

D6 - The Tip of The Iceberg: Greenhouse Gas Consciousness in the Dawn of the 21st Century

Presentation # 1 title: GHG Efficiencies and a Better Future – Rail, Community Ownership and the Island Corridor Foundation

Presenters:

Doug Backhouse - Island Corridor Foundation

Aldyen Donnelly - WDA Consulting Inc. and GEMco

Abstract

Local governments and First Nations on Vancouver Island are working together through the Island Corridor Foundation to develop an integrated and sustainable transportation network. Through this modern redefinition of rail – communities have invested in their own economic future – building gateways to world markets, and using the GHG reductions to pay for it. The market for freight transportation on Vancouver Island is set to increase by a factor of 10. Rail efficiencies, and the opportunity to have competitive access to North American markets for the first time in Vancouver Island's history, set the stage for significant growth in the freight movements. This economic opportunity requires a significant infrastructure reinvestment that will be funded, in part, through Carbon Tax Credits sold in the open market. The ICF, working with GHG consultants GEMco have identified a market for an estimated 2.3 million tonnes of GHG reductions and have worked to monetize this value to support this investment in a sustainable transportation future. This session will provide an introduction to the unique community ownership model of the ICF and will focus on the business opportunity of a renewed rail infrastructure and the innovative funding opportunities that are available through carbon reductions.

Speaker Biography

Doug Backhouse has been working as the ICF's executive director since July 2006, and before that as a planning advisor during the Foundation's creation and asset negotiation phases. After successfully negotiating the transfer of \$330 million dollars worth of transportation infrastructure in 2006, Doug has worked with the Foundation board to ensure that this asset fulfills its potential in supporting compact environmentally sustainable development on Vancouver Island.

Aldyen Donnelly was instrumental in the 1995 creation of the not-for-profit Greenhouse Emissions Management Consortium (GEMCo), initially as a representative of then-founding partner Westcoast Energy. The intent of GEMCo was to explore the nature of real and economic emission reductions in a carbon-constrained future. Aldyen was appointed the first President of GEMCo and continues to serve in that capacity on a part-time basis. Under Aldyen Donnelly's management, GEMCo became a world leader in the financing of speculative emission reduction projects through Emission Reduction Credit ("ERC") forward purchase agreements. Between 1995 and 2007, 14 of Canada's 20 top GHG emitters have participated in GEMCo for at least 3-year terms. In the GEMCo context, the purpose of executing projects was to deliver real-life commercial emission trading experience, on a fast track, to GEMCo members.

Presentation # 2 title: Virtual Travel or Carbon Neutral Traveler? Tourism in the Age of Climate Change

Presenter:

Emilie Adin - PlanGirl International

Abstract

Virtual (zero carbon emission) travel and carbon-neutral tourism are good ways to take increased responsibility for the greenhouse gas emissions we create. To solve the problem of climate change, we all need to take account of personal carbon emissions and make continued efforts to reduce these wherever possible. In some cases, this will mean traveling “virtually” via the use of telecommunications (such as video conferencing and webcasting). In cases when it is impossible to reduce our carbon emissions to zero, going carbon neutral by purchasing carbon offsets is a practical and affordable way to make a difference. Purchasing carbon offsets can help support the transition to a sustainable energy economy by providing an additional source of revenue to renewable energy development: industrial heat recovery, ground-source heat pump systems, solar thermal systems, high efficiency biomass stoves, and efficient lighting systems are good examples of funded research projects. Other carbon offsetting initiatives (such as tree planting programs and long-term protection practices) focus on carbon sequestration. In 2007, BC’s own Harbour Air Seaplanes became North America’s first carbon neutral airline. Harbour Air purchases carbon offsets to mitigate the climate impact of all scheduled service, charter and tour operations – not an optional program for its clients. New businesses such as FlyGreen.ca will purchase carbon offsets to compensate for your flights on airlines such as WestJet and Air Canada, at no additional cost or fees to climate conscious travellers. Travel agencies are increasingly specializing in eco-tourism and sustainable tours that focus on profiting the environment, local communities, or both. Green management practices are being adopted by hotels and other tourism services. Major conferences, conventions and sporting events are going carbon neutral, as are big rock bands, such as The Rolling Stones. Green travel tips are increasingly taken to heart by local, regional and international destination tourists. Local and human-powered tourism are becoming de rigueur. But are we doing enough, and is there a net benefit to the environment? Homes are getting more energy efficient, but many families are purchasing second and third homes in tourism-based resort communities. Carbon offset investments that support the development of renewable energy technologies do not in many cases actually reduce carbon emissions in the short term. How far do we need to go to offset our carbon emissions? And how can we set our own ethical boundaries regarding travel abroad, the purchase of a flight, and our desire to pursue personal, cultural or business opportunities outside our own neighbourhoods? Tourism in the Age of Climate Change will examine current practices, and explore ethical quandaries. Interactive workshop activities will follow a short presentation.

Speaker Biography

Emilie K. Adin, MCIP, is the Deputy Director of Planning for the City of Langford and previously worked as a planning consultant, college instructor, workshop facilitator and writer on urbanism. Her writings on urbanism have been published in a book on community planning, and in national and provincial newspapers, magazines and journals. Emilie has facilitated or acted as Master of Ceremonies at over a dozen workshops and conferences. She has also given a number of presentations on urbanism and sustainability across North America. Emilie holds a Master’s degree from the School of Community and Regional Planning at the University of British Columbia, an Urban Design Certificate from Simon Fraser University, and a certificate on sustainable architecture and urban planning from La Universidad de la Habana, Cuba. She has also attended the planning program at the University of California – Los Angeles as a Visiting Scholar, on scholarship with the North American Consortium on Sustainable Development and Planning. Emilie K. Adin has dual Canadian/Irish citizenship and speaks several languages, including French and Russian. She is currently writing a book on urban design best practices in Europe, with special regard to sustainable urbanism.

Presentation # 3 title: Designing a Livable Community for Low Greenhouse Gas Emissions in Nanaimo, BC

Presenter:

Amy Gore - HB Lanarc Consultants/University of Guelph

Abstract

Climate change is one of the most pressing issues that the world faces today. As carbon dioxide levels continue to rise, developing countries are taking action to reduce and stabilize greenhouse gas (GHG) concentrations in the environment. As approximately half of the world's population lives in urban areas, a large proportion of energy related GHG emissions can be traced directly to the urban environment and can be altered and influenced by measures suggested by local government. Because municipalities influence many of the aspects of urban design that contribute to GHG emissions, they can play a role in reducing a city's energy requirements and related GHG emissions. In concert with the growth in population there is pressure for development to spread out beyond the urban boundary, leading to sprawling, low density communities. Concerns over the negative impacts of sprawl are causing planners to investigate ways in which cities can be developed to be more sustainable. Allowing cities to intensify and expand within existing urban fabric can have several benefits such as reduced car travel and higher densities which in turn support alternative energy systems and public transit, both of which contribute to a reduction of GHG emissions. This project explored the relationship between urban design and GHG emissions, effectively integrating GHG reduction strategies into urban environments while maintaining or enhancing quality of life. Urban design and GHG reduction strategies were applied to an existing site (52ha) in Nanaimo, BC to yield two alternative designs and compare GHG emissions and quality of life outcomes. Results showed that a 5% reduction in GHG emissions could occur if new buildings were built to demanding building code standards, existing buildings were retrofitted at a steady rate and a carbon neutral district energy system was implemented into the site. Alternatively, more modest strategies were not effective in reducing GHGs and resulted in a 19% increase in GHG emissions. This analysis and conceptual design of an energy efficient community show that GHG reductions are compatible with improvements in the quality of urban life, even when the GHG reduction strategies are aggressive. The outcome of this analysis is potentially adaptable to various community planning projects throughout the province and would provide guidance for transportation planners, urban planners, civil engineers, landscape architects and architects. In addition, it will provide the general public with a visualization of what an energy efficient community looks like.

Speaker Biography

Amy Gore A member of the HB Lanarc team since May 2008, Amy also holds a bachelors degree in Chemical Engineering from McGill University and has recently completed her Masters degree in Landscape Architecture at the University of Guelph. Her interests involve finding innovative ways to integrate sustainability strategies into the design of urban environments such that they contribute to efficiency while maintaining or enhancing the quality of life of the residents, with a focus on the relationship between greenhouse gas reduction and urban design. Her diverse background provides her with a unique set of technical, problem solving, graphic and design skills.