

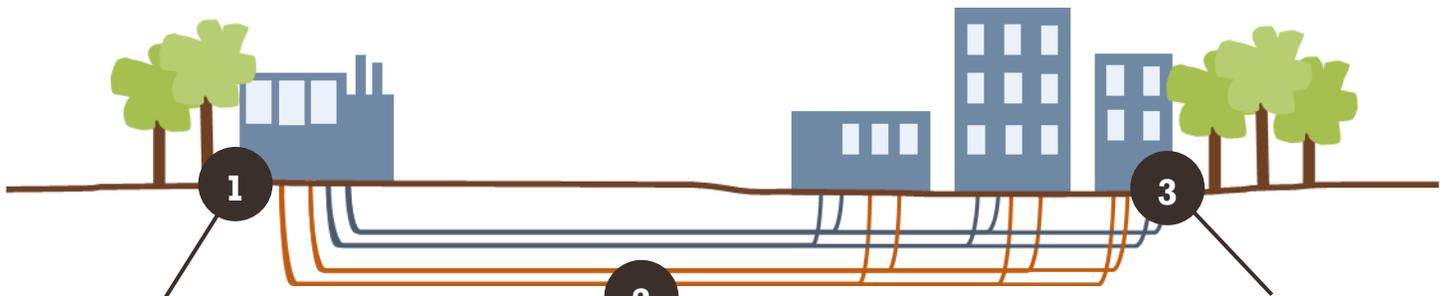
DISTRICT ENERGY

at Overlake Village

District Energy systems are highly efficient ways of heating and cooling buildings using small central plants connected to a network of underground pipes that carry hot water, chilled water, or steam to multiple buildings. Not only does District Energy require less fuel to operate, but it also balances energy demand between buildings on the district grid, reducing costs and carbon emissions.

As **Overlake Village** develops, the City of Redmond is interested in learning whether District Energy is technically and economically feasible in this area. Puget Sound Energy is partnering with City of Redmond on a *feasibility study*, with completion expected end of 2014.

How does DISTRICT ENERGY work?



A **CENTRAL PLANT** generates heating and cooling energy typically with natural gas boilers for heating and electric chillers for cooling.

A **DISTRIBUTION PIPING** system uses two heating pipes and two cooling pipes to carry energy underground to and from buildings in the district.

Discrete **ENERGY TRANSFER SYSTEMS** in the basement or rooftop of each building carry heating and cooling to the building.

How would it impact OVERLAKE VILAGE?

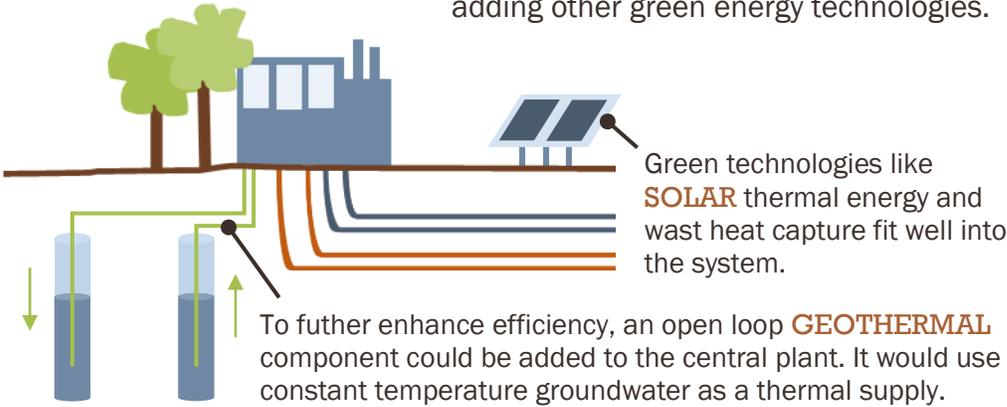
Figures below are based on the 2013 Pre-Feasibility Study completed by Otak, Inc. and Puttman Infrastructure.

- ↓ **Energy Demand**
by 10 percent (or 30 percent with geothermal component)
- ↑ **Cost Savings**
by 10 percent (or 50 percent with geothermal component)
- ↓ **Carbon Emissions**
by 15 percent (or 40 percent with geothermal component)



Going GREENER?

The District Energy grid provides ample opportunity for fuel switching and adding other green energy technologies.



What would DISTRICT ENERGY look like?

The **CENTRAL PLANT** can be designed to be discrete and blend into existing infrastructure, as seen in the examples below.



Dockside Green, Victoria, BC



The Brewery Block, Portland, OR



Hartford Central School District, Hartford, NY



Regent Park, Toronto, Ontario

Who would manage DISTRICT ENERGY?

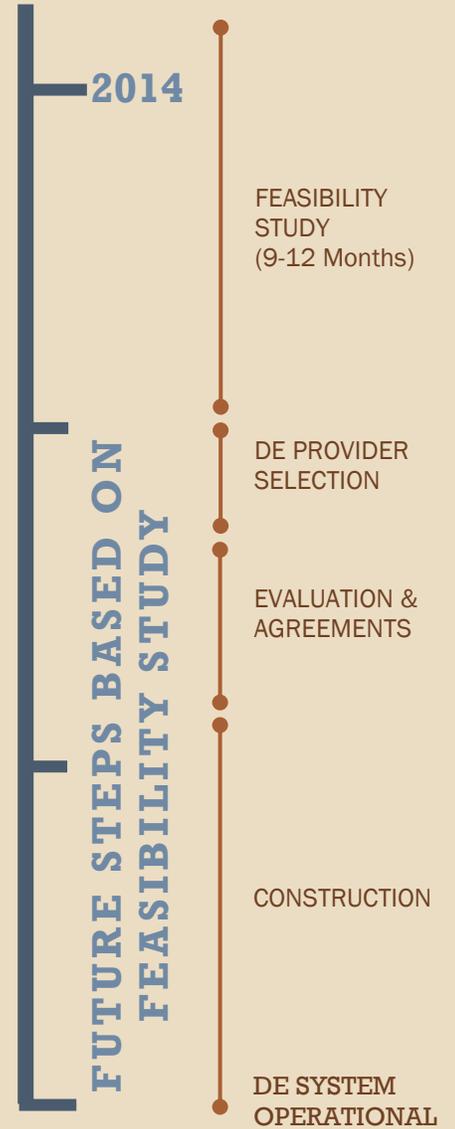
A District Energy system could be a public-private partnership with entities described below.



WHAT'S HAPPENING

Through 2014, the City of Redmond, Puget Sound Energy, and consulting groups McKinstry and Sound Energy Investments will conduct a **FEASIBILITY STUDY** to follow up on the 2013 Pre-Feasibility investigations.

WHAT'S NEXT



LEARN MORE

For more information, visit:
www.redmond.gov/districtenergy

Or contact:

JEFF CHURCHILL, AICP
City of Redmond, Senior Planner
jchurchill@redmond.gov

IRENA NETIK
PSE, Director, Hydroelectric Resources
irena.netik@pse.com

