

# Thermal Energy Network Highlights

## Thermal energy is **actionable**.

- We have local heat that we can move & share in our communities using proven technology: ground or water source heat pumps and underground pipes.
- Cities, towns, and developers know how to install and operate water-based infrastructure. Water and wastewater departments already lay pipes and manage energy flows.
- Cities and towns know how to raise capital for municipal infrastructure, and developers understand financing for large projects that pay the upfront costs back over time.
- The IRA offers direct pay of tax credits to municipalities and transfer of credits to developers for unprecedented 30-40% tax incentives.

## We can **keep customer and operational costs low**.

- Unprecedented federal funding can be leveraged to provide grants, low-interest loans, and incentives to cover upfront installation costs.
- These investments can be recovered over time through rates in the same way a municipal water department bills for service, offering reasonable, predictable customer costs.
- The durable components located inside buildings and underground require little maintenance and last longer than other kinds of heat pumps.

## Reusing local heat can be an **economic driver**.

- Thermal Energy Network development aligns with community revitalization, particularly for new construction, denser town centers, and commercial development.
- Local clean energy appeals to young professionals and can attract businesses.

## We can build local Thermal Energy Networks **incrementally**.

- Starting small with 2-3 buildings that can share heat helps to establish the concept, demonstrate the technology, and de-risk building a network.
- For example, we can share heat between an ice arena and a nearby high school, a hospital and an adjacent senior housing complex, or a large grocery store next to an apartment building.
- Nearby buildings and other small networks can be added over time.

## We can **align clean energy with other priorities** such as housing and wastewater.

- Ground or water source heat pump installations make sense for many locations. Some good criteria include building density, new construction, and high energy burdens.
- In Vermont, we have many small cities and town centers that can share heat among buildings. With the growing need for more housing, new or expanded wastewater systems, and walkable communities, we have new opportunities to share heat.

## We can **reserve electricity for where it's most needed**.

- Ground or water source heat pumps draw from constant temperatures, so they use less electricity than other kinds of heat pumps. Their high efficiency can help to lower electric peaks and keep electricity costs lower.
- By re-using existing heat, we can reserve more electricity for other uses and build less electric infrastructure.
- Diversifying our energy sources increases resilience and our independence from energy imports and fluctuating markets.

## Using local thermal energy has **many social and economic benefits**.

- It's safer and healthier than burning fuels to heat buildings.
- It provides cooling as well as heat and domestic hot water.
- We can keep energy dollars local and never pay for any fuel, just occasional maintenance.
- Current gas, oil, and propane workers can use existing skills and keep quality jobs.

Visit [www.vctn.org](http://www.vctn.org) for more information.

