

Where and When a Thermal Energy Network Makes Sense

A Thermal Energy Network (TEN) will be more efficient and cost-effective when paired with complementary projects in your community that are in the early stages of development. Local infrastructure projects, new developments, and large buildings with heating systems that need replacing are good places to start.

Conditions that could benefit TEN development in your community:

Local infrastructure projects underway

Any time construction is planned could be an opportunity to tie in a TEN, particularly if the work involves or is adjacent to a building or facility that has excess heat and nearby buildings that can use that heat.*

The “dig once” principle can help a TEN project save money on excavation and paving.

For example:

- A local water or wastewater project is in early stages of development.
▶ Learn more about [Energy from Wastewater](#).
- Water or wastewater systems/sections need repair or replacement.
- Streets or sections of town are scheduled for existing infrastructure work.

New developments

New construction is one of the best opportunities for installing a TEN. Any drilling for geothermal boreholes or trenching for horizontal pipes can be least disruptive, and compatible indoor distribution systems (see vctn.org/s/Compatible-HVAC-Systems.pdf) can be installed rather than retrofitted.

For example:

- An affordable housing development is in early planning stages.
- New residential and/or commercial developments are being planned or permitted.

Good starting points

Starting small is a good initial approach to a TEN. A project that successfully connects two buildings can demonstrate the technology and many of the benefits, inspiring a larger network and showcasing how moving heat can take the place of carbon-emitting, more expensive heating and cooling systems.

For example:

- A large municipal building such as a school or town hall has an aging heating/cooling system and could benefit from a geothermal system, becoming an anchor for a TEN.
- Oil and propane customers could save significantly by shifting to repurposing existing heat.
- A large thermal energy resource is within ¼ mile of a building or set of buildings that can receive the waste heat.