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AN ORDINANCE relating to the sale of heat energy transferred to or from the King County wastewater treatment system and authorizing the King County executive to enter into up to three agreements for such sewage heat recovery projects.

STATEMENT OF FACTS:

1. Wastewater contains heat energy as it flows through pipelines to the treatment plant, and can be both a source of heat for buildings and a sink for unwanted heat from buildings.

2. Warm and hot wastewater flushed from homes and businesses is a significant source of energy. One estimate is that Americans flush three hundred fifty billion kilowatt-hours of energy into the sewers each year, roughly enough to power thirty million U.S. homes.

3. Recovery of heat energy from wastewater is consistent with the wastewater treatment division's mission to recover resources from wastewater.

4. Use of this renewable heat energy reduces use of fossil fuels for heating and cooling, contributing to efforts to reduce the region's carbon footprint, consistent with King County's Strategic Climate Action Plan, and supports countywide greenhouse gas emissions reduction targets adopted as Countywide Planning Policies by the King County Growth Management Planning Council in 2014.

5. Sewer heat transfer is an established technology in other countries, including Canada, and is a developing market in the United States with interest from private property owners in King County as a potential solution for delivering cost-efficient, environmentally responsible heating

and cooling in buildings.

6. Sale of this previously unused heat energy resource provides an opportunity to generate modest but new funding, which can be used to further carbon emission reduction projects within the wastewater treatment division.

7. The unique nature and complexity of determining if, when and where a sewer heat transfer might be a useable energy option for a given user demonstrates that sewer heat does not lend itself to a sale to the highest responsible bidder at public auction or by sealed bid. Under such unique circumstances, K.C.C. chapter 4.56 authorizes the county to negotiate a sale directly with a person or entity.

8. The sale of sewer heat transfers, based on the terms and conditions set forth in the attached agreement, will provide a public benefit by generating revenue. Such sales are in the overall best interests of the public.

9. To ensure compliance with the state constitution and state law provisions prohibiting the use of wastewater revenue or assets for private purposes, the county will require payment to the county for county staff and administrative costs associated with evaluating a proposed sewer heat transfer project, even if the project developer does not enter into a sewer heat transfer agreement with the county or proceed with the project.

10. The market for the sale of this county resource is in its nascent stage. Therefore, the appropriate pricing for this resource must be developed by real world experience. The agreement, in the form of Attachment A to this ordinance, will be used for up to three pilot projects whereby the county may waive the annual access fee for up to three years in exchange for information from the sewer heat transfer user by which the county can more accurately develop a pricing strategy for potential future sewer heat transfer agreements. Allowing for a limited number of pilot projects wherein private sewer heat transfer users would not be charged

an annual access fee for a short period of time in exchange for sharing revenue and expense data with the county, would allow King County to better assess feasibility of the technology and the reasonableness of the annual access fee charged for sewer heat energy transfer.

11. "Sewer heat transfer user" is synonymous with the term "a wastewater thermal energy user" as used in the agreement.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. **Findings:** The King County council hereby finds under K.C.C. 4.56.100.A.2. that unique circumstances exist to support the executive's testing of negotiated direct sale of sewer heat energy transferred to or from the pipelines as wastewater is conveyed to the treatment plant, and, except as provided in section 4.C. of this ordinance, that it is in the best interest of the public to limit the number of negotiated direct sale agreements to three in order that the county be able to determine the appropriate pricing for this county resource.

SECTION 2. The King County executive is hereby authorized to designate up to three private sewer heat transfer projects that have demonstrated readiness to move forward by meeting a thirty percent design threshold or similar milestone of the overall design of the construction project, including the sewage heat transfer component of the construction project, and to enter into an agreement, substantially in the form of Attachment A to this ordinance, with each project developer for the sale of heat energy transferred to or from the pipelines as wastewater is conveyed to the treatment plant, in accordance with the agreement. To be considered as a pilot project, the entity signing the agreement on its behalf and behalf of its successors in interest shall be required to share data on its usage, revenue and expenditures with the county for at least three years.

SECTION 3. Moneys from the sale of sewer heat transfers and any environmental attributes shall be allocated to the wastewater treatment division. The revenue from sewer heat transfers shall be used to further the goals outlined in the King County Strategic Climate Action Plan relating to the operations and capital

improvement program of the wastewater treatment division. Revenue beyond that needed for such purposes may be spent on rate stabilization.

SECTION 4. A. The wastewater treatment division shall prepare an annual report describing the benefits demonstrated, as well as any operational or capital challenges encountered, associated with the implementation of the pilot project. Among the elements to be addressed in the report shall be:

1. The level of interest demonstrated by potential sewer heat transfer users, which shall include, but not be limited to, inquiries received from potential project developers and the number of applications for participation in the pilot project;

2. Information that establishes the overall sewer heat transfer user costs, which may include, but not be limited to: costs to construct the energy transfer system; costs to construct backup energy systems; operating costs of the sewer heat transfer user and backup energy systems; revenues to the sewer heat transfer user related to using the sewer heat transfer, including tax benefits, renewable energy credits, grants and payments from downstream users; energy usage by the sewer heat transfer user and backup energy systems; and estimated construction and operating costs of comparable energy systems that would have been used instead of a sewer heat transfer;

3. Information regarding the overall sewer heat transfer user's carbon footprint, which may include, but not be limited to: estimated carbon emissions associated with construction of either the energy transfer system or the backup systems, or both; estimated carbon emissions associated with the wastewater sewer heat energy user's overall energy usage, both through a sewer heat transfer and backup energy systems, and estimated carbon emissions associated with comparable energy systems that would have been used instead of a sewer heat transfer; and

4. A cost-benefit analysis for each piloted project, which may include, but not be limited to: costs to the wastewater treatment division associated with each pilot project, as well as a summary of those costs that were or to be reimbursed to the wastewater treatment division by the sewer heat transfer user; the annual energy

transfer fee revenues that would have been collected by the wastewater treatment division if the user had not been designated a pilot project; and any impacts to wastewater treatment division's conveyance or treatment system, whether it be physical or operational, or other wastewater treatment programs, either positive or negative, resulting from the sewer heat transfer user's connection and energy transfer system.

B. The report required by this section shall be transmitted by the executive by June 1 of each year for ten years or until one year after the last pilot project has provided the wastewater treatment division the data required under section 2 of this ordinance, whichever is sooner. The executive shall transmit the report required by this section in the form of a paper original and an electronic copy the clerk of the council, who shall retain the original and provide the electronic copy to all councilmembers, the council chief of staff and the lead staff for the mobility and environment committee or its successor.

C. The wastewater treatment division may transmit an ordinance requesting approval to enter into agreements for an additional project or projects, but only if either there is sufficient developer interest or there is a project that would provide useful information because it is a different type of development than any of the three pilot projects, or there are both. The proposed ordinance shall be accompanied by a summary of the data received to date from the pilot projects under subsection 4.A. of this section to
inform the council's adoption of ordinances authorizing the executive to enter into additional agreements for the direct sale of sewer heat energy transferred to or from the pipelines as wastewater is conveyed to the treatment plant.