A CREDIT UNION GUIDE TO CLIMATE CHANGE AND GREENHOUSE GAS MANAGEMENT

Produced by

Strandberg CONSULTING

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SOLUTIONS FOR A SUSTAINABLE WORLD

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Canadian credit unions are committed to supporting the health and well-being of their members and local communities. Concerned about global warming trends, many credit unions are leading the way in responding to climate change by reducing their energy use and limiting their use of fossil fuels.

This Guide to Climate Change and Greenhouse Gas Management is produced by:

Strandberg Consulting. Strandberg Consulting provides training, strategic advice and planning services to credit unions interested in enhancing their corporate social responsibility programs.

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Read ahead to learn more about the science and facts of global warming; what four leading credit unions are doing to reduce their greenhouse gas emissions; and what you can do to limit your credit union's climate change impacts.

The following information will appear in DOXIM newsletters from Jan 2008 – Sept 2008. To subscribe to their newsletter, please email Fiona Chan at fchan@doxim.com.

CLIMATE CHANGE 101

The earth is heating up and the global climate is changing, according to the International Panel on Climate Change (IPCC), a United Nations-backed group of 2,500 top scientists from more than 130 countries studying the science of climate change. In their latest report released last May, they note that 11 of the last 12 years (1995 − 2006) rank among the 12 warmest years since 1850. They agree that most of the increase in global average temperatures since the mid-20th century is very likely due to increases in greenhouse gas (GHG) concentrations from human activity (*EnviroZine*, Environment Canada, Issue 76, October 11, 2007).

Climate change is occurring because carbon dioxide (CO_2) and other gases we produce through burning fossil fuels to heat our homes, run our cars, and produce our food are enhancing the Earth's natural greenhouse effect, thereby causing Earth's temperature to rise. These gases − called greenhouse gases (GHGs) − trap the sun's heat in the atmosphere, raising temperatures much the same way the roof of a greenhouse keeps the warmth inside.

Greenhouse gases occur naturally and are needed to keep the earth warm enough to support life. However, human activity − through the burning of coal, oil, and natural gas − is adding huge quantities of CO_2 to the atmosphere thus throwing off natural balances and increasing average temperatures (www.ec.gc.ca).

If we continue on the current development path, IPCC estimates that temperatures could rise by as much as 6 Celsius degrees by 2100, less than one hundred years from now. A rise in global temperatures could lead to severe storm patterns, more heat waves, changes in precipitation, a rise in sea levels, and regional droughts and flooding. Canada faces economic impacts in the agriculture, forestry, tourism and recreation sectors. Climate change is also projected to impact human health through increases in cases of heat stress, respiratory illnesses and transmission of insect- and waterborne diseases, placing additional stresses on health and social support systems (www.ec.gc.ca).

Comment [pk1]: *Celsius degrees,I assume*

On a per capita basis, Canada is the largest consumer of energy in the world and the second largest producer of greenhouse gases. With a population of just over 30 million, we use as much energy as the entire continent of Africa, home to 700 million people, and contribute 2% to overall global emissions (www.davidsuzuki.org).

For more information about the science and impacts of climate change check out:

David Suzuki Foundation	www.davidsuzuki.org
Environment Canada	www.ec.gc.ca
IPCC	www.ipcc.ch
The Pembina Institute	www.pembina.org
SafeClimate for Business	www.safeclimate.net

Credit unions and GHG emissions

Given the seriousness of the issue and the scientific consensus about the problem, the time to act is now. Forward thinking organizations around the world are making pledges to reduce their GHG emissions and go carbon neutral. Being carbon neutral involves calculating your total climate-damaging carbon emissions, reducing them where possible, and then offsetting your remaining emissions, often by purchasing carbon offsets such as tree planting or renewable energy investments.

Best practice organizations typically begin with measuring their organization's total emissions, starting with determining what emissions they are responsible for. For a service sector, office-based organization like a credit union, key sources of emissions could include: facilities energy use, employee commuting, and business travel.

Vancity Credit Union has pledged its operations to be carbon neutral by 2010, defining the scope of its emissions to include:

- Premises energy use
- Paper use
- Employee commuting
- CEO air travel

The next section focuses primarily on the issue of paper use, which in Vancity's case represents 17% of its energy emissions.

The myth of the 'paperless' office

The 'paperless' office is a myth. Contrary to claims associated with the introduction of technologies such as the personal computer, e-mail and networks that electronically capture, store, and transmit data, paper use is at an all-time high.

In Canada, consumption of paper for printing and writing more than doubled between 1983 and 2003 to 91kg or about 20,000 pages per person per year. This works out to 55 pages per person per day! Estimates for additional printing by businesses due to the use of the Internet and e-mail range from 30 to 40% depending on business size (Statistics Canada, 2006).

The digital era is hungry for paper: industrialized nations, with 20% of the world's population, consume 87% of the world's printing and writing papers. Global production in the pulp, paper and publishing sector is expected to increase by about 75% from 1995 to 2020. This level of demand exacts a huge toll on the environment.

GHG impacts of paper use

Nearly 50% of all trees harvested in North America are turned into some type of paper product. Cutting down trees to make paper contributes to climate change by destroying forests, which otherwise trap and store carbon in trees and root systems. According to the United Nations Food

and Agriculture Organization, deforestation accounts for 25% of the annual carbon emissions caused by human activity. Previously stored carbon is released, and there is no longer a forest to absorb more carbon. While replanted trees will absorb some carbon, the rapid harvesting of plantation trees simply releases it again (Environmental Paper Network, *Understanding Recycled Fibre*, June 2007).

To add insult to injury, the pulp and paper industry is the third greatest industrial greenhouse gas emitter, after the chemical and steel industries. Furthermore, despite long-term educational efforts to support paper recycling, paper makes up nearly 40% of the municipal solid waste stream. In the landfill, waste paper decomposes to produce methane, a potent greenhouse gas with 23 times the heat trapping power of $C0_2$.

What can credit unions do to reduce the climate impacts of their paper use?

So, you've decided that you want to reduce your paper use. Now what?

- Measure your paper use
- Adopt practices that conserve paper; and
- Purchase recycled paper or paper harvested from woodlots that have been sustainably harvested

Measuring paper use

A first step is to get a handle on how much paper your organization is using. In 2005, Vancity measured paper used for: letterhead, copy/fax paper, member statements, marketing materials, member communications (including newsletters and annual reports), business cards, envelopes, and AGM and board election communications (2004-05 Accountability Report, p. 8).

Once you know how much paper you use, it's much easier to measure the impacts of your paper reduction efforts.

Adopting practices that conserve paper

Adopting programs to reduce paper use by employees and members is an important way for a credit union to reduce its GHG emissions. Here are examples of actions to be taken:

- Set all copiers to print double-sided. A study of printing and copying practices at 14 companies found that companies could achieve paper savings of 10 to 30% through this strategy alone. (From *Copy This! - Results of the Citigroup - Environmental Defense Partnership to Improve Office Paper Management*, November 2004)
- Minimize weight of paper used for ATM receipts, statements, business cards, and letterhead.
- Eliminate pre-printed forms or migrate to Print-On-Demand (POND).
- Encourage members to switch to e-statements.
- Adopt electronic data storage − storing information and documents electronically.
- Purchase multi-functional devices that print, scan, copy, and/or fax.
- Educate and engage staff through contests, rewards, profile and recognition.

Purchasing recycled content or sustainably harvested paper

Switching to paper with post consumer recycled content is another way for a credit union to reduce its GHG emissions. There are three types of recycled paper on the market: 30%, 40% and 100%. There are negligible costs for converting to 30 or 40% recycled. At 100% there are noticeable price premiums, but these costs can be more than offset by reduced paper use. And by using recycled paper you will be helping to protect forests and keeping paper out of landfills.

Sustainably harvested paper is derived from legally harvested forests that are managed to sustain their biodiversity, productivity and vitality and to prevent harm to other ecosystems and indigenous or forest-dependent people. In Canada such papers are certified by the Forest Stewardship Council (FSC) and contain a combination of post-consumer waste/recycled fibre; FSC-certified fibre from well-managed forests; and fibre from controlled sources. Although recycled fibre is often considered the only alternative for responsible papers, it can only meet 35% of current paper consumption, and due to quality requirements not all paper can be 100% recycled. FSC recycled papers contain 100% post-consumer waste/recycled fibre. For all other FSC papers a minimum of 10% of the fibre must come from FSC-certified forests which are managed to protect wildlife habitat, ensure clean water, protect high value areas and respect the rights of local communities. Any remaining fibre must be controlled, meaning it can't come from:

- Areas of social conflict and illegal logging
- Genetically modified trees
- High-conservation value forests
- Large scale conversions which replace native tree species with faster growing non-native species (From: www.fsccanada.org/PaperProcurement.htm)

Fast Facts:

- Did you know that it takes 2 to 4 tonnes of raw wood fibre to produce a tonne of virgin pulp and only 1.4 tonnes of recovered paper for a tonne of recycled pulp − a wood fibre savings of up to 300% (Environmental Paper Network).

- Switching from one tonne of 0 per cent recycled fibre paper to 100 per cent post-consumer recycled fibre saves between 12 and 24 trees (depending on grade and pulping process) and eliminates 2 tonnes of greenhouse gas emissions.

- In 2005, Vancity switched from 30% to 100% post-consumer recycled paper. Vancity reports that it saved about 1,370 trees and kept about 57 tonnes of GHG emissions out of the atmosphere (2004-05 Accountability Report).

Comment [pk2]: *Is this a metric tonne? We should probably use metric terms and spelling throughout, even for the first bullet point, which is strictly speaking a ratio and therefore independent of units*

Major companies and institutions have put in place procurement policies stating a preference for FSC-certified paper and other wood products - Dell Inc., Victoria Secret, Williams Sonoma, Alberta Ministry of Environment, Home Depot, Ikea, Kodak, LL Bean, Lowes, Nike, and Norm Thompson, to name a few (www.fsccanada.org/aboutcertificationcanada.htm).

In Summary

Adopting these types of strategies makes good environmental sense. As global demand for paper rises and developing countries emulate the paper use of developed countries, it is increasingly important to use paper wisely and increase the use of recycled and sustainably harvested fibre in order to protect the world's forests and to reduce greenhouse gas and other toxic emissions (Environmental Paper Network). And by reducing your overall paper consumption you can save costs too. Now that's a bargain!

Resources

For more information on paper reduction strategies check out:

www.papercalculator.org
Business Guide to Paper Reduction www.forestethics.org
Environmental Defense Fund www.environmentaldefense.org
Environmental Paper Network www.environmentalpaper.org
Sustainability Purchasing Network www.buysmartbc.com
World Resources Institute www.wri.org
Forest Stewardship Council www.fsccanada.org/PaperProcurement.htm

More on what your credit union can do to reduce your GHG emissions

Reducing paper use is only one of many ways for a credit union to reduce its greenhouse gases. Here are some other ways:

Energy Management: Improve office energy efficiency by undertaking energy efficient lighting, heating, ventilation and air conditioning upgrades and building envelope improvements. Further reduce your emissions through the purchase of green energy certificates, which represent the environmental attributes of the power produced from renewable energy projects and are sold separate from commodity electricity They are typically available from your provincial energy supplier.

Employee Commuting: Locate new offices and branches close to rapid transit; include showers and lockers for those who wish to commute by bike; provide incentives for transit use and car pooling; and eliminate free parking.

Employee Air Travel: Reduce the number of trips by combining trips and participating in video conferencing; purchase offsets to reduce carbon emissions from plane travel to zero.

Employee Car Travel: Provide incentives for employees to drive low emissions vehicles and to maintain their vehicles.

Financing Member Solutions: Provide financing to personal and business members to take action on climate change. This could include: loans for low emissions vehicles; loans and incentives

for energy efficient home renovations; green mortgages for highly energy efficient homes; financing for renewable energy projects, etc.

Providing Advice to Business: Provide support to initiatives that help small and medium size businesses to reduce their GHG emissions and go carbon neutral.

Supporting Community Solutions: Through community investment programs, provide support to community organizations that are working on climate change solutions.

Follow LEED Principles in Building and Branch Development: When building or renovating future administrative offices or branches, consider following LEED principles, the national standard for the design, construction, and operation of high performance green buildings. (LEED stands for Leadership in Energy and Environmental Design (LEED) Green Building Rating System™.)

The business case for reducing GHG emissions and paper use

Businesses that commit to reduce their environmental impacts, including GHG emissions and paper use, benefit in a number of ways. First, there are financial cost savings found in reducing energy and paper consumption. Secondly, organizations which are aligned with environmental concerns are better able to attract and retain quality employees. Thirdly, organizations that don't align their internal practices with employee and public or client sentiments concerning the environment risk alienating their staff and customers. (Who hasn't heard customers or staff complain about unnecessary paper and energy use?) Indeed, organizations that consult their staff on sustainability issues find GHG emissions, energy use, paper use and waste to be amongst their top concerns. Staff are aware and motivated to help businesses reduce their energy and paper consumption – and engaged staff are more productive, while teaming of staff on these initiatives results in greater productivity still. Furthermore, the introduction of new technologies and processes to reduce energy and paper consumption often result in a number of other organizational cost efficiencies and productivity improvements. So, regardless of the business, there are myriad opportunities to reap financial – as well as environmental – rewards for initiatives that reduce an organization's paper and carbon footprint.

Credit union case studies

Credit unions from coast to coast are taking the lead in managing their climate change impacts. Read below to find out how Envision Financial, Alterna Savings, Vancity Credit Union and iNova Credit Union are tackling climate change.

Envision Financial

For BC-based Envision Financial, with 800 employees, 19 branches and close to 100,000 member-owners, 2007 was the year of "getting the inside onside." The focus has been on helping employees learn about, understand and deliver on Envision's environmental ethic. The key tool

for this has been a series of awareness raising articles under the banner "Envisioning a Greener World" in the daily e-newsletter. The articles focus on key environmental issues and what employees can do in the workplace and at home. The paper use article highlighted the amount of copy paper that Envision orders annually. Employees were encouraged to take action (set printers to double side and print 2-sided) and to feed ideas into the newly formed Employee Environmental Advocacy Team. The mandate of this team − made up of a cross-section of employees and chaired by the CEO − is to create Envision's *Environmental Response Plan*. No doubt the plan will build on what Envision is already doing, such as purchasing green energy certificates to offset the GHG emissions of its branches, building LEED certified for all future branches (i.e. branches that conform to the national standard for the design, construction, and operation of high performance green buildings), encouraging members to switch to E-statements, offering a car loan for low emissions vehicles, purchasing offsets to zero out the carbon emissions of the CEO's travel, and giving carpools preferred parking spaces at head office.

iNova Credit Union

Even a credit union as small as iNova in Nova Scotia − with 9 employees, 1,800 members and $3 million in assets − can make a difference. General Manager, Willy Robinson, says employees are committed to reducing paper use. Printers are set to double side and 2-sided copying is embedded in their culture − so much so that staff members comment huffily when handouts are printed on one-side. iNova uses 100% post-consumer waste recycled paper for all advertising materials and is experimenting with 100% recycled content copy paper. At its new rented premises, iNova has said no to a drive thru and is advocating for the best building environmental options with the landlord. In 2007, iNova held an environmental AGM. The 100 members who attended were treated to local food served on china, a presentation on solar panels, an environmental tradeshow and walked away with a compact fluorescent bulb and very few handouts. iNova demonstrates that action is not limited by size. iNova is presently putting the finishing touches on a sustainability plan that will create a road map for its sustainability initiatives now and into the future.

Vancity Credit Union

Vancity Credit Union, the largest credit union in Canada with 57 branches, 380,000 members and 2,500 employees, is a climate change leader and has been since the early 90's. In 2005, it committed to being carbon neutral in its operations by 2010. This commitment has enabled Vancity to pull together a broad range of environmental initiatives under one strategic imperative thus focussing energy and resources. To long-standing action on premises energy use and employee commuting, Vancity has added innovative financing to encourage members to reduce their GHG emissions and grants to community organizations addressing climate change. In 2006, Vancity extended its GHG tracking to include travel by employees who use their cars to conduct business and all corporate air travel.

In 2005, Vancity established a baseline against which progress towards its 2010 goal can be tracked. Vancity Group's total greenhouse gas emissions are currently around 4, 250 tonnes per year. According to Amanda Pitre-Hayes, Manager, Environmental Programs, the biggest

challenge to achieving this goal is finding high quality carbon offsets to bring Vancity's emissions to zero.

Highlights from Vancity's 15-year commitment to action include:

- locating its head office on the SkyTrain
- being named a PowerSmart Leader for facilities energy management
- switching to 100 % post-consumer waste copy paper and statement paper
- branded staff engagement program titled, GreenFeat focussing on reducing Vancity's environmental footprint
- Clean Air Auto Loan for low emissions vehicles
- Bright Ideas home financing incentives for energy-saving home renovations
- financing for green energy alternatives (eg., small-scale hydro)
- funding the U-Pass program which provides discounted transit passes to university students in Greater Vancouver
- funding the Carbon Neutral Workgroup for Small Business, a pilot to help small businesses and non-profits become carbon neutral

Alterna Savings

Alterna Savings, with $1.7 billion in assets and 150,000 members has five CSR (corporate social responsibility) pillars. To the four pillars of financial literacy, community economic development, accountability, and philanthropy, Alterna added environmental sustainability in 2006.

Alterna has developed a number of initiatives that address its own greenhouse gas emissions and support members and businesses to reduce theirs. In 2007, the Board committed to offset the carbon emissions resulting from the business air travel of all employees and Board members. In addition, the credit union held a carbon neutral AGM, purchasing trees to offset the CO_2 emissions from staff, board and member travel to the event.

Alterna provides low cost financing for energy retrofits to members' homes and businesses, and discounted loans for the purchase of hybrid vehicles. Additionally, the credit union has invested in WindShare, a pioneering 'for-profit' wind co-op that develops locally owned wind power projects. The co-op's first project is a highly visible wind turbine on the Gardner Expressway in Toronto. Alterna promotes members' green literacy through various media. For instance, 2006's AGM featured climate-friendly giveaways and a keynote speaker from Al Gore's team, and the credit union offers educational forums on energy conservation and green fact sheets with energy saving tips in branches. Presently, Alterna is developing lending expertise for larger commercial businesses in order to finance green energy opportunities such as geothermal technology.