By John Hood,
Director of Renewable Resource
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Concrete Sewer Pipe Industry Goes "Green"

An enormous amount of thermal energy (heat) is lost when wastewater flows into the sanitary or storm sewer pipes. A company in Sudbury, Ontario, Canada, Renewable Resource Recovery Corporation, has designed and patented (pending) an innovative precast concrete @*Source*-Energy Pipe (System) that uses heat recovery principles to extract the wasted heat energy and return it to heat residential, institutional, commercial and industrial buildings. A heat pump in the building operates and controls the energy System, transferring heat in and out of the building to the @*Source*-Energy Pipe System. The heat pump provides year round comfort in the building – heating in the winter and cooling and conditioning the building in the summer.

Rainbow Concrete Industries Ltd. in Greater Sudbury, the first company licensed to produce the new "green" concrete pipe, has installed the @*Source*-Energy Pipe System in a new 18-lot subdivision constructed by Albona Investments Ltd in Garson, Ontario, Canada.

The technology uses engineering geothermal principles to capture heat energy from the sewer pipes and adjacent ground where temperatures tend to be constant at given depths. @*Source*-Energy Pipes are precast reinforced concrete pipes which function as standard sewer pipes with a heat recovery system incorporated into the pipe System. The System provides heating and cooling to buildings, with an energy efficiency rating from 400 to 500%. Initial design calculations indicate that fifty to sixty feet of sewer pipe will provide sufficient heat energy to heat a residential building. Actual performance data is to be determined in the Garson, Ontario project.

Water containing environmentally safe antifreeze flows through heat recovery pipes embedded within the concrete pipe wall, transferring heat energy into and out of the building, controlled by a heat pump in the building. The heat transfer fluid does not come in contact with the pipe effluent.

The precast concrete @*Source*-Energy Pipe System has the potential to provide significant reductions in energy costs to the home/building owner, without the worries of future price escalations normally associated with conventional heating and cooling systems. It provides an attractive opportunity to developers wishing to meet the growing demand for green, sustainable subdivisions and buildings. The @*Source*-Energy Pipe System is a sustainable energy system that does not emit greenhouse gases, air pollutants or toxic emissions. It is a low cost, safe, dependable, renewable energy source. Utilizing the @*Source*-Energy Pipe System as the heating and cooling system for a single two bedroom home is equivalent in green house gas reductions to removing three cars off the road.

Concrete pipe manufacturers wishing to become a licensed producer of the @*Source*-Energy Pipe are asked to contact Renewable Resource Recovery Corp. at email: pbnaneff@rcil.ca, telephone: 705.566.9993 (X231) or John Hood at email: johnhood@vianet.ca, telephone: 705.690.0624.

Renewable resource Recovery Corporation's directors: Robert Mancini, John Hood, Les Lisk and Boris Naneff.

@*Source*-Energy Pipes installed in an 18-lot subdivision in Garson, Ontario, Canada.