

## Environment Committee

Meeting date: November 10, 2015

**Subject:** Wastewater Energy Capture Partnership in the Twin Cities

**District(s), Member(s):** All

**Policy/Legal Reference:** Policy 1-2 (Sustainability)

**Staff Prepared/Presented:** Jason Willett, 651-602-1196

**Division/Department:** MCES c/o Leisa Thompson, 651-602-8101

### Background

Environmental Services and Community Development staff have been in conversation with Ever-Green Energy about a possible demonstration partnership for recovering energy from sewage. Sewage from within MCES interceptor(s) would be extracted, ground, passed through a heat exchanger and then returned to the sewer. The recovered energy would be captured in another fluid, without contact with the sewage, and looped around and made available in a small geographical neighborhood. The businesses and/or housing that needs energy would provide their own heat pumps. That equipment would work like a ground source (aka geothermal) heat pump.

The demonstration project is anticipated to save substantial greenhouse gas emissions from the heating and cooling load replacing the use of natural gas and electricity. It may also be less expensive for the end consumer, contributing to economic competitiveness in the Region. Environmental Services does not expect to save money; however, we do not expect to lose money either, so a contract with indemnification and insurance may be in order. We anticipate a partnership with Ever-Green Energy to set up a pilot or two that captures energy from the sewage and develops a mini district energy system that provides less expensive, renewable heating and cooling where development is demanding new energy load.

Ever-Green is a local mission-based subsidiary of District Energy St. Paul, with over 30 years of experience in developing, operating, and managing district energy systems. Ever-Green's work includes operating the largest, most successful hot water district heating system in North America. Ever-Green is a national leader in renewable energy, and the Ever-Green Project Team provides the technical expertise, business acumen, and operations know-how to help develop an implementable sewage thermal recovery system.

Staff from Ever-Green will present details on the business concept and status.