

**Environment & Sustainability Standing Committee  
September 5, 2013**

**TO:** Chair and Members of Environment & Sustainability Standing Committee

Original Signed

**SUBMITTED BY:** \_\_\_\_\_  
Jane Fraser, Director, Planning & Infrastructure

**DATE:** July 2, 2013

**SUBJECT:** Municipal Facility Solar Ready Policy

**INFORMATION REPORT**

**ORIGIN**

This report originates from the Environment & Sustainability Standing Committee May 2, 2013, Motion.

**LEGISLATIVE AUTHORITY**

HRM Charter, 79, Power to expend money.

**BACKGROUND**

At the May 2, 2013, Environment and Sustainability Standing Committee, the following motion was approved: “that the Environment & Sustainability Standing Committee request a briefing note exploring how HRM, through the Community Energy Plan or otherwise, could make HRM corporate buildings “Solar Ready” for the future.”

**DISCUSSION**

*What is Solar Ready?* Solar Ready infers that during construction or renovation of a building, considerations are made to ensure that a future solar installation is technically and financially optimal. The Canadian Solar Industry Association (CanSIA) has produced a Technical Guideline summarized as follows:

Location	Requirements
Roof	<ul style="list-style-type: none"> <li>• Roof loading capacity</li> <li>• South facing/free of shade</li> <li>• Space</li> <li>• Slope</li> </ul>
Utility Room	<ul style="list-style-type: none"> <li>• Space</li> <li>• Strength to hold tank</li> </ul>
Pipe Run	<ul style="list-style-type: none"> <li>• As short a run as possible</li> <li>• Conduit pre-installed</li> </ul>

***Applicability of Solar Ready Policy***

Privately owned Residential/Commercial buildings: Halifax Regional Municipality enforces and administers the National Building Code in construction. Current Building Code does not require “Solar Ready”. Historically, Efficiency Nova Scotia offered a \$200 rebate per home to provide Solar Ready homes; however, subscription to the rebate was extremely low.

Municipal owned Buildings: The prevailing municipal building practice for new construction requires attainment of LEED Silver certification. LEED certification provides points in categories such as sustainable site selection, water efficiency, energy efficiency, indoor air quality, materials and resources, and innovation and design.

**Status Quo:** Currently, Facility Development develops a program of requirement that incorporates a sustainable approach to design, with input from stakeholders such as end users, operational/maintenance stewards, financial staff, urban design staff, and Energy & Environment staff. A basic tenant of sustainability is to “create flexible platforms for future opportunities”. This platform includes consideration for future solar retrofit or installations and has been taken into design consideration in the new Central Library. Other types of considerations include: enabling for future alternative energy supplies (district heat system), active transportation linkages, future usage possibilities, and operational opportunities. Facility Development considers a range of sustainability options, including Solar Readiness.

**Canada Games Centre:** With 200 Solar Thermal Hot Water panels and 36 Solar Duct modules (pre-heating ventilation air), the Canada Games Centre is Halifax Regional Municipality’s largest solar installation completed to date. Staff and industry continue to learn from this installation, and are expanding the domestic hot water system to provide heat to the pool in 2013/14 as a result of the current system being able to provide more hot water capacity than the system originally calculated. This upgrade will result in \$15,000 of energy cost savings annually and a less than five year payback.

***Other HRM Facilities with Solar Technologies***

- Lakeside Volunteer Fire Station (#58)
- Middle Musquodoboit Volunteer Fire Station (#38)
- Central Fire Department (#3)
- Meaghers Grant Fire Station (#36)
- Findlay Community Centre
- Sackville Fire Station (#10)
- Cole Harbour Fire Station (#17)
- Eastern Passage Fire Station (#16)
- Black Point Volunteer Fire Station (#56)
- Knightsbridge Fire Station
- Upper Hammonds Plains Community Centre
- Harrietsfield/Williamswood Community Centre
- Moser River Community Centre
- Ste. Therese Community Centre
- Centennial Pool/David Mackinnon Police Headquarters

As demonstrated by the preceding list, generally, HRM facilities are able to retrofit to solar quite well if they have access to the sun. Likely, pre-planning for conduit runs from the roof top would make retrofit installations in the future more cost effective. Structurally, staff has not run into problems with loading roofs on HRM buildings with solar equipment. However, during some feasibility assessments, space on the roof is a challenge.

An absence of policy with respect to solar readiness has not diminished the municipal efforts to incorporate solar solutions.

**Options to make HRM Buildings “Solar Ready” for future:**

Option	Consideration
Continue working practice	Responsive; Adaptable
Incorporate a policy toolkit in the Community Energy Plan revision regarding Building (Recapitalization and New) Projects	Comprehensive; Need to assess efficacy and if policy can keep pace with emerging building practices and options
Develop a standalone policy on Solar Ready	Will specifically address this issue but not address other building sustainability policy opportunities, creating a directional gap
Incorporate in the future Corporate GHG Emissions Reduction Plan Revision	Not revised until 2017

Staff recommends that a specific policy with respect to Solar Readiness is not practical. Staff is able to implement community and Regional Council direction on new facility development (and recapitalization) projects in a professional manner using best available technologies, innovations, and practices. The status quo working practice enables opportunistic collaborations with key

stakeholders including Efficiency NS, industry, facility users, facility operators, the public, and other levels of government. From a practical perspective, Halifax Regional Municipality continues to demonstrate leadership in Green Building practices evidenced by:

- Waste management practices
- Demonstration Stormwater Management Projects
- LEED certified buildings
- Natural Gas Conversions
- Lighting retrofits
- Demonstration new technologies
- Large number of buildings with Solar installations
- Green procurement/outfitting and furnishings
- Energy Efficiency Projects
- Energy Benchmarking
- Waste heat recovery projects

A standalone policy could detract from the many other progressive practices, and future emerging practices, and the ability to respond to opportunities.

### **FINANCIAL IMPLICATIONS**

There are no implications to the 2013/14 Operating or Project Budget.

### **COMMUNITY ENGAGEMENT**

None completed in preparation of this report. However, new HRM building projects undergo a public consultation as required for the facility to align with community objectives.

### **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:

**Original Signed**

Richard MacLellan, Manager, Energy & Environment, 490-6056

**Original Signed**

Terry Gallagher, Manager, Facility Development, 476-4067

---