ENERGY MANAGEMENT

There are several tools and programs to help calculate energy costs. The US EPA's Roofing Comparison Calculator tool gives an estimate of how much energy and money a building owner can save by installing an ENERGY STAR® labeled roof product. Other similar energy calculating tools include the NRCA's Energy Wise Roof Calculator and SpecRight program, as well as the USDOE /ORNL's Cool Roof Calculator.

American Solar Roof Inc., in partnership with several energy management consulting firms, strive to work towards implementing measures that reduce a building's overall energy demand **before** the installation of a solar (PV) system. Some of these firms are as follows:

NEEM

New England Energy Management

STEM

Savings Through Energy Management (STEM)[6] is a program offered to various facility managers, schools, and other building users, which enables them to become leaders in an effort to conserve energy. Through STEM, individuals will learn to perform energy audits, to interact effectively with custodians, administrators, and others who manage facilities. The findings of the program will be presented in such a way that action is taken upon recommendations to monitor energy consumption subsequent to the action taken to identify real energy savings. For roofing systems, STEM provides many calculations related to the energy management of installing highly insulated roofs which

[6] STEM: Savings Through Energy Management educational program (www.wilsoned.com)

minimize a building's heat loss and cooling load through the restraint of air leakage through a roof assembly.

LEAK DETECTION/ROOF MONITORING SYSTEM

To provide roof asset management to building owners, 2001 Company offer comprehensive roof asset management (see Appendix 4) maintenance programs (see Appendix 5) and. This program involves routine inspections of the condition of the facility's roof, scheduling repairs, and also in some cases the instrumentation of the roof for real time performance monitoring and leak detection. The leak detection instrumentation has been developed through a partnership with the RCABC[7] and Levelton Consultants Ltd. of Vancouver, B.C. These instruments provide a leak detection and roof monitoring system through the use of wireless remote sensors as shown in Figures 20a and 20b, which measure moisture content, temperature and relative humidity values in real time which are available for viewing on a third party administered website

[7] RCABC: Roofing Contractor Association of British Columbia

Figure 20a) 2001 Company remote wireless leak detection and roof monitoring sensor – Standard Model

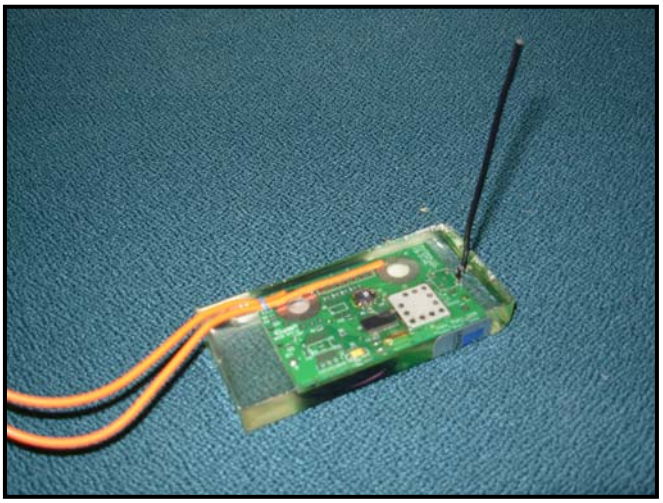

Figure 20b) 2001 Company remote wireless leak detection and roof monitoring sensor - thin profile waterproof model

Sustainable 2001 Co. Wind Vented Roof Assemblies

2001 Company promotes the use of "Green" roofing in the broadest sense. For over 30 years, 2001 Company has been providing sustainable wind vented, environmentally friendly roofs throughout North America and the Carribean.

How are wind vented roofs sustainable?

- Roofs are available with Energy Star™ rated "Cool" reflective membranes
- In re-roofing, wind vented roofs dry out existing wet roofs through horizontal continuous air exchange through the wet roof.
- By drying out a wet roof, the costly tear off is avoided, reducing landfill waste.
- Continuous drying of a wet roof mitigates the spread and growth of mold and increases a roof's thermal performance.
- 2001 Company offers highly insulated (R30+) proven energy efficient design and installation techniques.
- 2001 wind vented roofs are an ideal substrate for protecting a solar electrical system.
- Long term performance history.
- Hurricane resistant.
- UV resistant
- Asbestos encapsulation
- Minimal use of adhesives and VOCs
- Minimal fastening and disturbance to existing roof substrate.

- Re-roofing with minimal disturbance to building occupants
- Roofs available for U.S Green Building Council LEED™ credits.