

## ENHANCED PUBLIC ENGAGEMENT ON CLIMATE SOLUTIONS FOR BC

*A CIRS Proposal for a supplementary program to help achieve BC's climate change targets*

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The BC Government has legislated aggressive targets for reducing Greenhouse Gas (GHG) emissions and established the Pacific Institute for Climate Solutions (PICS) to foster research to help meet our climate change commitments. To date, \$1 million per year from the endowment has been allocated to the Pacific Climate Impacts Consortium (PCIC) for impacts research at the “front end” of the climate change problem, where the climate science begins. **This proposal targets the “back-end” of the problem, where the science hits the ground:** where climate solutions need to be implemented through behaviour change, policy change, and action. While much public education on climate change focuses on individual behaviour, the emphasis here is on **collective decisions on critical issues that will determine our longer term capability (past 2020) both to adapt to, and adequately mitigate, climate change:** issues such as land use, urban form, density, transportation infrastructure, energy, water systems, and community-based agriculture.

The proposed program focuses on **two-way engagement with the public and stakeholders, using innovative but proven visualisation tools**, coupled with the latest research findings on capacity-building and behaviour change methods. Such techniques have been shown to attract and engage many more people than conventional communication methods, and can overcome the often abstract and complex nature of scientific or technical information on climate change. The research collaboration of multiple BC universities known as the Centre for Interactive Research on Sustainability (CIRS) provides an established, internationally recognized cluster of researchers with the necessary interdisciplinary expertise on climate change, including: perception-testing, simulation, visualization, gaming, participatory processes, and community planning. Using state-of-the-art technologies for 3D modelling and visual immersion labs (on-campus and mobile), CIRS could serve as **a hub for community extension, capacity-building, and action research on climate change:** hosting researchers, private sector experts in new media, and extension agents from various organizations. Working closely with other PICS scientists, Secretariat staff, and other government departments, it would greatly expand access to knowledge and technologies needed to support climate change solutions across the province and via the web.

The proposed program is designed to fit within the Secretariat and PICS mandates for extension and behaviour change, complementing the new LIVE SMART program and Community Conservation Councils by extending their reach to attract a larger audience and using different tools. To maximize engagement with BC citizens and accelerate action on climate change, three linked initiatives have been proposed:

1. **A Community Climate Change Solutions program for enhanced community outreach and planning** across BC, using new research-based visioning processes with **3D visualisation of climate solutions in peoples' own neighbourhoods.**
2. Developing **interactive simulation and gaming tools to engage a substantial fraction of the population of BC** (including our youth) in learning about our choices in tackling the climate change challenge, engaging the media, science outlets, and the computer gaming industry.
3. **Dynamic public art installations** to engage the general public, such as the prototype educational, interactive and sustainable public display in a 3D game-like environment planned for downtown Vancouver by UBC's Media and Graphics Interdisciplinary Centre.

These three initiatives would all draw from the same core research and production of 3D image databases of the kind already being developed at UBC, but based on scientific inputs/scenarios from PCIC and others. They would bring together BC's world class research expertise in this area

with Vancouver's well-known expertise in video gaming. The **first phase of Initiatives 1 and 2** are described in more depth below; Initiative 3 has already been proposed in a major grant application to the New Media Program (run by NSERC and the Canada Council for the Arts), and the first prototype would be fully funded if this grant comes through (decision expected in December 2008).

### **Initiative 1: BC Community Climate Change Solutions (3CS) Program**

**Purpose:** to engage the collective public at the local community/neighbourhood level, leveraging existing outreach mechanisms in community planning, but making them far more appealing to participants; and thus to build a constituency for policy/behaviour change and empower local politicians/decision-makers to make the hard choices necessary to reach BC's long term climate change targets. We can show in animations or before-after pictures how various local responses to flooding or fire risk, for example, might differentially change a neighbourhood, or how new made-in-BC energy technologies could influence its carbon footprint, out to 2050 and beyond. Scientific evidence suggests visualisation of local climate scenarios can make climate change more real and urgent to participants, build awareness and support for new policies, and leave people with a clearer idea of constructive actions that can be taken in the community.

**The 3CS program aims to empower the communities themselves to use such methods** and move them as quickly as possible beyond the universities and into local hands. The multi-year province-wide program draws upon visioning case studies (some already funded) in regions such as Metro Vancouver, Prince George, and Columbia Basin, as recommended by Premier Campbell in August 2007. This proposal represents the first stage of a wider capacity-building program to disseminate the results emerging from these case studies and practical measures that all communities can take to advance climate solutions on the ground. We will work side-by-side with UBCM, BC government, and other extension providers. **Deliverables** would include:

- **Needs assessment** with selected case study communities and partner/practitioner organizations, on suitable methods, needs, training/support programs, and web delivery mechanisms (estimated cost: \$20,000).
- **Prototype tool-kit** for communities to operationalize the visioning process and support outreach, providing templates and initial examples for visualisation and analysis of adaptation and mitigation options, suited to varying levels of in-house capability (estimated cost: \$30,000).

### **Initiative 2: Interactive Simulation and Gaming Tools**

**Purpose:** to engage a substantial fraction, perhaps 40%, of the total population of BC in interactive processes of community engagement, aimed at communicating the trade-offs and consequences associated with different scenarios of climate change and climate change responses, and eliciting people's reactions. Print and broadcast media, communications expertise, new media organizations, museums, and the computer gaming industry would be engaged in developing web-based simulation and gaming tools that will allow citizens to learn about, and express preferences for alternative climate change response strategies, eg. transit, renewable energy, or urban farms. These preferences are not based on polls but on a prior process of engagement and learning. We will build an ongoing database of such preferences and views that could be an important source of intelligence on informed values and preferences.

Research has demonstrated that complex public policy issues can be addressed in ways that are engaging to a wide variety of audiences using interactive gaming and simulation tools. UBC has been at the forefront in developing and testing such tools. Our experience in commercializing the QUEST urban simulation software (now sold to 10 Canadian cities for use in community engagement), and with Science World QUEST (18,000 users of the system over three years), suggests that it is possible to engage large numbers of people in such activities, extending our reach

far beyond the workshop audiences typically used for community engagement and public education. A particular advantage of such an approach is that it provides an opportunity to engage strongly with youth, who are already predisposed to such tools. Vancouver is a global centre for this kind of simulation and research into interactive gaming; we thus have an opportunity to be at the forefront of efforts to achieve unprecedented levels of engagement of the public in climate change solutions.

**Deliverables** would include:

- **Workshops** to engage potential partners (eg. EA, Radical, Science World, MAGIC) to demonstrate initial case study work and modelling systems, and to scope out the full potential (estimated cost: \$20,000).
- Initial **proof of concept interactive 3D visualisation demo**, building on previous 3D work and databases (estimated cost: \$30,000).



The combined program proposed here would require a sustained commitment of senior research time and staffing, with specialist visual media services. We are requesting from PICS a total of \$50,000 for the next year, in combination with a matching \$50,000 from the BC Climate Action Secretariat, to initiate the above linked programs. These would increase the impact of the overall PICS research effort on the attitudes and behaviours of BC's citizens and communities, and accelerate climate action on the ground.