

Site Selection for a Thermal Energy Network

Selecting a site for a Thermal Energy Network (TEN) begins with choosing a strong anchor building or cluster of buildings paired with one or more reliable thermal energy resources.

An initial project can be as simple as providing heat exchange between two buildings such as a grocery store directly adjacent to an apartment building.

Site selection may also:

- Factor in potential routes, customers, or thermal energy resources for a TEN to expand.
- Consider timing to coincide with other infrastructure or new development projects.
- Prioritize low or moderate income housing or essential facilities and services.
- Identify locations where switching from fossil fuels will provide the greatest social and economic benefits such as in energy burdened communities.

Moving heat among buildings in a TEN is an effective way to accelerate decarbonization because the concept, design, and operation are **site specific**. Systems are informed by local opportunities, tailored to local conditions, and responsive to community needs. Taking time to evaluate and select TEN sites, nodes, and connecting routes is an investment in an efficient thermal energy system.

While there are no one-size-fits-all approaches to community decarbonization, a strategic site selection process to identify a viable first TEN project and plan for future TEN opportunities can create a smoother process and lower overall costs.

Key Criteria for Site Selection:

- The **density** of buildings and proximity to thermal energy resources is important for a TEN to function efficiently and be cost-effective.
- A TEN benefits from a **diversity** of thermal energy resources and thermal loads or building types, providing the ability to balance different sources of heat and to exchange heating and cooling needs.
- Ideal TEN locations contain an **anchor** customer or a cluster of customers within proximity to thermal energy resources.

Additional Ideas for Site Prioritization:

- Buildings reliant on oil or propane are prime candidates for switching to a TEN.
- Affordable housing, facilities that serve low and moderate income residents, civic buildings, and non-profit customers can be prioritized to lower or stabilize energy bills and provide benefits associated with cleaner, safer heating and cooling.
- Focusing on or including new construction in a TEN project can be more cost-effective and help avoid or offset the cost of retrofitting existing buildings.
- Working with a single owner of a development or just a few large building owners can streamline decision-making and expedite a project.

► For specifics on thermal energy resources and potential pairings with nearby buildings that can use the waste heat, see [How to Get a Head Start on a TEN](#) and these fact sheets:

- [Moving Heat](#): How Thermal Energy Networks repurpose the heat we already have
- [Energy from Wastewater](#): Capturing and reusing thermal energy from wastewater systems