

Which Ownership Model?

There are many ways to own and operate a Thermal Energy Network (TEN). Considering both the advantages and challenges of a few common ownership models can help identify which approach is most beneficial for your project.

This summary focuses on three ownership models that can serve a TEN.

- Municipal
- Cooperative
- Third-party

Municipal Ownership

ADVANTAGES	CHALLENGES
<ul style="list-style-type: none">• Local control, including over existing thermal energy resources• Lack of profit-seeking motive• Transparency and known entity• Familiar with shared infrastructure and transferable business models	<ul style="list-style-type: none">• Lack of local technical expertise• Potential local capacity constraints• Potential budget & bonding constraints• Pace depends on politics
NOTES	QUESTIONS
<ul style="list-style-type: none">• Municipal ownership can be facilitated by establishing a municipal corporation—a local development corporation or other authorized entity with bonding capacity and separate governance tasked with leading a project.	<ul style="list-style-type: none">• Does the community support spending municipal resources on climate or clean energy action?• What existing policies support development of a TEN?

Cooperative Ownership

ADVANTAGES	CHALLENGES
<ul style="list-style-type: none">• Self-governance and local control• Equitable ownership and distribution of benefits, including revenue• Place-based identity enhances participation• Membership strengthened by aligned interests	<ul style="list-style-type: none">• Finding enough local members• Consistent leaders/lead members• Keeping buy-in affordable• Credit-worthiness of multiple owners (vs. one large entity) can have financing implications
NOTES	QUESTIONS
<ul style="list-style-type: none">• Can include both thermal energy resource owners and users• May be best suited to a portion of a town or to grow organically over time• Similar to Homeowner's Association (HOA)	<ul style="list-style-type: none">• Does the community have an anchor institution or organization to launch/lead a co-op?• What thermal resources are under the control of a potential co-op member?

Third-Party Ownership

ADVANTAGES	CHALLENGES
<ul style="list-style-type: none"> • Can function outside political constraints • Can provide expertise for all stages of a project • More seamless transition from development to ownership • More likely to allow for a faster process 	<ul style="list-style-type: none"> • Unregulated de facto monopoly may not allow local input into rates or fees • Level of transparency is up to the company • Investor returns draw money out of the community
NOTES	QUESTIONS
<ul style="list-style-type: none"> • Most third parties are for-profit entities • For-profits have more access to a variety of capital resources, but grant funds are less available 	<ul style="list-style-type: none"> • Do the conveniences of third-party ownership outweigh the challenges of municipal or cooperative ownership? • How does the expectation of investor returns impact the community?

The Role of Large Utility Companies

There may be a role for investor-owned regulated utilities in developing TENs.

Financing: A utility framework allows a gas or electric company to invest in energy infrastructure and recover costs through billed rates over a period of decades. This allows all customers to access energy without needing to pay a significant cost upfront. The more customers who pay to access the energy infrastructure, the more the recovery of the initial investment can be shared.

While a municipal utility can spread out the upfront costs of installing a TEN over many customers in a town or city, that rate base or the total amount of customers is limited to the municipality. A gas or electric company with a large territory, if allowed by its regulators, could use its rate base across a wider population, resulting in somewhat lower costs. However, an investor-owned utility must also generate a return for shareholders, often about 8%-10%, which may offset the cost savings associated with a larger scale TEN installation.

Workforce: Gas workers already have most of the skills needed to install a TEN, as pipefitting and plumbing are primary skills needed in construction. The gas utility workforce can be rapidly retrained and employed in TEN development and construction.

Pilot Projects: Many large investor-owned gas and electric utilities are beginning to explore providing customers with access to TENs using existing regulatory and cost recovery frameworks as well as existing workforce. In some states, such as New York and Massachusetts, pilot projects are exploring a workable business model for investor-owned utilities.

A TEN generates revenue over time by selling thermal energy.

A utility creates revenue via *rates* established by a regulating authority such as a municipal body or a state's public utility commission.

Other TEN owners can create revenue through *customer charges* such as one-time connection fees, monthly user fees, metered usage rates, or fees based on peak thermal energy use.

For-profit, low-profit, or non-profit?

Another way to look at ownership is to consider who will benefit from the system over time. Decisions about who will own a TEN involve choosing among for-profit, low-profit, or non-profit approaches that impact financing opportunities, customer costs, and whether or not any revenue generated will stay in the community.

For-profit

The owning company charges enough for TEN services to ensure that its investors receive an acceptable return on the investment of the upfront costs and continue to earn dividends, which typically result in higher customer rates or fees. For-profits can include mission-driven companies that operate as a B-Corp, C-Corp, or LLC.

Low-profit

TEN ownership can be set up to return a percentage of the revenue to the community it serves through a Low-Profit Limited Liability Company (L3C) or a Public Purpose Energy Service Company (PPESCO).

Non-profit

A non-profit owner returns any profit beyond what's needed to operate a TEN to the community through reinvestment in the system, as revenue for the municipality, or as co-op member benefits.

Deciding between for-profit, low-profit, and non-profit ownership models relates directly to the potential of a TEN to offer lower customer rates, function as a public good, create local wealth, and support economic development. This choice should be highly localized, as a model that works in one community may not work in another.

Own and operate or transfer?

In most cases, a third party is hired to manage the process of building a TEN. That company may continue to own the TEN for a time or in perpetuity.

One decision when building a TEN with a third party is whether to choose a **DBOOM** or **DBOOT** approach.

DBOOM: Design Build Own Operate <i>Maintain</i>	DBOOT: Design Build Own Operate <i>Transfer</i>
<ul style="list-style-type: none"> • The third party not only manages the TEN design and build process, but also owns and operates the TEN. • Offers a seamless transition from construction to ownership and service 	<ul style="list-style-type: none"> • After a set term, the third party that manages the TEN design and build will transfer ownership to another entity, most likely a municipality. • Allows a period of third-party ownership in order to de-risk a project before local ownership begins

See the deeper dive [Ownership Guide](#) for more details on each ownership model and:

- Related financing considerations
- Questions to consider
- Examples of existing projects

Who can own and operate a TEN?

Many TENs are owned and operated privately, but some can benefit from local or state authorization to function as a utility.

Statewide policy such as proposed in VT [H.669](#) / [S.252](#)* would allow municipalities and other approved owners to use a utility model to make the upfront costs of a TEN affordable over time.

Municipalities

In Vermont, specific language in a town charter or in state statute is needed to allow a municipality to own and operate a TEN utility. This kind of simple legal provision is standard for shared infrastructure, as many town charters already authorize water and sewer utilities, but does not usually apply to a TEN.

Existing utilities

Gas and electric companies or cooperatives already must seek authorization from the Public Utilities Commission to build and own projects. A simple change to state statute such as proposed in Vermont would allow TENs to follow the same process.

Businesses and organizations

Private TEN owners don't need authorization, but may want to use a utility model to take advantage of longer-term financing. A simple change to Vermont state statute such as proposed in [H.669](#) / [S.252](#) is needed to create this pathway.

For more on the advantages and applications of a utility model, see [What Authorization is Needed? \(vctn.org/s/What-Authorization-is-Needed\)](#).

Consult legal expertise early in your TEN development process to identify any authorizations that might apply to your project.

* See Vermont's Thermal Energy Networks Act Fact Sheet ([vctn.org/s/VT-TENs-Act.pdf](#)) for current details on the House and Senate bills.