



ARE District Energy

Council Transportation & Utilities Committee

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Amy Gray & Beverly Barnett
August 4, 2021



Presentation overview

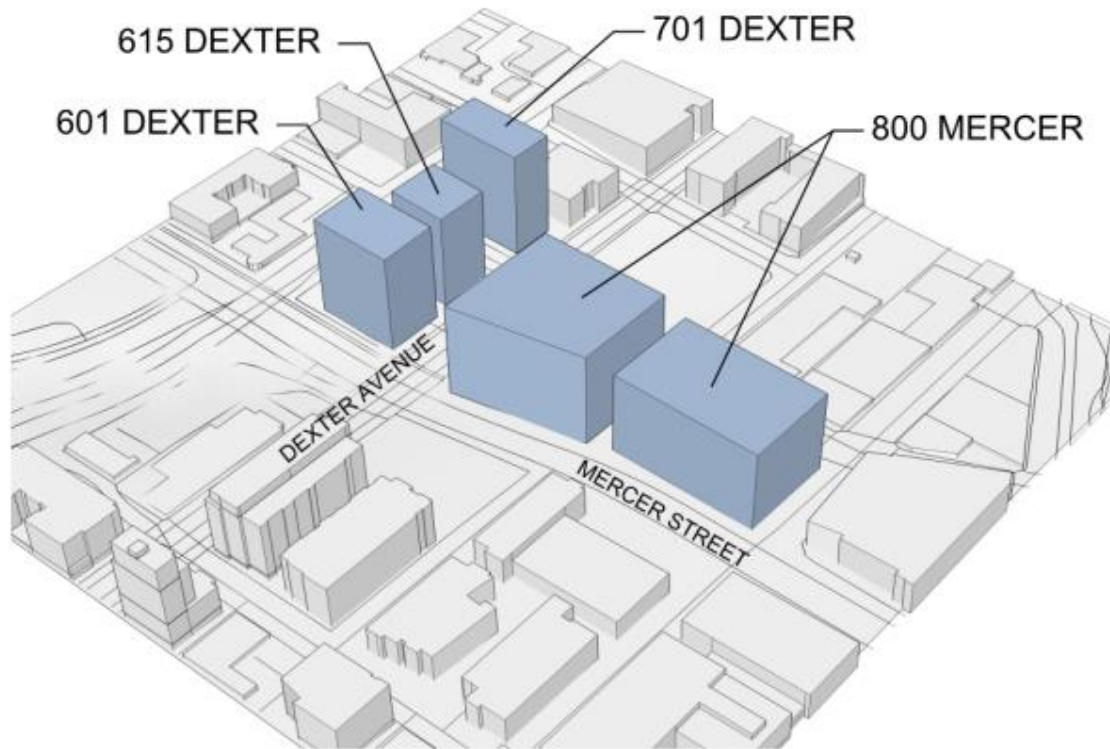
- ARE –SEATTLE NO. 33, LLC is seeking a new permit for private utility lines under Roy St, and Dexter Ave N
- The utility lines will extract waste heat from municipal wastewater and distribute energy between 601 Dexter Ave N, 701 Dexter Ave N, & 800 Mercer St
- SDOT recommends approval of the term permit

Term permit process

- Step 1: Resolution
City Council adopted Resolution 31980 on December 7, 2020, providing conceptual approval for the private use in the right-of-way, subject to the terms and conditions to be established in the term permit ordinance.

- Step 2: Ordinance
Passage of the ordinance details the terms and conditions of the permit, including annual fee, maintenance obligations, indemnification, insurance, and bond requirements.

Proposal



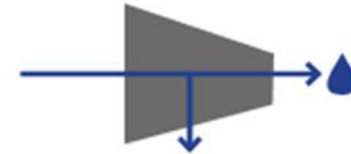
EXTRACT & COLLECT

Tap sewage main and pipe to collection tank



SCREEN & PROCESS

Process the raw sewage to prepare it for heat exchange
— details depends on manufacturer



HEAT EXCHANGE

Exchange sewage heat with condenser water system
via specialty heat exchanger



RETURN

Return processed sewage back to communal sewage main



Proposal

- Sewer wastewater contains heat energy; heat is currently expelled to the atmosphere
- Repurposing this wasted resource will provide 90% of total heating requirements for 1.4 million sq. ft. occupied space
- Annual energy savings are estimated at 1,045,000 kWh/yr; enough electricity to power approximately 125 homes
- CO2 savings are estimated at 4.6 million pounds/yr; equivalent of removing 451 cars annually



Project neighborhood - South Lake Union

601 Dexter Ave N, 701 Dexter Ave N, & 800 Mercer St



Requested action

- SDOT is seeking Council approval of this ordinance for the private utility lines located under and across the right-of-way in South Lake Union to use excess waste heat by ARE-SEATTLE NO. 33, LLC
- If the ordinance is approved, this permit will be in place until 2036

Questions?

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