





AS CANADA SCRAPS ITS GREENHOUSE-GAS EMISSION TARGETS, JOHN ROBINSON IS WORKING TO PROVE SUSTAINABILITY HAS REAL-WORLD APPLICATIONS THROUGH THE CONSTRUCTION OF ONE OF THE GREENEST BUILDINGS ON EARTH

After years of dire warnings about the dangers of environmental degradation from scientists, the world suddenly opened its eyes in November 1974. More than 20 countries, including Canada, signed and gave their support to the Declaration on Environmental Policy issued by the Organization for Economic Co-operations and Development (OECD). The policy, which directly addressed the growing pressures of increases in population, urbanization and industrialization on the environment and its resources, outlined the countries' commitment to "the promotion of non-polluting technologies, the conservation of energy and the development of substitutes for scarce or environmentally harmful substances." Although no specific targets were implemented, action on the environmental front, it seemed, was imminent.

More than 30 years later, Canada's record on climate change policy has not lived up to its stated intentions. Despite being one of the first countries to sign the Kyoto Protocol in 1998, which aimed to reduce greenhouse-gas emissions by six per cent below 1990 levels by 2012,

the Conservative government under Stephen Harper scrapped the policy in 2006. No substantial alternatives were proposed, bringing Canada's commitment to mitigating climate change into question.

But beside a deserted railway in east Vancouver, rumblings of change are slowly taking concrete form outside the pressures of political agendas. There, a building – unlike the world has ever seen – is scheduled to be built, where it will stand as tangible proof that sustainability can actually work in the real world.

The concept for such a building began as just a pipedream for Dr. John Robinson, professor at the Institute for Resources, Environment and Sustainability (IRES) at UBC Vancouver. Frustrated with the Canadian government's scattered commitment to climate change policy, he began engaging the public to think about the possibilities of sustainable futures – and the consequences of continuing on its profligate ways. Because bad news alone is not a strong motivator of creative policy and behavioural response, Robinson knew he had to shift public discourse on climate change from doom and gloom facts to

solutions using tangible examples.

"Sustainability is abstract – too many syllables – so we needed to move beyond research into demonstration at the regional scale," says Robinson. "The idea was to build a building that requires almost no external sources of energy, water, light or waste treatment. Then we can treat it as a living laboratory where we can study it over the whole life of a building, study different systems and how they interact, and how people react to them. The power of something you can walk into, play with and see is very great."

If Robinson has his way, the \$36-million Center for Interactive Research on Sustainability (CIRS) will be the "greenest" structure on the earth. Drawing 80 per cent less energy than the model National Energy Code for Vancouver, this "living laboratory" is designed to be environmentally neutral, requiring almost no off-site energy, water or wastewater systems to function. Photovoltaic (solar) cells will generate almost all of CIRS' electricity. Rain will provide all the water, except for back-up fire suppression. Wind will supply virtually all the ventilation. A system of pipes under



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CIRS will cool and heat it. The waste treatment will be managed internally.

Building a structure that demonstrates sustainability to the extreme is only one part of the goal behind CIRS. In order for sustainability to work on a grand scale, Robinson recognizes the importance of public engagement to affect policy and market changes; politicians can’t act and markets can’t sell if the public doesn’t accept the policy and buy the product. A major focus of CIRS will be the development of public education using computer game-like simulation tools that can fly participants through the future landscape and show them the consequences of different policy and behavioural choices.

While individuals play an important role in supporting environmental sustainability, Robinson is quick to point out that policy change at the municipal level is how social change happens – not by individuals making individual decisions. For example, he explains it is more valuable for the City of Vancouver to exempt

CIRS from traditional building codes – as long as CIRS demonstrates performance-based equivalencies – than an individual purchasing a green house because changing building codes could allow builders to pick up and apply those alternatives in all future building endeavours.

“A building that has all these great sustainable features won’t matter if down the street there are buildings going up whose owners are not paying attention,” says Robinson. “CIRS only matters if we transfer that technology to the marketplace by creating a clustered hub of innovation on sustainability aimed at contributing to global urban development.”

If CIRS succeeds, its technologies, policies and applications will be replicated and adapted to a variety of environments all over the world. Construction is slated to begin sometime between January and April 2007, with its completion anticipated in late 2008.

Robinson knows the road to a sustainable future will be a long one but he is fully aware

that the planet doesn’t have 50 years to waste while governments get their act together. Although there are isolated examples of green buildings and green policies instituted already, he ultimately sees CIRS as the catalyst that will accelerate sustainability and make it standard practice in British Columbia: “When sustainability is business as usual, we’ll have succeeded.”

Dr. John Robinson is professor at the Institute for Resources, Environment and Sustainability (IRES) at UBC Vancouver where he directs several research programs in the areas of climate change and policy, analyzing sustainable futures in the Georgia Basin and building computer game-like simulations for public engagement. He receives funding from the Social Sciences and Humanities Research Council (SSHRC), GEOIDE, the Canada Foundation for Innovation (CFI), the British Columbia Knowledge Development Fund (BCKDF), Sustainable Development Technology Canada, Western Economic Diversification Canada and the BC Ministry of the Environment. ■