

District Energy Systems can reduce carbon, save money - but only if well-regulated

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Is centralized heating an effective way for BC communities to reduce greenhouse gases?

Centralized heating systems known as District Energy (DE) Systems generate heat at a central plant and then pipe it underground, providing heat and [hot water](#) for a cluster of buildings or even an entire community. DE has exceptional potential to reduce [greenhouse gas emissions](#) and contribute to a lower carbon economy.

But unless they're properly designed and regulated, DE systems risk high costs and overestimated greenhouse gas reductions.

A new white paper from the Pacific Institute for Climate Solutions (PICS) outlines an economic regulatory framework that encourages financially sustainable DE systems while reducing carbon emissions and providing reasonably priced energy services.

Authored by Peter Ostergaard of the Fraser Basin Council, the paper examines the services, financials, governance, and rate-setting frameworks for nine diverse DE systems in BC. "BC is a leader in the development of DE systems," says Ostergaard. "Systems such as Vancouver's Neighbourhood Energy Utility—which uses wastewater to produce heat for all the buildings in southeast False Creek—are an example of how district energy can provide impressive energy efficiencies and emission reductions, and still be cost effective."

But there are risks, cautions Ostergaard. "District Energy systems are

like any utility; they are long-lived assets that are costly to develop initially. As a result, the cost of energy to the customer, particularly from newer DE systems, can be higher than conventional utilities.

Government support, in the form of policy and regulatory initiatives and subsidies, is essential for the viability of many DE systems.”

The paper includes a number of recommendations for policy-setters and DE developers, including:

- Develop DE systems to offer value to customers by providing safe, reliable, competitively priced services, not merely as an emissions reduction project
- Set rates on a “cost-of-service” basis, where prices reflect the true revenue requirements of the utility
- Make senior government incentives available to offset up-front development costs
- Simplify the regulatory framework, particularly for small, mature DE systems.

The full white paper can be found at pics.uvic.ca/white_papers.php .

PICS is a collaboration of BC’s four research intensive universities, and is hosted and led by the University of Victoria.

Provided by University of Victoria

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