of the latest Briefing Notes are available for download at the following page: http://pics.uvic.ca/briefing_notes.php

Global Climate Change Governance

As part of our outreach and communications initiatives, PICS hosts a number of guest speakers on campus at UVic. Their lectures are presented live in person and are also accessible online via webcasts which have attracted viewers from around the world.

On May 4, 2010, PICS hosted Dr. Andreas Rechkemmer, Senior Science and Policy Advisor, Global Risk Forum in Davos, Switzerland, who spoke on "New Approaches to Global Climate Change Governance".

His lecture summarized and critiqued the effectiveness of the main components of the present climate change regime, in particular the UN Framework Convention on Climate Change and the Kyoto Protocol and provided an analysis of the 2009 Copenhagen Summit and its implications for future global climate negotiations.



Dr. Rechkemmer argued for reforming the UN in order to become more effective in dealing with climate change and integrating future climate governance with risk management and sustainable development policies.

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