

Metro Vancouver Satellite Map

# Metro Vancouver Conference Day 2023

DISTRICT ENERGY CASE STUDIES – HOW MUCH HEAT DO WE HAVE?

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**metro**vancouver

# BROADER RESOURCE RECOVERY OPPORTUNITIES

## Energy

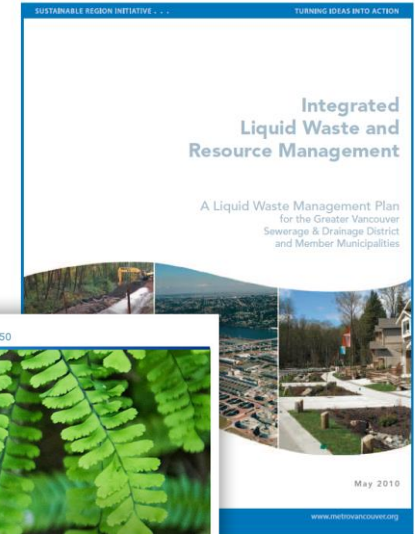
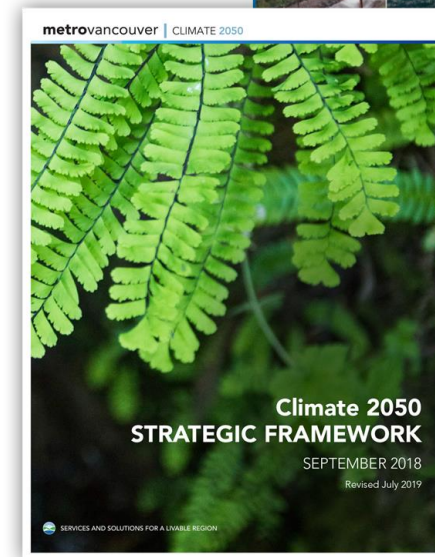
- Sewer / effluent heat
- Waste-to-energy heat
- Renewable natural gas
- Biosolids
- Co-generation
- Biodiesel

## Nutrients and Other Resources

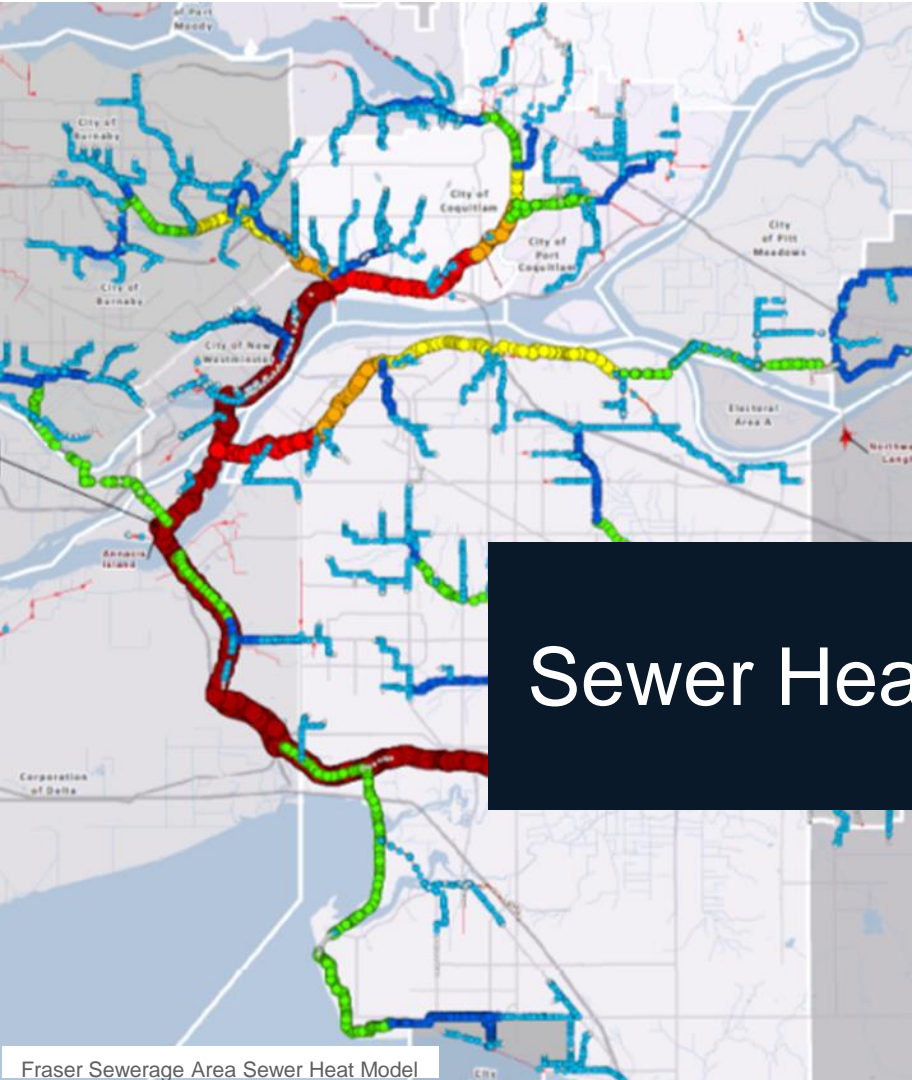
- Reclaimed water
- Metals
- Phosphorus / fertilizer
- Carbon dioxide
- Biosolids as carbon sink

# POLICY GUIDANCE

- Sewage and Waste: Heat Recovery Policy
- Climate 2050 Strategic Framework
- Carbon Price Policy
- Energy Management Policy
- Liquid Waste Management Plan
- Integrated Solid Waste and Resource Management Plan







# Sewer Heat / Effluent Heat

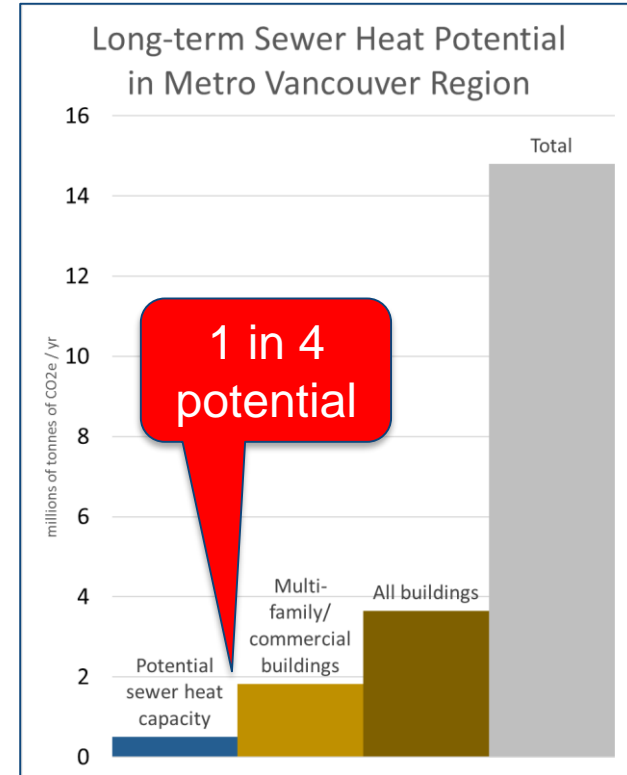
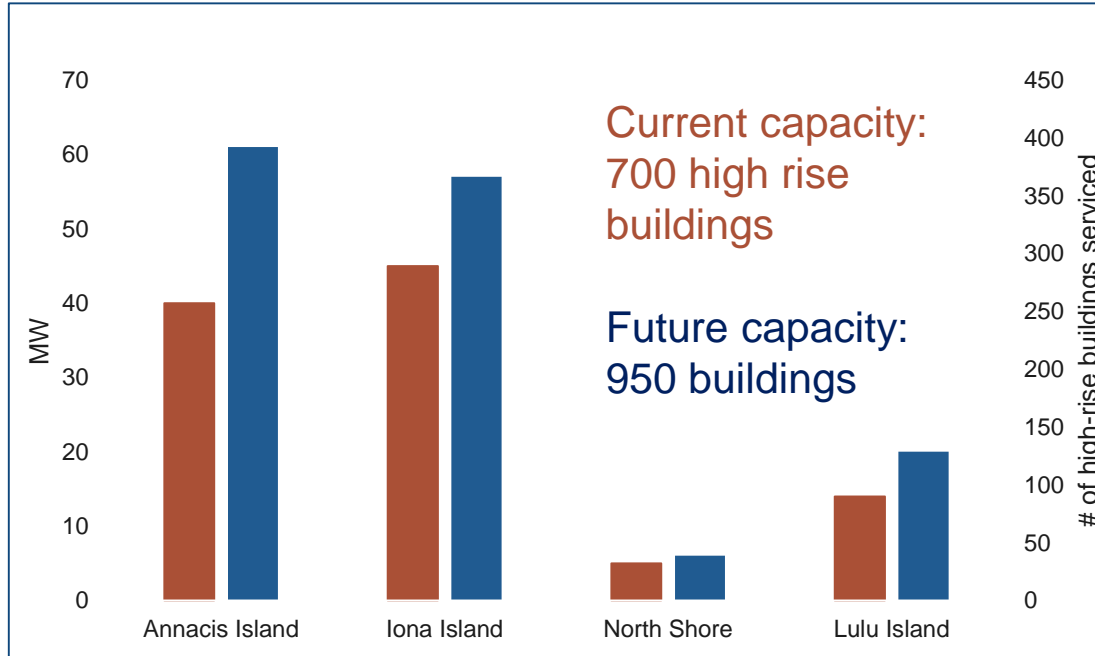


Fraser Sewerage Area Sewer Heat Model

Metro Vancouver North Shore Wastewater Treatment Plant

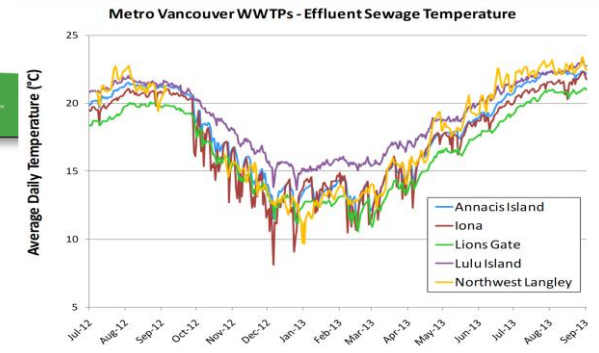
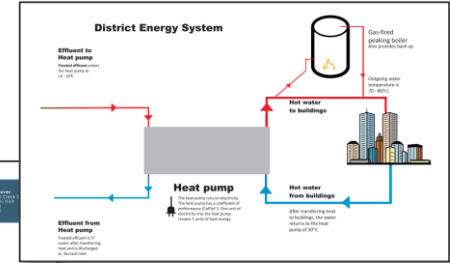


# SEWER HEAT: CURRENT AND FUTURE CAPACITY



# SEWER HEAT OPPORTUNITIES

Active Projects	Regional GHG Reduction (tonnes/year)
Lonsdale Energy Corporation	7,200
Surrey City Centre (Phase 1)	9,800
Sapperton District	5,700
Senakw	4,700
North Vancouver District	7,600
<b>Total</b>	<b>35,000</b>
<b>Current Heat Potential</b>	<b>250,000</b>



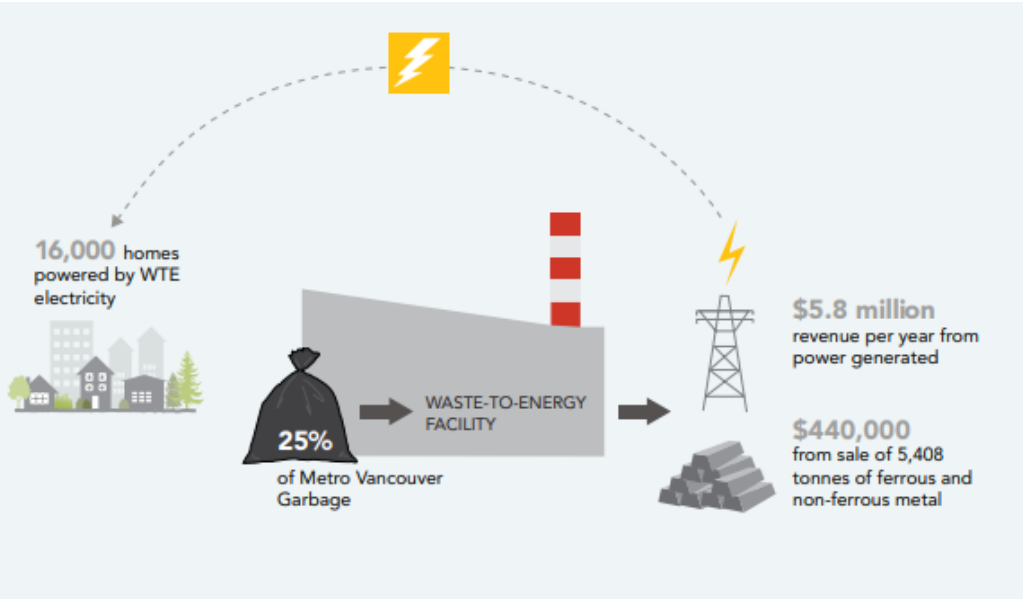




# Waste-to-Energy District Energy Project



# METRO VANCOUVER WASTE-TO-ENERGY FACILITY

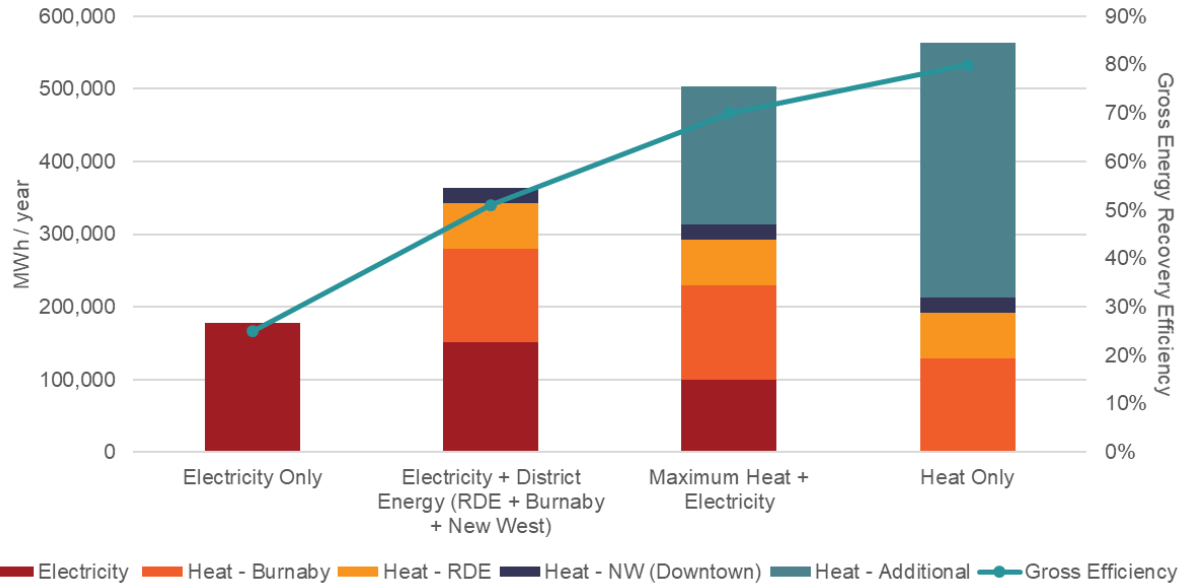


- Operated in Burnaby since 1988
- Mass-burn facility that turns waste into heat and electricity
- Generates ~100 MW thermal energy -- currently converted into ~22 MW electricity

# WASTE-TO-ENERGY FACILITY DISTRICT ENERGY PROJECT



# HEAT RECOVERY



- No change in Waste-to-Energy Facility emissions or amount of waste processed
- Triples energy recovery
- Heat and hot water for up to 30,000 homes
- Up to 45,000 tonnes per year of GHG emission reductions
- Self-funded over life of project



Vancouver Skyline

Thank you

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