

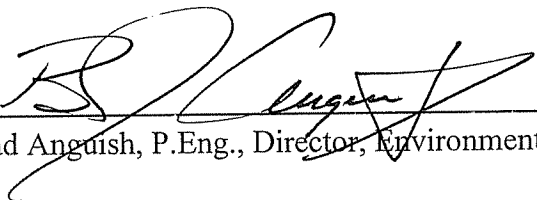


PO Box 1749  
Halifax, Nova Scotia  
B3J 3A5 Canada

**Halifax Regional Council**  
**March 30, 2004**

**TO:** Mayor Kelly and Members of Halifax Regional Council

**SUBMITTED BY:**

  
Brad Anguish, P.Eng., Director, Environmental Management Services

**DATE:** March 18, 2004

**SUBJECT:** Climate Change and Greenhouse Gas Reduction Strategies

## **INFORMATION REPORT**

### **ORIGIN**

January 21, 2003 Information Report, "Greenhouse Gas (GHG) Emissions and the Kyoto Accord"

### **BACKGROUND**

In a January 21, 2003 Information Report to Regional Council, entitled, "Greenhouse Gas (GHG) Emissions and the Kyoto Accord" staff provided requested updates on Kyoto Accord implications/opportunities for HRM.

The January, 21, 2003 report advised that the CAO had recently (January 1, 2003) brought a number of HRM work groups, dealing with issues of environmental sustainability, together in the new Environmental Management Services business unit.

The report stated that it was timely to develop a GHG Reduction Plan for HRM and to build this into the 2003-04 Business Plan for Environmental Management Services business unit. This was done.

The report also suggested that Council be provided with further updates on the GHG Reduction Strategies and Plans as they emerge. Staff are pleased to provide an update on several climate change and greenhouse gas reduction initiatives that are now underway.

## DISCUSSION

Climate change and greenhouse gas emissions are significant environmental issues. The attached brochure, "Climate Smart" provides a succinct overview of the causes, impacts and remedies required.

In 1998, HRM officially joined the Federation of Canadian Municipalities (FCM) 20% Club, committing to reduce its GHG emissions. The program is now called Partners for Climate Protection and includes completing the following five Milestones:

1. GHG Inventories
2. GHG Targets
3. Local Action Plan
4. Implementation Plan
5. Monitoring

Corporate GHG emission inventories were completed in 1998. However, these need to be updated along with the completion of the balance of Milestones.

Over the past several months EMS staff have been actively networking and facilitating numerous meetings and discussions with others levels of government, local community, private sector and others. This has resulted in the creation of some specific partnerships, external funding and projects that will enable HRM to move forward its Climate Change and Greenhouse Gas Emission Strategies, and at very minimal financial impact to HRM taxpayers.

### **Climate Change and Greenhouse Gas Emission Partnerships, Initiatives and Strategies**

#### **A. Climate Smart (Sustainable Mitigation, Adaptation, Risk Toolkit)**

This is a leading edge collaborative partnership involving the public and private sectors. The attached brochure, "Climate Change - Climate Smart" briefly describes the project, the partners involved and deliverables. The official launch of this initiative is scheduled for March 30, 2004, at Halifax Hall.

Key deliverables include:

- Climate Change Strategy for HRM
- Greenhouse Gas Emission Reduction Management Plan (tied into Milestones 3-5)
- Community Based Vulnerability and Risk Management
- Climate Change Adaptation Planning and Management Options Guide
- Cost/ Benefit Adaptation Assessment
- Communications and Outreach

A \$35,000 in-kind contribution from HRM will leverage more than \$500,000 in total funding.

- \$200,000 - FCM GMEF

- \$150,000 - Natural Resources Canada
- \$50,000 - Nova Scotia Energy Department
- \$25,000 - Nova Scotia Dept. of Environment & Labour
- \$50,000 - Environment Canada
- plus private sector contributions

**B. Partners for Climate Protection (PCP) - Greenhouse Gas Reduction Strategy for HRM**  
Regional Council had committed to meeting the federal Partners for Climate Protection (PCP) objectives by 2007. This project will help enable this.

Key deliverables include:

- Refreshing the original GHG Inventories (Milestone 1)
- Setting GHG Reduction Targets (Milestone 2)
- Strategies for Local Action Plan, Implementation Plan and Continuous Monitoring (Components of Milestones 3-5)
- GHG Reduction Modelling for HRM overall (Components of Milestones 1-5)

This project is cost-shared 50-50 through the Federation of Canadian Municipalities (FCM) Green Municipal Enabling Fund (GMEF).

- \$65,000 - FCM
- \$65,000 - HRM

**C. Whole Systems Methodology - Corporate Wide Sustainability Analysis (The Natural Step)**

One of the four cornerstone corporate scorecard themes is, "Healthy Sustainable Vibrant Community". This includes environmental sustainability. Therefore, an environmental strategic management tool is needed to help determine sustainability, set standards and determine performance measures.

Environmental Management Services (EMS) has engaged The Natural Step, a whole systems leading edge methodology that is used in Europe and by several multinational companies such as Nike and McDonalds. Whistler, B.C. (site of the next world Winter Olympics) and HRM are the first two North American Communities to engage The Natural Step (TNS) as an environmental strategic management tool.

Key deliverables include:

- Corporate wide Sustainability Analysis
- Staff training and workshops
- Determine gaps, opportunities, risks, costs, etc. toward sustainability

This project is cost-shared 50-50 with the FCM GMEF.

- \$10,000 - FCM
- \$10,000 - HRM

**D. District Energy Concept**

A natural gas fired, centrally located, thermal electrical generation station that burns cleaner natural gas and reuses the waste steam to heat buildings has major economic and environmental potential for HRM.

From an environmental perspective there is an opportunity to reduce greenhouse gas emissions by several hundred thousand metric tonnes per year and substantially reduce air borne particulates.

To put this into perspective, as a corporation, HRM releases approximately 110,000 metric tonnes of greenhouse gases annually, mostly through the burning of fossil fuels to heat the buildings and operate the fleets.

However, a District Energy Concept may be moot if natural gas cannot be delivered to optimum plant locations in Halifax; therefore, the key deliverable includes a feasibility study for crossing the harbour with natural gas.

This project is cost-shared with the FCM GMEF.

- \$20,000 - FCM
- \$20,000 - HRM\*

\* HRM's share is covered by Heritage Gas who has undertaken the feasibility study, so in essence there is no net cost to HRM, other than staff time to support the process.

**E. Ongoing Related Activities-Action Items**

Items A to D are part of a more formal overall environmental strategic planning process.

However, while these more formal planning processes are taking place, and where capacity and resources permit, predictable recommendations and outputs are already being started in various business units. This includes Public Works and Transportation, Real Property and Asset Management and Governance & Strategic Initiatives.

Initiatives to date include:

- Regional Plan;
- applied science bio-fuel trials in buses, vehicles and buildings;
- commuter trip reduction programs;
- alternate transportation accesses; and
- "reduced idling" programs.

Additionally, as part of the 2004/05 Business Plan, RPAM will be initiating an overall strategy to reduce energy usages in HRM owned buildings. Recently an Energy Auditor has been hired and will work with EMS to bring about greenhouse gas emission reductions in the portfolio of HRM owned buildings.

**F. Future Green Initiatives**

Staff will be providing updates to Regional Council on other leading edge green initiatives over the next coming months as additional partnerships and external funding opportunities fall into place.

A future, "State of the Environment Report" for HRM and its citizens is a targeted goal of Environmental Management Services. This includes air, land, water and community components.

**BUDGET IMPLICATIONS**

HRM's portion of funding (\$75,000) has been recommended by the Corporate Scorecard Theme Teams and is provided for in the 2004/05 budget, subject to Regional Council approval.

**FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN**

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Capital and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves, as well as any relevant legislation.

**ALTERNATIVES**

N/A

**ATTACHMENTS**

Climate Change - Climate Smart

<p>Additional copies of this report, and information on its status, can be obtained by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.</p> <p>Report Prepared by:                      Stephen King, Manager-Sr. Advisor, SSRM, Environmental Management Services, 490-6188</p>
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# Climate SMART

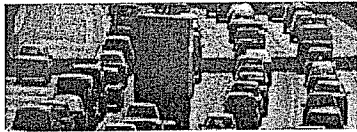
“An Integrated Strategy for Climate Change Preparedness and Planning”

**Climate Change - Global Warming** is when we experience a significant variation in the climate or in its variability, persisting for an extended period (typically decades or longer).

## What causes it?

Contributing to global warming (climate change) are increased levels of greenhouse gas, an invisible gas that traps heat from the sun. The increasing levels of such gases upset a natural balance in the atmosphere, which scientists say will make the Earth's climate warmer.

The highest contributor to greenhouse gas is carbon dioxide (CO<sub>2</sub>), a by-product released when fossil fuels such as oil, gas and coal are burned.

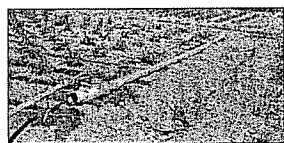


## Are there Negative Impacts?

In Nova Scotia, experts expect more severe weather events such as droughts, floods, heat waves, flooding and erosion in coastal areas, more forest fires and northward movement of pests and diseases. Public and private infrastructure is also vulnerable to extreme weather events.



All of this will result in additional stress on wildlife and all ecosystems along with increased risk to public health and safety.



## Big Fixes

The surest method to reduce greenhouse gas emissions is to reduce the use of fossil fuels through energy efficiency, alternate fuels, and to protect carbon sinks such as forests and farmland, which absorb carbon from the atmosphere. One of the planned big fixes is through the Kyoto Accord.



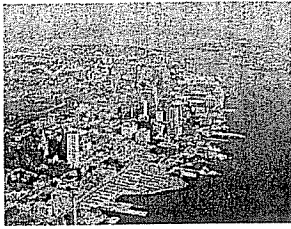
## Kyoto Accord

The Kyoto Accord is an international agreement negotiated by more than 160 countries in 1997 in Kyoto, Japan. It is designed to cut greenhouse gas emissions (caused mainly by burning fossil fuels) to 5.2 per cent below 1990 levels by 2012.

In December 2002, the House of Commons passed a motion that Canada will ratify Kyoto and Environment Minister Anderson deposited the ratification with the UN.

**So what is Climate SMART, who is involved and how can it help?**

**What? Climate SMART** (Sustainable Mitigation and Adaptation Risk Toolkit) is a leading edge collaborative partnership involving both the public and private sectors. Its goal is to help municipalities integrate “greenhouse gas” emission reduction and climate change impact/adaptation issues into the decision making process for policy makers, practitioners and vulnerable communities. With HRM as the prototype municipality, lessons learned can be replicated in other Nova Scotia and Atlantic Canada communities, as well as in municipalities across Canada.



Plainly put, Climate SMART will help HRM to develop management and planning tools to prepare for climate change impacts, and to

develop strategies to mitigate practices that contribute to it in the first place - primarily the reduction of greenhouse gas emissions.

## Who? A partnered approach with Climate SMART

### Federal

Environment Canada  
Natural Resources Canada  
Atlantic Canada Opportunities Agency

### Provincial

Nova Scotia Department of Energy  
Nova Scotia Department of the Environment and Labour

### Municipal

Federation of Canadian Municipalities  
Halifax Regional Municipality

### Private Sector

Select member companies of the ClimAdapt Network and the Nova Scotia Environmental Industries Association

How? Climate SMART tools include:

*Greenhouse Gas Emissions Reduction Management Plans* - for HRM and the greater community.

*Community Based Vulnerability and Risk Management* - for infrastructure, built environment and natural assets from global climate change impacts.



*Climate Change Adaptation Planning and Management Options Guide* - planning and management mechanisms, adaptation strategies, and environmental emergency preparedness and planning.

*Cost/ Benefit Adaptation Assessment* - to help determine potential social, economic and environmental impacts and costs.

*Communication and Out-reach* - to inform the public and enhance community stewardship.

## Need More Information?

For more information about the Climate SMART Project or on climate change in general, please contact us or visit us on-line at [www.climadapt.com](http://www.climadapt.com).

