

## Sewer Heat Recovery (SHR) Frequently Asked Questions

**Q: Is SHR only available in King County?**

**A:** Sewer heat recovery is a proven technology that is in use around the world and in some parts of the United States. This is the first-time commercial building owners and developers will be able to access and harness heat from King County’s sewer system for installing SHR technology in privately-owned buildings. Recovery of heat energy from wastewater is consistent with King County Wastewater Treatment Division’s mission to recover resources from wastewater.

**Q: Is it possible to tap into sewer lines that are not owned by King County (ex. Seattle Public Utilities)?**

**A:** King County Wastewater Treatment Division only offers SHR for sewer lines owned by King County. Potential Users are advised to check with the utility owning the sewer line in question and inquire about opportunities there.

**Q: Can any building-type or size be considered for SHR in King County?**

**A:** Yes. Potential Users should conduct a needs analysis, assess their building’s heating and cooling system(s), and evaluate the costs associated with building and operating a SHR system in order to determine whether it is a good fit. King County relies on Users to do their own assessment and make their own decision. In general, a greater demand for heating and cooling is a better fit due to the cost to build the system and economies of scale.

**Q: How are Users selected? Approved?**

**A:** The King County Council has authorized up to three pilot projects. Projects (Users) will be selected on a first come, first served basis based on readiness of the project in its entirety. We define “ready” as 30% design or greater. Users will also have to agree to all contract terms. The contract template can be found [HERE](#).

**Q: Does a building owner or developer have to reside in King County?**

**A:** No. However, the building(s) itself must be located within King County Wastewater Treatment Division’s service area.

**Q: Are there any fees associated with becoming an Approved User?**

**A:** Yes. Approved Users must reimburse King County’s Wastewater Treatment Division for costs to review designs. In addition, once the SHR system is running, Approved Users are responsible for paying an annual fee based on the amount of energy transferred between their system and the sewer. A pilot project’s annual fee is waived for the first three years of the contract, in return for usage data (based on contract terms). The contract template can be found [HERE](#).

**Q: If we are a sewer/wastewater treatment agency outside of Washington state interested in SHR for our business community, does your agency provide presentations about how you arrived at launching SHR?**

**A:** We encourage you to first check our website ([www.kingcounty.gov/energyprogram](http://www.kingcounty.gov/energyprogram)) for specific information. For additional questions, please email [Erika.Kinno@kingcounty.gov](mailto:Erika.Kinno@kingcounty.gov). We are available to provide an overview presentation on an individual case basis.

**Q: Why should we obtain energy from wastewater?**

**A:** Much of the energy used to heat water for laundry, dishwashers, showers, etc., goes down the drain. SHR is a way to harness that wasted heat as a new, renewable energy source with no new carbon emissions. SHR is a step toward protecting the environment to combat climate change, and can help businesses establish green, and leverage sales and occupancy engagement strategies by promoting sustainable practices that attract to tenants, buyers, and potential investors.

**Q: How is energy obtained from wastewater?**

**A:** The main technology used is standard equipment known as a heat exchanger. This device allows heat from a fluid (raw sewage) to pass to a second fluid (refrigerant or water) without the two fluids ever mixing or coming into direct contact. SHR also will likely use a heat pump, a pump, a grinder and some method to screen and filter out harmful objects to protect the system's equipment.

**Q: Is wastewater be considered a reliable energy source?**

**A:** In general, yes. Wastewater can be considered a reliable energy source. Historical data shows that in the conveyance pipes where SHR is most likely to be used, flow does not stop because there is no way to stop water from flowing into them from all the various surrounding buildings and facilities. That said, we cannot guarantee the flow or temperature of wastewater in our conveyance pipes, so a backup heating system will most likely be needed.

**Q: What are the basic requirements to consider SHR for our building?**

**A:**

1. Access to a King County sewage line.
2. A hydronic heating or cooling system.
3. A redundant system for peak use.

**Q: Is there approved legislation that allows SHR to be offered to King County building owners/developers?**

**A:** Yes. The King County Council unanimously adopted legislation authorizing up to three (3) pilot projects and approving a boilerplate contract that WTD can sign with Potential Users. While fairly common in Europe and parts of Canada, these kinds of use agreements between utilities and private users are groundbreaking in the United States. You can view the legislative documents [HERE](#).

**Q: What is the target group for SHR?**

**A:** Commercial building owners and/or developers with buildings in the King County Wastewater Treatment Division's service area whose facility(ies) use hydronic (circulating water) systems to heat or cool buildings, and ones that are located near a King County sewer interceptor pipe. SEE MAP [HERE](#).

**Q: What are the seasonal average temperatures of the sewer system?**

**A:** August-September 67 deg F (warmest average)  
February-April 54 deg F (coolest average)

**Q: Are there financial incentives for installing a SHR system?**

**A:** Yes. There may be opportunities for clean or renewable energy grants at the state and federal levels. If state law changes, Users may be eligible for Thermal Renewable Energy Credits (T-RECS) within the State of Washington.

**Q: Is SHR provided anywhere else? WA state? U.S.? Other countries?**

**A:** Yes. SHR is a proven technology in use around the world; most common in Europe. This is the first-time commercial building owners and developers will be able to access and harness heat from King County's sewer system for installing SHR technology in privately-owned buildings.

**Q: How long does it take to install a SHR system?**

**A:** It depends on the complexity of each individual project and contractor experience, and is up to the User's design, but in general the work involves digging a vault, and creating two sewer line connections.

**Q: Are normal sewer operations interrupted or stopped during installation of SHR system?**

**A:** Sewer service for individual customers typically wouldn't be interrupted, but the Wastewater Treatment Division may temporarily divert flows to accommodate the connection installation depending upon the location.

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