



## ICLEI Energy Exchange # 4 Topic: Heating & Cooling from Wastewater

### Session description

The transition to sustainable energy sources requires fulfilling the demand for affordable and reliable clean energy while minimizing social and environmental impacts. Large amounts of untreated wastewater are discharged into rivers and seas. Current estimates suggest that wastewater treatment accounts for only 1% to 3% of global energy output, yet it consumes over 20 % of a municipality's electrical energy demand. Wastewater treatment plants have the potential to be transformed into innovative resource recovery factories, where valuable resources such as water, energy and nutrients can be recovered from waste.

One promising approach is to recover heat from wastewater. Through the use of heat recovery systems, wastewater can be transformed into a sustainable energy source. These systems capture the thermal energy present in the wastewater and utilize heat exchangers and heat pumps to provide heating for nearby buildings. In addition, the residual heat in wastewater can be utilized for cooling purposes. This innovative approach capitalizes on the continuous availability of thermal energy in wastewater and transforms it into a climate-neutral energy source with significant potential for municipalities, utilities and urban developers.

Moreover, the integration of wastewater heat into heating networks can contribute to the decarbonization of district heating systems. Wastewater heat recovery initiatives not only have environmental benefits but also actively engage communities in wastewater management practices and raise awareness. This inclusive approach leads



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to more sustainable solutions that enhance community resilience. The main objective of the webinar is to explore the benefits and challenges of implementing wastewater heat recovery projects. The webinar will showcase successful use cases, foster knowledge exchange and promote the adoption of waste to energy practices.

**Featured speaker(s)** Christian von Drachenfelas, UHRIG

**Moderator** Sastry Akella, Senior Officer, ICLEI World Secretariat

**Date and location:** Virtually on **Zoom, 4 October at 12 pm CET**

### Registration:

[https://us06web.zoom.us/webinar/register/WN\\_mGJc79zqQK-m6IvHozBCfw#/registration](https://us06web.zoom.us/webinar/register/WN_mGJc79zqQK-m6IvHozBCfw#/registration)

### Guiding questions

- What are the benefits of utilizing wastewater as a sustainable energy source through heat transfer systems?
- How do heat exchangers and heat pumps contribute to harnessing thermal energy from wastewater for heating nearby buildings?
- How can wastewater heat recovery initiatives from wastewater actively involve communities in wastewater management and raise awareness?
- What are some examples of successful projects that have implemented heat recovery from wastewater?
- What are the costs of implementing wastewater heat recovery at the city level and what kind of investment is typically required?

### Indicative agenda

Time	Description
5 minutes	Introduction by ICLEI WS
40 minutes	In-depth dive into the chosen theme
15 minutes	Audience interactive discussion (Q&A) and closing remarks



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## Contact information

In case of questions or concerns, or interest in partnering or participating, please contact the Sustainable Energy team at the ICLEI World Secretariat at [sustainable.energy@iclei.org](mailto:sustainable.energy@iclei.org).

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