



Certified Rental Building Program Environmental Management Standards of Practice

Committed to
Environmentally-Responsible
Building Operations



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Environmental Management Standards of Practice

SUMMARY OF STANDARDS

The Certified Rental Building Program (CRBP) is a quality assurance program that provides residents, prospective residents and the public with verifiable measures that “Certified” buildings are well-run and well-managed. The CRBP is introducing a set of “Environmental Management” standards to complement existing standards that address Building Operations, Resident Management, Financial and Risk Management, and Human Resource Management.

The CRB “Environmental Management Standards” are designed as tangible benchmarks that reflect the commitment of members within the Certified Rental Building Program to pursuing environmentally responsible building operations. This commitment to responsible environmental practices extends to buildings that are a part of a Member’s current portfolio, as well as to new buildings being purchased and/or brought into a management portfolio.

The introduction of the new Environmental Standards of Practice are designed to respect prudent business decisions and the need for capital and other resources required to enhance building and service quality. They are intended to support efforts for ensuring well-run and well managed buildings. It is recognized that there are often unique and competing initial capital demands and pressures associated with bringing new buildings up to product quality and service quality standards reflective of Members commitment to quality-assurance. As such, Members will have a period of up to two years from the date of purchase of a new building or the bringing of new buildings into their portfolio to ensure all Environmental Management Standards of Practice are met at these buildings.

Ultimately, with the addition of the Environmental Management Standards, residents and prospective residents will be assured that when they choose to live in a Certified Rental Building they are also selecting a Property Manager and staff that not only care about the quality of their building and the quality of service provided to residents, but also the impact that daily operations have upon the environment.

1. Members shall have a documented Environmental Management Policy that outlines its commitments to pursuing environmentally responsible and sustainable operating practices and for engaging employees and residents.

2. Members shall have a documented “Environmentally Preferable Purchasing” policy that outlines its commitments to the purchase and use of products and services that minimize negative environmental and human health impacts.

3. Members shall monitor and record environmental performance to ensure substantive irregularities or anomalies in energy/water usage and waste generation and disposal can be identified and actions initiated to remediate and/or mitigate excessive usage, as required.

4. Members shall endeavour to reduce electrical consumption and shall encourage conservation. At minimum, Members shall install energy efficient electrical fixtures and lamps/light bulbs for use in common areas and for in suite applications, and install ENERGY STAR® qualified in-suite appliances and laundry machines when replacements are required. Where appliances are not ENERGY STAR® qualified, EnerGuide data shall be used to ensure energy efficient appliances are selected

5. Members shall endeavour to reduce natural gas consumption and shall encourage conservation. At minimum, Members shall ensure timely preventative and on-going maintenance of all boiler and/or heating systems to ensure maximum efficiency.

6. Members shall endeavour to reduce water consumption and shall encourage water conservation. At minimum, Members shall install water efficient plumbing fixtures for use in common areas and in-suite applications as replacements are required, as well as conduct regular inspections and maintenance to minimize leakage.

7. Members shall promote waste reduction, reuse and recycling at all buildings. At minimum, Member shall have documented policies and practices for the disposal of hazardous or toxic waste, the streaming of waste to promote recycling and the diversion of bulk materials and electronic waste from land fill sites.

8. Members shall ensure that the air quality in suites and in common areas meet applicable standards. At minimum, Members shall use Low or No VOC materials in suites and in common areas applications, where available and applicable, as well as conduct regular inspections and maintenance of air handling equipment.

9. Members shall foster a culture that promotes commitment of front-line staff to delivering services and operating buildings in an environmentally responsible manner. At minimum, Members shall establish a joint "Environmental Operations Committee", identify an environmental champion for their organization, identify per CRBP building, a person who will promote, lead and coordinate building specific environmental initiatives and have a documented training and knowledge enhancement program for employees.

10. Members shall actively engage residents in efforts to reduce consumption and to encourage their use of environmentally responsible practices. At minimum, Members shall have a documented and active resident education and awareness program.

Standard 5 - Appendix A
Natural Gas Consumption

A Best Practice for Reducing Energy Consumption- Heat Reflector Technology

Buildings built before 1985 that have hot water or steam boiler heating systems which use radiators or baseboard convectors, can lose a significant amount of radiant heat through poorly insulated exterior walls. Heat reflector technology is a best practice that can be used to reduce heat loss, associated fuel consumption and greenhouse gas emissions and costs, while improving resident comfort.

This energy conservation measure also has a positive impact for Standard 8 – Air Quality – as dust, dirt and debris are cleaned from convectors during the process of installing heat reflectors.

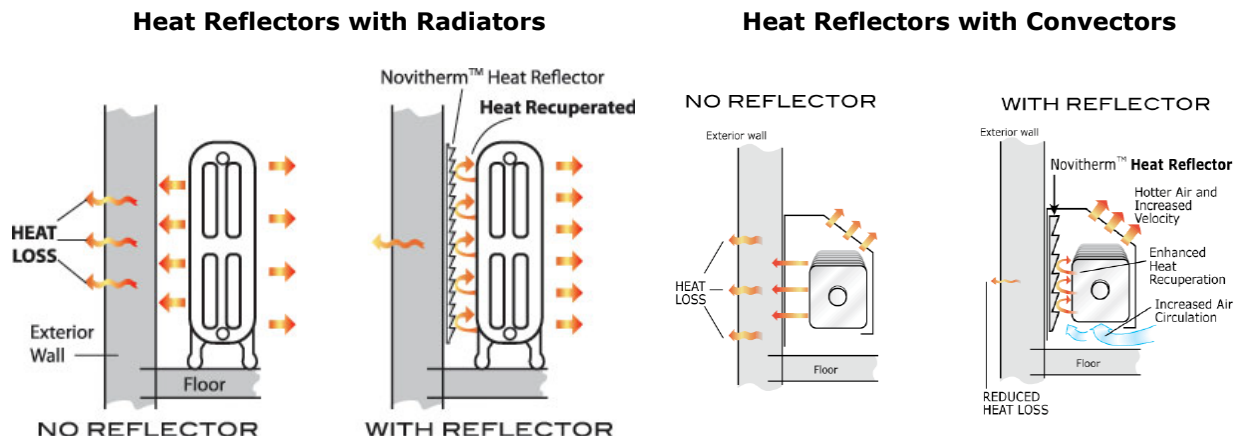
Heat Reflector Technology

Hydronic heating systems for buildings consist of four areas that can be improved on.

- Heat production (boilers).
- System management (controls).
- Hot water circulation (pump configuration).
- The supply of the heated water to the suites. (Pipes and heating units).

The first three areas are located in the boiler room. The fourth – distribution – runs throughout the building and delivers heat to the building occupants.

A cost effective energy measure to increase the efficiency of your building's distribution system, are heat reflectors. Products such as Novitherm™ Heat Reflectors, when installed in between the hot water heating units and the cold exterior wall, are designed to reflect radiant heat.



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For products such as Novitherm™ Heat Reflectors installation can be completed without removing the radiators, and require about 1/4" (10 mm) of space between the radiator and the exterior wall or between the convector fin and the back of the unit, for the panels to be inserted. For convector/baseboard radiators, the covers are removed and the panel affixed to the flat surface at the back of the heating unit. Heat reflectors should be installed within the full length of the convector to reduce radiant heat loss to the outside wall.

The aluminized surface of the heat reflector then reflects almost all of the infra-red heat, normally absorbed by the wall behind the radiator, back into the room. Also, the air trapped behind the reflector panel prevents conductive heat loss to the exterior.

Depending upon the quality of the product, heat reflectors can last up to 25 years or more.

Novitherm™ Heat Reflectors are manufactured in Canada in accordance with an ISO 9001:2008; AS9100 Registered Quality Management System. They have been rated to North American standards for smoke and flame spread under CAN/ULC0S102 and ASTM E84 by Underwriters Laboratories of Canada. The Solar Thermal Research Laboratory at the University of Waterloo, Waterloo, Ontario, Canada has tested the Novitherm™ Heat Reflectors with an emittance of 0.06 ± 1 (a thermal reflectance of 93 to 95%).

Benefits of heat reflectors

- The hot water inside the heating system returns to the boiler at a higher temperature.
- The heating system requires less energy to reheat the water in the boiler.
- The heating unit (Radiator/Convactor) remains hotter.
- The increase of reflected heat into the room improves the comfort level and allows the building operator to reduce the water temperature of the system (by 5 to 10°F or more) while maintaining or improving resident comfort.
- Reduced heat loss lowers the building's demand for heat and therefore results in less energy consumption, and reduced greenhouse gas emissions.

To maximize the benefit to use of this technology, installation of heat reflectors should be done in conjunction with:

- A thorough cleaning out loose debris and dirt from between the heating fins. This increases air flow (similar concept as changing a furnace filter).
- Adjustments to the heating curve of your boiler controls/building automation system, upon completion of the installation, to compensate for improved heat output.
- On-going monitoring of consumption to check for over heating or mechanical problems such as a stuck zone valve or a defective control and to ensure resident comfort is maintained as further boiler control adjustments are made.

Simple payback and Return on Investment (ROI) are standard payback evaluations. There are however other benefits of energy conservation such as:

- improved comfort may reduce resident turn-over;
- improved comfort may decrease electricity consumption (by reducing the use of supplementary electric heaters in apartments);
- reduction in carbon footprint and greenhouse gas emissions, and
- an improved NOI (net operating income) increases building value.

As with all energy measures, typical paybacks relate to per unit energy costs (m^3) and consumption. The table below is based on 17 years of experience with Novitherm Heat Reflectors:

m^3 rate	Simple payback	Improved NOI	CapRate	Bldg value
\$0.45	1 to 3 years	\$ 1 saved	@ 6.5	increase of \$15.39
\$0.35	1 to 3 years	\$ 1 saved	@ 6.0	increase of \$16.67
\$0.25	2 to 4 years	\$ 1 saved	@ 5.5	increase of \$18.19
\$0.15	2 to 6 years	\$ 1 saved	@ 5.0	increase of \$20.00