B.C. funds study on using region's sewage for energy

Raw waste can be used to create power, but technology is expensive
Rob Shaw, Times Colonist
Published: Monday, September 10, 2007

The B.C. government has launched a unique study to see whether a flush of your toilet could one day produce useable fuel, power and clean water.

The $100,000 project is believed to be one of the most comprehensive government reports on the benefits of recovering resources -- such as heat, biogas, electricity and water -- from human waste during the sewage treatment process.

"In order to deal with climate-change issues, and possible new technologies, we should look at possibilities for things such as water reuse, energy and heat recovery," said Ida Chong, minister of community services, which has commissioned the study.

"If we were to recapture gas, we could resell or reuse energy. We could save future costs of payments or expenditures of energy."

Although disgusting, raw sewage can contain a wealth of resources. San Diego uses secondary sewage treatment and disinfection to extract irrigation-quality water that is sold to commercial businesses such as golf courses. Sweden mixes organic kitchen waste with sewage sludge and processes the resulting biogas to power municipal buses and private vehicles. Sweden also uses heat pumps to extract heat from warm waste for district heating in apartment radiators.

And numerous treatment plants across North America, including in Vancouver, recover gas to partially power internal generators. Currently, Nanaimo is spending $6.8 million to upgrade its treatment plants to recover biogas.

B.C.'s study is being done with the participation of the Capital Regional District, which last year embarked on an ambitious -- and some argue expensive -- plan to build sewage treatment plants in Greater Victoria.

The plants will cost about $1.2 billion to build and treat the 129 million litres of raw waste currently discharged into the ocean every day through two underwater outfall pipes. The provincial and federal governments have agreed to cover two-thirds of the cost, with local municipalities covering the rest.

The costs do not include any resource-recovery technology, although it sets up some plants to be expanded for such things as water and energy recovery in the future.

"It wasn't just about the CRD, but it will also be helpful in the future for other projects we fund across the province," Chong said of the study.

Although advocates argue resource recovery can help pay for itself in the long run, the technology is often new and expensive.

The government's report will be a "high-level study" that particularly looks at the feasibility and economics of investing in resource recovery, said Dwayne Kalynchuk, CRD general manager of environmental services.

"Then based on that, we'll have to drill down and say what are our specific opportunities in the capital region," he said.

The CRD had planned to conduct its own study. However, it voted last week to help the provincial project and use those results instead. The report should be finished in mid-October.

rfshaw@tc.canwest.com