



P.O. Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

Environment and Sustainability Standing Committee
April 7, 2011

TO: Chair and Members of Environment and Sustainability Committee

SUBMITTED BY:

A handwritten signature in cursive script, appearing to read "P. Townsend".

Phillip Townsend, Director, Infrastructure and Asset Management

DATE: March 21, 2011

SUBJECT: 2020 Greenhouse Gas Corporate Reduction Target

ORIGIN

This report originates from the

- Environment and Sustainability Standing Committee – March 3, 2011, Corporate Greenhouse Gas Emissions Reduction Plan

RECOMMENDATION

It is recommended that the Environment and Sustainability Standing Committee direct staff to:

1. Develop a new Corporate Local Action Plan to Reduce Greenhouse Gas Emissions by 25 to 30% below 2008 levels by 2020; and
2. Return to this committee with the draft plan for review of the proposed target and recommended actions for further direction, input and ultimate endorsement prior to a recommendation going to Regional Council.

BACKGROUND

While corporate operations are responsible for only about 2% of the region's greenhouse gas (GHG) emissions, understanding and reducing our corporate emissions sets the stage for influencing community emissions on a larger scale. Halifax Regional Municipality (HRM) currently aims to reach 20% below 2002 corporate GHG levels by 2012 in the corporate sphere. Sustainable Environment Management Office (SEMO) staff recently assessed HRM's progress toward this target and concluded that:

- 1) Two years before the deadline, HRM has achieved about 68% of the savings recommended in the 2005 Corporate Local Action Plan to Reduce GHG emissions (LAP). If staff continues to build on lessons learned so far, HRM has a good chance at achieving the savings the LAP called for by 2012.
- 2) However, by just reaching its "savings target", HRM will not be achieving its GHG reduction target of 20% below 2002 levels by 2012. With significantly underestimated 2002 data, it is difficult to say precisely how much eCO₂ HRM needs to save to reach its target, but it is more than what the LAP called for. Ultimately, inaccurate base data (2002 data) led to the development of a target that was not achievable and a plan that did not take us to our target. HRM should adjust its target base year from 2002 to 2008, because the 2008 data more accurately reflects real corporate emissions.

HRM must continuously re-evaluate and update its GHG reduction goals. HRM should consider 2020 for its next target deadline in order to align itself with Nova Scotia's provincial GHG reduction targets.

DISCUSSION

Rationale for Target Range:

The recommended target range is 25 to 30% below 2008 levels by 2020. With a rough 9-year goal in mind, SEMO staff will be better equipped to engage appropriate HRM units and develop an action plan that will take our municipality to its target. This range will evolve into a more concrete target after the development of the action plan. The target that staff may recommend following the planning exercise, may be higher or lower than the anticipated 25 to 30% target indicated.

This particular range is based on estimated achievable GHG savings from buildings, vehicle fleet and lighting improvements. The recommended target also accounts for a significant improvement in provincial electricity emissions from increased renewable electricity sources. Predicted corporate GHG reductions will come from:

- 1) *Buildings*: In 2008, HRM buildings were responsible for 59,620 tonnes eCO₂ (67% of total). Based on natural gas conversions, various energy efficiency projects, and the expected increase to 25% renewable electricity in Nova Scotia, HRM can realistically

reduce its building GHGs to about 45,000 tonnes by 2020. Staff predicts an estimated 15% electricity reduction and 10% heating fuel reduction in HRM facilities. A retro-commissioning process in HRM facilities with the goal of identifying energy saving opportunities, will assist staff in reaching its target.

- 2) *Vehicle Fleet*: In 2008, HRM's vehicle fleet produced 7693 tonnes eCO₂ (9% of total). With continued improvements in how HRM purchases new vehicles and uses its current fleet, HRM can reach a 10% reduction in GHG emissions from its vehicles. Therefore, vehicle emissions can be reduced to about 6900 tonnes eCO₂.
- 3) *Lighting*: In 2008, street lights, traffic lights and sports field lights were responsible for 21,407 tonnes eCO₂ (24% of total). Since then, street light and traffic light conversions to LED technology have further reduced lighting emissions to about 19,000 tonnes. If HRM achieves its goal of replacing all of its street lights with LED lamps, HRM can bring lighting emissions to about 14,500 tonnes eCO₂ by 2020. With the predicted increases in renewable electricity in the province, these emissions may decrease even further to about 12,200 tonnes eCO₂.

Given the above predictions in buildings, vehicle fleet and lighting, HRM can potentially reduce its GHG emissions to about 64,100 tonnes eCO₂ by 2020, or 28% below 2008 levels.

Almost three quarters of HRM's corporate emissions come from electricity, implying that if Nova Scotia achieves its regulated target of 25% renewable electricity by 2015, HRM's emissions will decrease significantly even without implementing energy projects. This renewable electricity target has been included in the proposed corporate reduction target range. HRM may see even further GHG decreases if the province reaches its new goal of achieving 40% renewable electricity by 2020 (set in Nova Scotia's Renewable Electricity Plan, April, 2010). However, because this new goal has not yet been incorporated into electricity regulations and is not within HRM's control, it has not been included in the proposed target range.

The proposed corporate target range does not include emissions from Metro Transit because transit service expansions (which usually result in emissions increases) help reduce transportation emissions from the community. Increases in transit emissions are therefore acceptable and should not be included in corporate reductions targets.

GHG Savings Mean Financial Savings:

GHG savings derive from reduced fuel consumption is associated with less financial spending on the purchase of fuel. Consequently, the proposed GHG savings will come with long term financial savings, especially in a context of increasing fuel costs.

New HRM Target in the Context of Other Targets:

Other cities across the country and around the world are actively working toward their own GHG reduction targets. Some examples include:

Hamilton, ON:	20% below 2004 levels by 2020
Vancouver, BC:	33% below 2007 levels by 2020
Calgary, AB:	20% below 2005 levels by 2020 (corporate)
New York City, NY:	30% below 2007 levels by 2017 (corporate)

By aiming for a 25 to 30% reduction in corporate emissions by 2020, HRM is on par with many of these cities and it will help our province achieve its target of reducing emissions to 10% below 1990 levels by 2020 (according to published provincial GHG levels, NS must continue to reduce its emissions to 17.8% below 2008 levels by 2020).

New Corporate Local Action Plan to Reduce Greenhouse Gas Emissions Development:

Next, SEMO will consult with staff directly involved in buildings, vehicle fleet and lighting to develop a GHG reduction action plan and solidify the corporate target.

Plan development timeline:

<i>March 28-April 22:</i>	Conduct three sessions (a. buildings; b. vehicle fleet; c. lighting) to engage staff in discussions about how to reduce corporate emissions 25 - 30% below 2008 levels by 2020;
<i>April 25-May 13:</i>	Prepare draft plan;
<i>May 16-May 27:</i>	Review the draft plan with staff;
<i>May 30-June 17:</i>	Finalize the plan; and
<i>July 7:</i>	Environment and Sustainability Committee to review plan.

Lessons learned in the corporate process will be carried over to the community when SEMO staff begins developing a Community Local Action Plan to Reduce GHGs.

BUDGET IMPLICATIONS

This work is intended to be met within existing Sustainable Environment Management Office (SEMO) operating budget envelopes and delivered by internal staff. This work will not be contracted out.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

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

COMMUNITY ENGAGEMENT

Community engagement is not required to set a corporate GHG reduction target or to develop a Corporate Local Action Plan to Reduce GHGs.

ALTERNATIVES

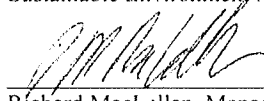
The committee may choose to not accept staff's recommended target range. This is not recommended because a target provides direction that will be important when developing the greenhouse gas reduction plan.

ATTACHMENTS

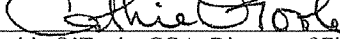
None

A copy of this report can be obtained online at <http://www.halifax.ca/commcoun/cc.html> then choose the appropriate Community Council and meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by: Lauralee Sim, Environmental Performance Officer,
Sustainable Environment Management Office, 490-3665



Report Approved by: Richard MacLellan, Manager, Sustainable Environment Management Office, 490-6056

Financial Approval by: 
Cathie O'Toole, CGA, Director of Finance, 490-6308