

Environment and Sustainability Standing Committee
March 1, 2012

TO: Chair and Members of Environment and Sustainability Standing Committee



SUBMITTED BY:

Philip Townsend, Director, Planning & Infrastructure

DATE: January 16, 2012

SUBJECT: Status of Community Energy Plan

INFORMATION REPORT

ORIGIN

July 7, 2011, Environment and Sustainability Standing Committee, Motion 8.3: Status of Community Energy Plan

BACKGROUND

In 2007, Regional Council approved the Community Energy Plan (CEP) (<http://www.halifax.ca/environment/energyplan/>) as a Functional Plan of the Municipal Regional Planning Strategy.

The CEP was created in order to identify clean, efficient and renewable supplies of energy and to reduce consumption. The CEP vision is: *'In partnership with other agencies, HRM intends to achieve the most significant improvement to energy sustainability, security, renewable technology, and environmental emissions among similar sized cities in Canada over the next 10 years.'*

The CEP consists of eight main goals:

- Improve the energy efficiency of buildings;
- Increase transportation choice and efficiency;
- Increase industrial energy efficiency;
- Encourage energy efficient land use planning and neighbourhood site planning;
- Increase efficiency of infrastructure;
- Increase energy security and diversify energy supply;
- Educate and engage residents and businesses; and
- Demonstrate local government leadership.

The development of the CEP involved the following key tasks:

- Review of Existing Resources;
- Consultation Program;
- Future Demand and Supply Assessments;
- Implementation Plan;
- Education and Awareness Program; and
- Monitoring Program.

DISCUSSION

As the CEP is now five years old, an update is required in order to understand the progress Halifax Regional Municipality (HRM) has made on the plan's prescribed actions. The current plan, approved in 2007, is out of date due to changes in regulations, legislation, new technologies and changing market opportunities.

This update will detail HRM's successful implementation of corporate and community CEP actions, and will determine which actions require attention in order to progress. Some actions may no longer be feasible or required, based on changes over the last five years, while other new actions may need to be added.

The CEP Progress Report will follow a similar format to Progress Report:
Greenhouse Gas Emission Reductions 2005-2011
(http://www.halifax.ca/environment/documents/3-Progress_Report_final_15Feb2011.pdf).

The report will include background on the CEP, diagrams and highlights, and a status update of the checklist of prescribed actions from the original CEP.

The CEP Progress Report will provide ESSC with information that can be used in decision-making with respect to energy projects, community engagement and the CEP moving forward. It is anticipated that the Progress Report will return to ESSC in the spring of 2012.

BUDGET IMPLICATIONS

There are no budget implications for this report.

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

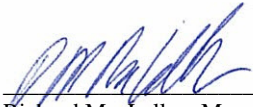
Community engagement is not required for the CEP Progress Report.

ATTACHMENTS

Attachment: Prescribed Actions of the Community Energy Plan, pages 16-20 of the final CEP report.

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: Shannon Miedema, Environmental Performance Officer, 490-3665

Report Approved by: 
Richard MacLellan, Manager, Energy & Environment, 490-6056

Goal 1: Improve the Energy Efficiency of Buildings

Legislative Priorities:

- .1 Modifications to the Provincial Building Code, including EnerGuide building energy efficiency requirements for new construction.
- .2 Remove provincial financial ceiling for allowable spending by municipalities, regardless of size.
- .3 Introduction of a provincial rebate on a portion of the HST, based on energy efficiency in buildings.

Corporate Actions

Action 1: Retrofit existing HRM buildings for energy efficiency improvements and the use of renewable energy technologies such as solar water heating. Focus on large energy users: arenas, community centres, libraries, etc.: <ul style="list-style-type: none"> Utilize demand side management (DSM) programs as a resource tool to reducing energy consumption Create a capital reserve fund for energy efficiency projects, replenished by part of savings from retrofit projects. 		Lean and Green
Action 2: Require higher standards of energy efficiency and environmental design in new HRM buildings: <ul style="list-style-type: none"> Make LEED Silver the standard for new HRM buildings by 2010, and LEED Gold by 2020. Encourage innovative and visible technologies such as green roofs and solar demonstration projects on new HRM buildings. 		Lean and/or Green

Community Actions

Action 1: Support existing programs to increase energy efficiency and consumption reduction in the residential sector: <ul style="list-style-type: none"> EnerGuide for Houses. R-2000 Home by NS Home Builders Association. 		Lean
Action 2: Adjust the building permit fee structure to provide incentives for new high efficiency homes based on achieving an EnerGuide 77 and/or R-2000 standard.		Lean
Action 3: Promote incentives currently available to support energy efficiency in buildings, in particular: <ul style="list-style-type: none"> DOE's 10% rebate on solar water heating systems. CMHC's 10% premium refund on its mortgage loan insurance premiums. Federal Eco Energy Retrofit Program and the associated provincial program. Utilize existing Conserve Nova Scotia energy efficiency programs. 		Lean or Green
Action 4: Use municipal code by-law changes as lever to require EnerGuide ratings on all existing homes, at time of sale, with involvement from the realtors association and the Province.		Lean

Goal 2: Increase Transportation Choice and Efficiency

Legislative Priorities:

- .1 Provincial emissions legislation.
- .2 Changes to the standards for Provincial roadways, to include for example active transportation capacity.

Corporate Actions

Action 1: Right-size the municipal fleet, assign vehicle use appropriately and designate more vehicles for multi-use.		Lean
Action 2: Continue and support HRM's Commuter Trip Reduction program.		Lean
Action 3: Implement driver training for HRM's fleet drivers.		Lean
Action 4: Purchase and showcase alternative fuel vehicles, e.g. CNG, Propane, Electric or Hybrid.		Green and/or Clean

Community Actions (*In the PCP framework, Transportation falls under Community*)

Action 1: Expand public transit services, in particular: <ul style="list-style-type: none"> • Ferry service to Bedford. • Rapid bus transit to suburban areas. • Neighbourhood shuttle buses connecting to rapid transit network. 	Regional Plan	Lean
Action 2: Encourage implementation of the Active Transportation Plan.	Regional Plan	Lean
Action 3: Look into the possibility of restructuring HRM's taxi zoning for greater efficiency (e.g. fewer taxi's having to leave the airport without passengers).		Lean

Goal 3: Increase Industrial Energy Efficiency

Legislative Priorities:

- .1 Federal Industrial Emission Management Regulations and Enforcement.
- .2 Federal Emissions Caps for Large Final Emitters.
- .3 Provincial comprehensive airshed management approach.
- .4 Provincial independent, third party qualified energy efficiency utility.

Community Actions

Action 1: Encourage industrial process heat recovery in industries such as breweries, dairies and others.		Clean
Action 2: Encourage activities to focus improvement on efficiencies in HRM based industrial processes, and for businesses in partnership with organizations such as the Eco-efficiency Centre and CIPEC.		Lean
Action 3: Conduct an inventory of sources of industrial waste heat that can be used by others (e.g. cooling water from Tuft's Cove). <ul style="list-style-type: none"> • Encourage the development of new buildings that can be heated using low grade thermal energy. • Explore feasibility for district cooling opportunities 		Clean

Goal 4: Encourage Energy Efficient Land Use Planning and Neighbourhood Site Planning		
Community Actions		
Action 1: Include energy considerations in the Urban Design Guidelines as a mechanism for leading development within the Capital District toward more sustainable models.	Regional Plan	Green
Action 2: Influence the community visioning exercises and the resulting guidelines for community development to include energy considerations.		Lean, Green or Clean
Action 3: Provide an inventory and plan for opportunity sites within HRM including brownfields and under-utilized areas within Business Parks.		Lean
Action 4: Provide opportunities for local food production and small scale food retail through urban agriculture and preservation of agricultural land within rural areas of HRM.		Lean, Green or Clean
Goal 5: Increase Efficiency of Infrastructure		
Legislative Priorities: <ol style="list-style-type: none"> .1 Municipal eco-procurement policy. .2 Provincial street lighting standards. .3 Municipal street lighting standard. 		
Corporate Actions		
Action 1: Create a Street Lights Efficiency Strategy including standards, inventory, energy reduction action plan, and partnerships. Work toward bringing all streetlights in HRM under municipal control.		Lean
Action 2: Restore the commitment to LED Traffic Signals Program and set a program completion date.		Lean
Action 3: Ensure implementation of the greenhouse gas emission reduction plan for pumping stations including items such as energy consumption monitoring, regularly scheduled maintenance, end of life motor upgrades to high efficiency units, and variable frequency drives on pumps with high flow variability.		Lean
Action 4: Explore options to encourage additional water conservation among water consumers.		Lean
Goal 6: Increase Energy Security and Diversify Energy Supply		
Legislative Priorities: <ol style="list-style-type: none"> .1 An open access electricity market including renewables. .2 An enhanced robust integrated regional electrical grid and selling/purchasing opportunities from other Atlantic provinces. .3 Federal LFE emission caps. 		

Corporate Actions		
Action 1: Participate in expanding natural gas availability in HRM.		Green
Action 2: Pursue Green Power Purchasing opportunities for HRM.		Clean
Action 3: Assess the risk of setting up a municipally owned energy utility with authority over power generation and/or energy purchase.		Green
Action 4: Consider co-sponsoring renewable energy projects with other NS Municipalities that have better access to renewable resource (e.g. tidal projects in West Hants, Kings, and Colchester).		Green or Clean
Community Actions		
Action 1: Biomass or MSW residuals for cogeneration plants or district heating.		Green
Action 2: Anaerobic digester (AD) plant for processing of organic ICI and septage waste.		Clean
Action 3: Utility size wind turbines independently or in cluster approach – and continue with the Wind Energy Master Plan process.	Wind Energy Master Plan	Green
Action 4: Encourage installation of solar panels to heat process water in industrial processes such as breweries and dairies.		Green
Action 5: Assess feasibility for mini (run-of-the-river) hydroelectric plants on Musquodoboit River at Crawford Falls, Middle and Upper Musquodoboit, Sheet Harbour River at Malay Falls, Half Way Brook and Little West River.		Green
Action 6: Encourage natural gas conversion of industrial boiler plants including Capital District Health Authority, Dalhousie, SMU, DND, and Olands.		Clean
Action 7: Assess potential for Harbour water cooling for buildings near the harbour.		Clean
Action 8: Increase the allowable NSPI net-metering limit to 800kW.		Green or Clean
Goal 7: Educate and Engage the Community		
Community Actions		
Action 1: Create recognition of the CEP by: <ul style="list-style-type: none"> Well planned and timed launch campaign, website and opportunities for engagement throughout the process. Maintaining the CEP brand in future energy programs resulting from the CEP. Promoting the CEP and its concepts to NS at large. Continuing support and promotion of the Naturally Green campaign. 		Lean, Green, Clean
Action 2: Work with the development and construction sectors to identify target markets for new education programs.		Lean, Green, Clean

Action 3: Work with local industrial and institutional large consumers of energy to expand their commitment to reduce energy use, for example through: <ul style="list-style-type: none"> • An industrial energy conservation pledge • A coalition-building session organized by the Mayor and involving CEOs and top managers 		Lean, Green, Clean
Action 4: Work with local NGOs in promoting their educational programs, especially within schools.		Lean, Green, Clean
Action 5: Encourage implementation of public awareness programs using creative strategies such as: <ul style="list-style-type: none"> • Displaying the “carbon footprint” of moving treated water to the users on their civic water bills. • Neighbourhood canvassing program to promote EnerGuide. • A large ad campaign on carpooling. 		Lean, Green, Clean
Goal 8: Demonstrate Local Government Leadership		
Corporate Actions		
Action 1: Implement all other Corporate Actions under the previous 7 goals to clearly demonstrate HRM’s commitment to “walk the talk”.		Lean, Green, Clean
Action 2: Use HRM’s influence to lobby for all legislative priorities identified in the shortlist of actions, thus getting “our own house in order”.		Lean, Green, Clean
Action 3: Push for the municipal voice at the table in formulating Nova Scotia’s Energy Strategy, particularly the formation of an Energy Advisory Committee.		Lean, Green, Clean

The Task 4 report then analyzed each action to determine its expected outcomes, required inputs, budget and resource requirements. Actions that embodied work previously approved by council were also identified in order to separate out previously approved projects and identify the costs solely for new actions in this plan. A summary of that analysis is presented here. This analysis is in essence a ‘snap shot’ – a high level overview of the more complete and substantive analysis contained in the Implementation Plan Report (Task 4 Report). It is meant to present in capsule tabular form the pith of the outcomes drawn from that analysis: