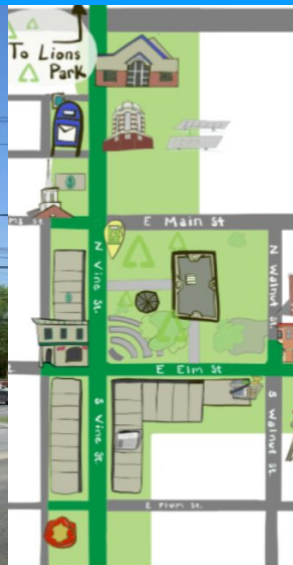




Municipal Thermal Energy Network Accelerator



THANK YOU TO OUR FUNDER!

*The New York
Community Trust*
of Westchester

A COLLABORATION BETWEEN:



Chatham House Rule

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[Chatham House Rule - Wikipedia](#)

Overview

The number of viable ownership and business models for thermal energy networks are informed by the governing laws and high upfront costs of the system.

- **INTRODUCE** the currently understood business and ownership models for community scale thermal energy networks.
- **DISCUSS** the applicable bodies of law and how they may apply for each ownership model.
- **INVESTIGATE** some of the advantages and disadvantages associated with each ownership model.

Four Main Bodies of Law (Session #2 Recap)

New York State Law concerning municipalities

- NYS Constitution
- Municipal Home Rule Law
- NYS Laws governing Cities, Counties, Towns and Villages

Public Service Law

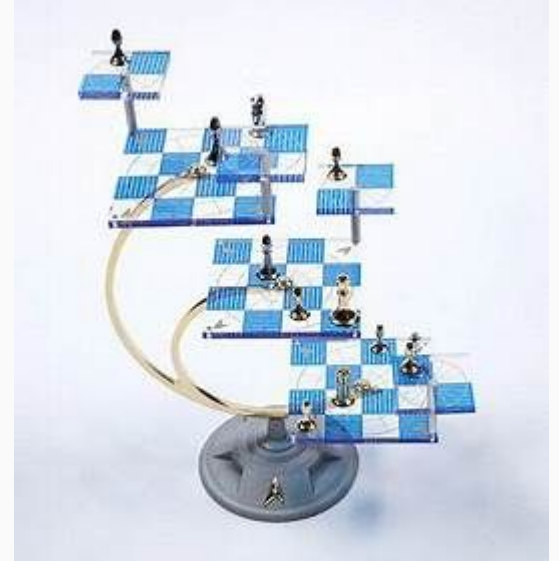
- Public Service Commission decisions
- Utility Thermal Network and Jobs Act (UTENJA)

Inflation Reduction Act (IRA)

- Federal Tax Credits (direct pay incentives) and Rules

Industrial Development Agencies (IRAs)/Local Development Corporations (LDCs)

- General Municipal Law Art 18-A
- Section 1411 of the Not-for-Profit Corporation Law



A Note on the IRA

Section 48 Tax Credit (as of June 16, 2025)

Tax-exempt entities, including municipalities, are *able to receive direct payments* equivalent to the ITC

Restrictions on split ownership - generation vs. distribution (89 Fed. Reg. 78190)

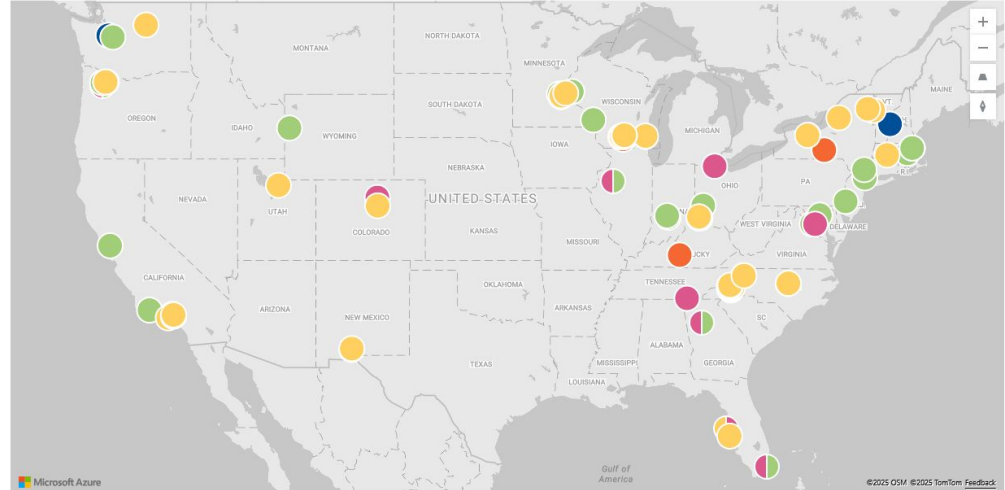
Where Direct Pay is headed:

- Geothermal is currently preserved, as are bonus credits
- Foreign Entity of Concern - could be concern for bond-funded projects
- Transferability repealed after 2 years

Projects by Installation Type

Project Type is shared by the project owner. Most projects include one type of energy infrastructure, though some include more than one. Projects that do not have an address are not included in the map. Click on a project dot to view details below.

Project Type ● Clean/Alternative Fuels ● Electric Vehicle ● EV Charging ● Geothermal ● Solar



Source: Climate Program Portal, *Local Government Direct Pay Tracker**

*Does not represent all Direct Pay filings

A Note on LDCs

- Local Development Corporations (LDCs) are special purpose not-for-profit corporations established as supporting organizations for municipalities. Municipalities may transfer property to LDCs without declaring it surplus or complying with competitive bidding and appraisal requirements, pursuant to the LDC enabling act.
- LDCs may:
 - Undertake transactions with and in place of municipalities to provide greater flexibility and efficiencies
 - Facilitate “Design-Build” projects and enter into offtake and power purchase agreements that are otherwise prohibited for traditional municipalities
 - Borrow money and issue bonds not subject to Muni. limits, but without taxing authority, so debt service must be paid from project revenues
- LDC involvement in UTEN projects also provides the ability to co-sponsor and/or own the facilities, further leveraging tax credit equity transactions

Key Considerations for Ownership Models

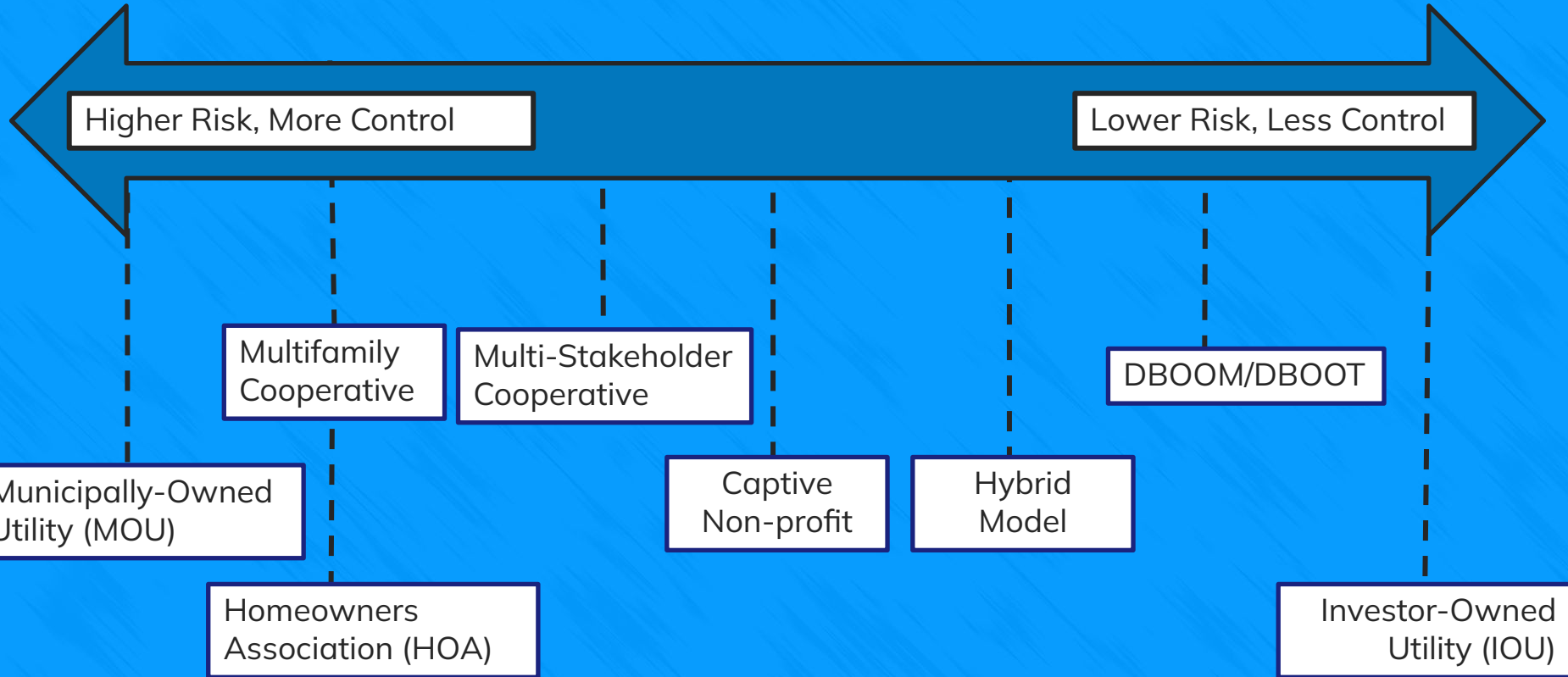
Central factors:

- Financial capacity
- Technical capacity
- Administrative capacity
- Community priorities (in relation to cost and transparency)
- Who saves? Who pays?

Overall: need to guarantee service quality (reliability), cost-effectiveness (affordability and competitiveness)



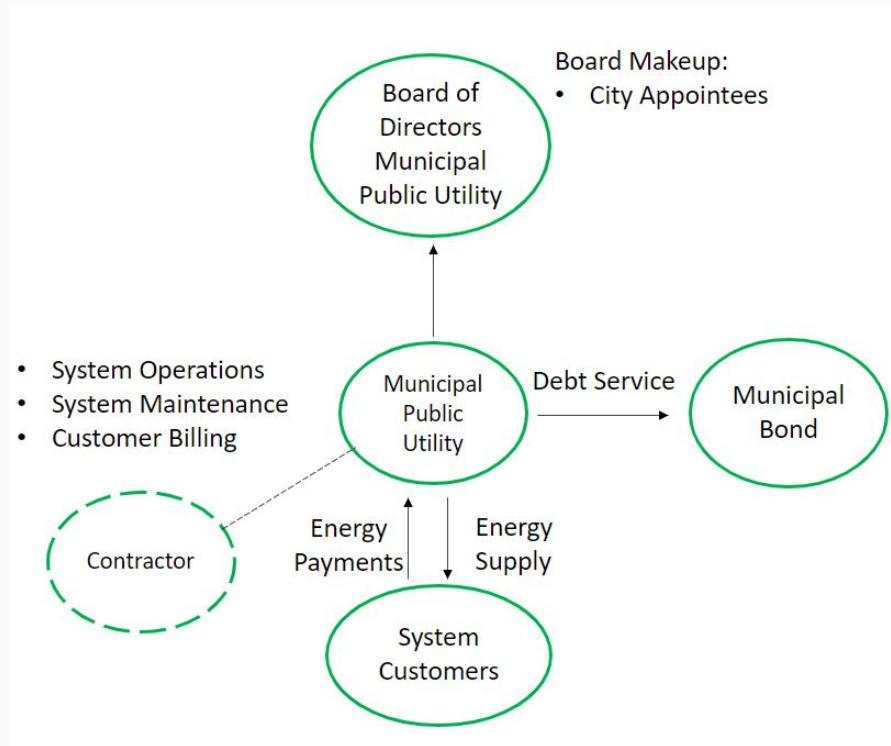
Scale of Control and Risk



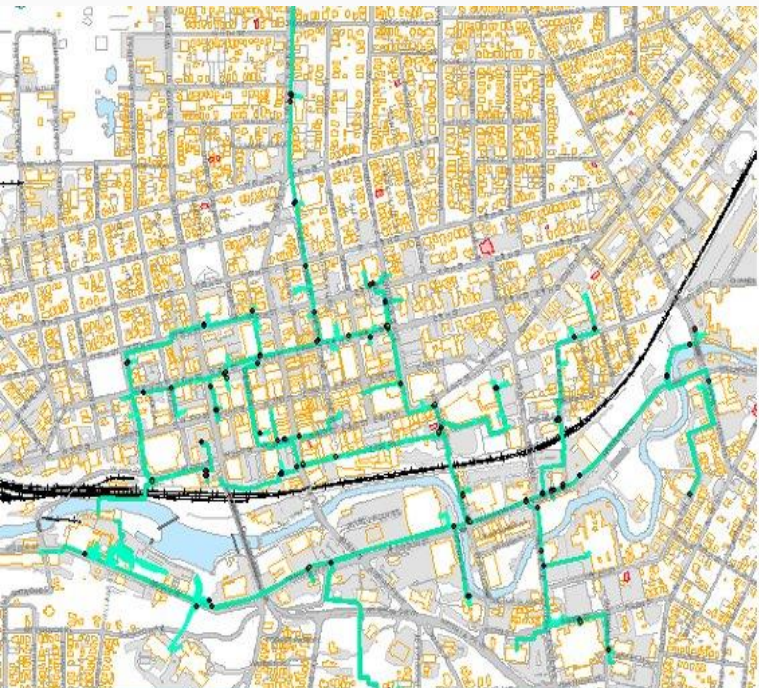
Model #1: Municipally-Owned TEN

TEN is owned, operated, maintained, and managed by the municipality

- Municipality has full control of governance
- Municipal employees are used for routine operations, maintenance, and billing with outside contractors as needed
 - Best fit for areas w/ municipal water, sewer, or electric utilities
- Financing for the system may come from municipal bonds, grants, and IRA direct pay incentives
- Not obligated to generate profits



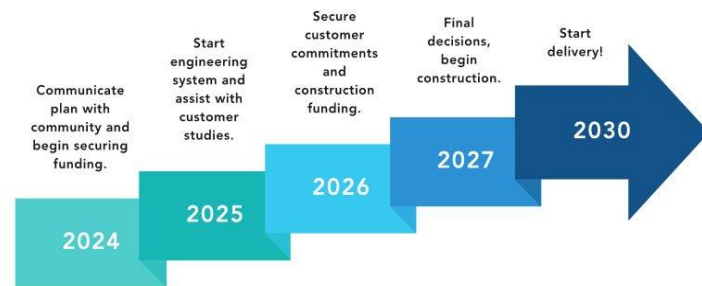
Example: Jamestown



Who has
District Heating
today?

- Ø 70 Customer Facilities
- Ø Over 700 apartments
- Ø Primarily disadvantaged community census tracts
- Ø Serves not-for-profit organizations, churches, public school buildings, regional hospital, small businesses

Anticipated timeline for Jamestown project:



Model #1: Municipally-Owned TEN

Advantages

- Full control of all assets and revenues
- Simple model – reduced legal complexity
- Single owner (no outside equity cost)
- Able to use existing municipal assets for maintenance or billing, and reinvest savings/revenue

Disadvantages

- The municipality is responsible for funding all of the development costs
- The municipality assumes all of the risk associated with development and performance of the asset
- The municipality must be prepared to be fully regulated as a utility
- Requires strong financial, technical, administrative capabilities

Pause for Questions



For consideration:

As of today, there are no electric or gas municipal utilities in Westchester – but we do see county and municipally-owned water and wastewater management systems.

Could you envision a system like Jamestown's in Westchester? Why or why not?

Model #2A: Multifamily Cooperative TEN

- Structure

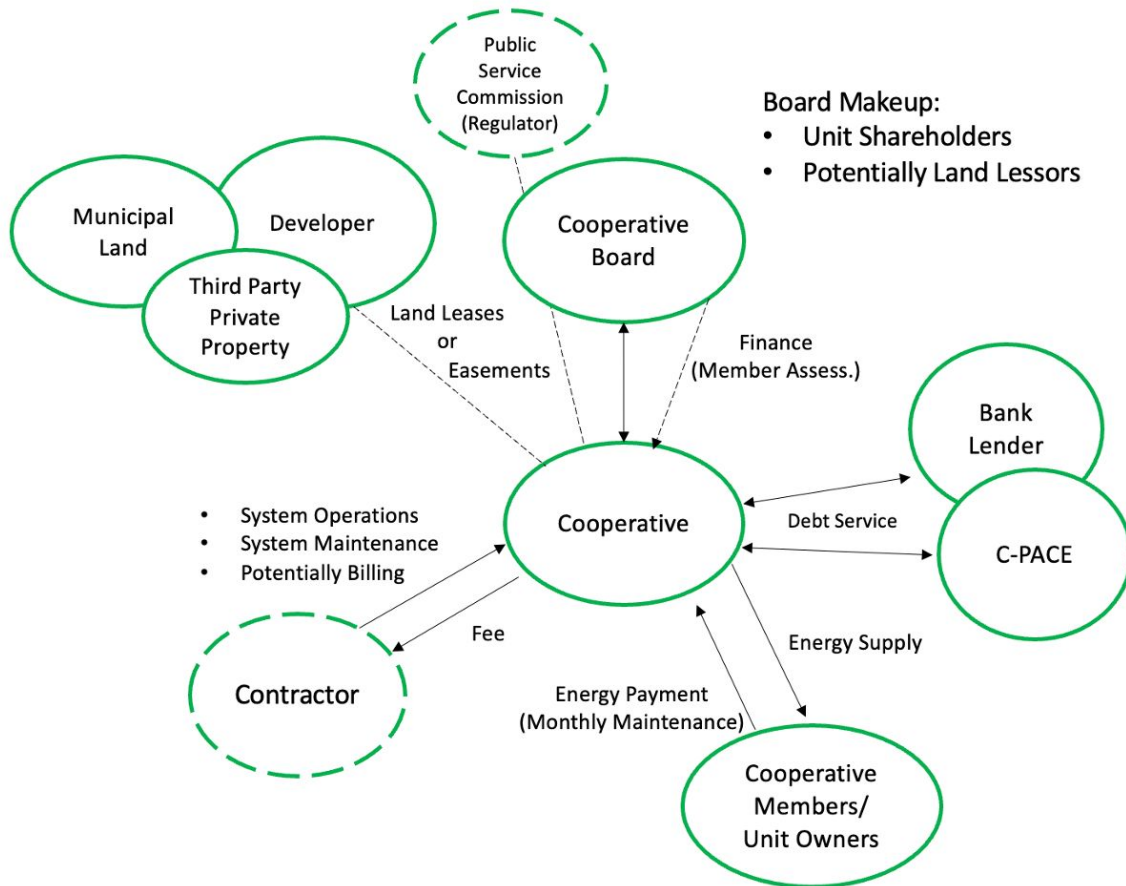
- Cooperative owns system (borefields, distribution, shared heat pumps, metering)
- Members = multifamily owners/shareholders
- O&M: third-party contractor (or internal)

- Financing & Tax Credits

- Funded by bank loans, C-PACE, or member assessments
- May qualify for IRA tax credits & direct pay (if tax-exempt or nonprofit)

- Regulation

- May be exempt from PSC oversight if no retail sales, otherwise requires exemption under UTENJA



Model #2A: Multifamily Cooperative TEN

Advantages

- Resident control and equity ownership
- Stable rates
- Scalable within building clusters
- No private utility involvement
- Promotes Community Resilience

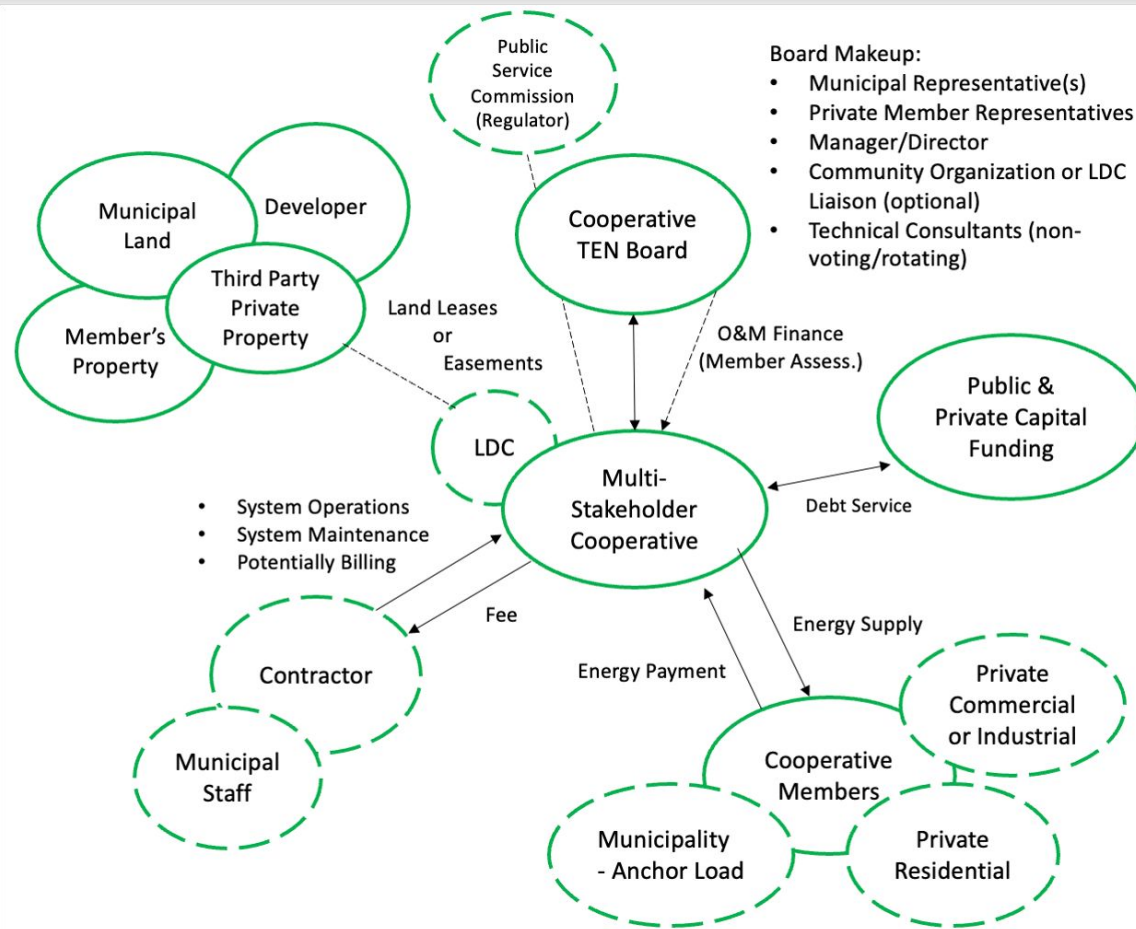
Disadvantages

- Governance complexity
- Financing as scale grows and limited capacity for expansion
- May face PSC regulation if not clearly exempted
- Municipal role limited

Model #2B: Multi-Stakeholder Cooperative TEN

Structure

- Municipally-anchored system
- Starts as public transitions or co-develops system into a cooperative model with other private or institutional members/users
- MS Coop owns system; incorporated under coop, nonprofit, or LDC law
- O&M via third-party or mixed (e.g., city staff + contractors)



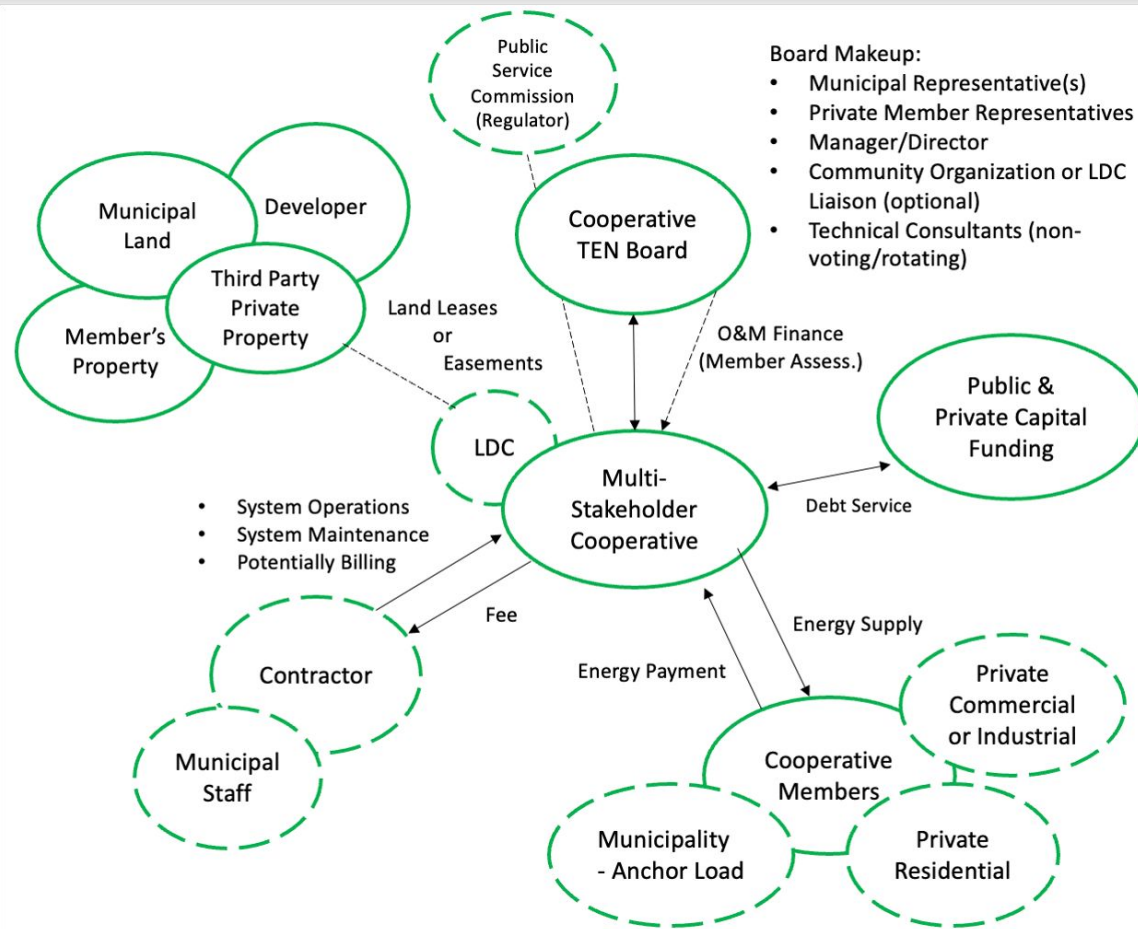
Model #2B: Multi-Stakeholder Cooperative TEN

Financing & Tax Credits

- Capital Funding Options:
 - Muni bonds, NYSEERDA, IRA Direct Pay (if eligible)
 - Member Equity Contributions
 - C-PACE/Green
 - Bank/Commercial Loans
 - LDC-Issued Bonds (if applicable)
- Expansion: Member Equity, Grants, Loans

Regulation

- PSC jurisdiction likely unless exempted under UTENJA



Model #2B: Multi-Stakeholder Cooperative TEN

Advantages

- Municipal anchor tenant ensures system viability
- Combines public leadership and community governance in a single independent governance model
- Flexible, expandable model
- Off-balance sheet for municipalities

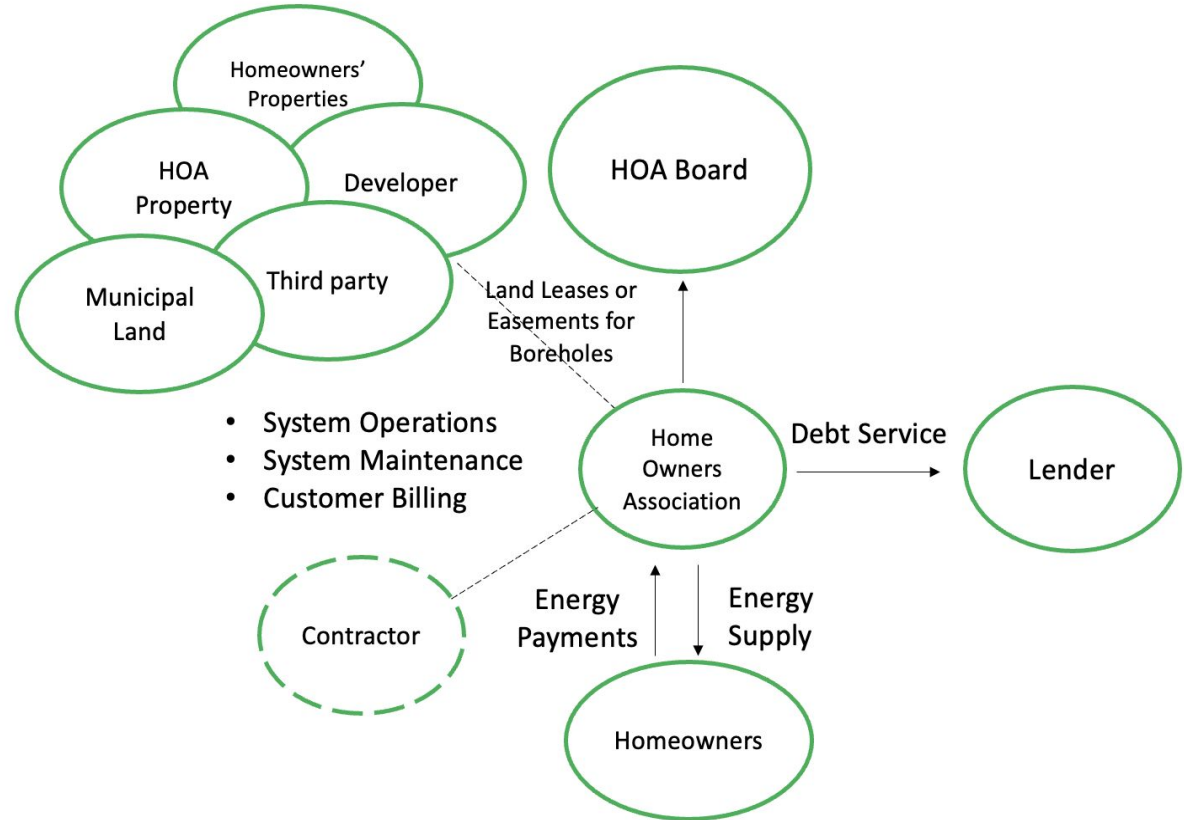
Disadvantages

- Legal complexity in infrastructure transfer
- Must maintain arms-length customer contracts
- Risks aligning procurement with coop governance
- Mixed ownership can complicate IRA eligibility
- Subject to PSC regulation unless exempted

Model #3: HOA-Owned TEN

Structure

- A TEN system owned by a Homeowners Association (HOA) or building owner consortium
- The HOA owns the geothermal system up to the Homeowner-owned elements
- O&M: Handled internally or through third-party service contracts
- Governance by elected HOA or board members
- Residents are members, not third-party customers



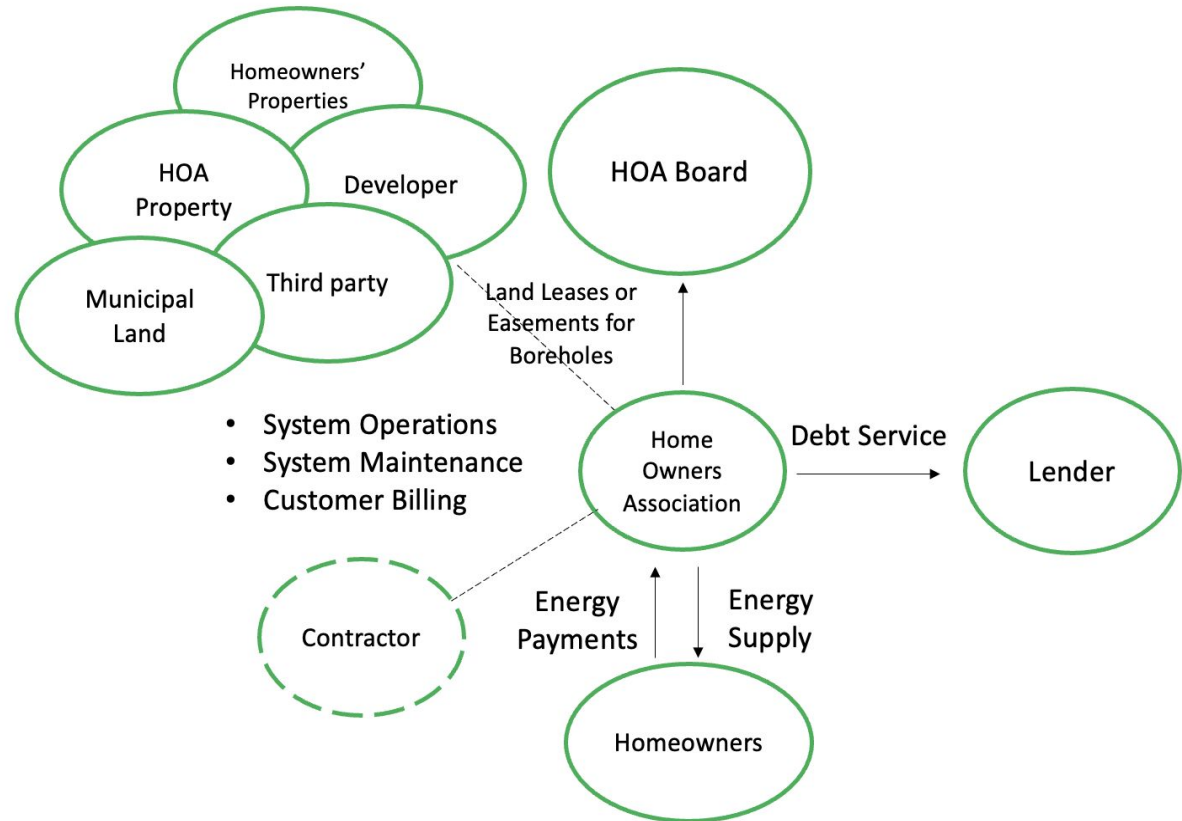
Model #3: HOA-Owned TEN

Financing:

- Limited options (Member Dues or Loans)
- May qualify for IRA tax credits & direct pay (if tax-exempt or nonprofit)

Regulation

- May be exempt from PSC oversight if no retail sales, otherwise requires exemption under UTENJA



Model #3: HOA-Owned TEN

Advantages

- Localized Control
- Custom Fit
- Streamlined BillingRegulatory Flexibility: May qualify for PSC exemption if service is non-retail and within property lines
- Community Buy-In: Strong alignment of energy decisions with resident priorities

Disadvantages

- Governance Burden: HOA must manage technical, legal, and financial decisions
- Limited Scalability: Harder to expand system beyond the original site or ownership boundary
- Financing Complexity: Fewer options for project finance; relies on dues or loans
- Uncertain PSC Status: May require exemption under UTENJA, depending on service scope
- Maintenance Risk: Long-term repair and upgrade costs fall on resident-owners

Pause for Questions



For consideration:

Do you think your municipality may be to exploring these “emerging” ownership models?

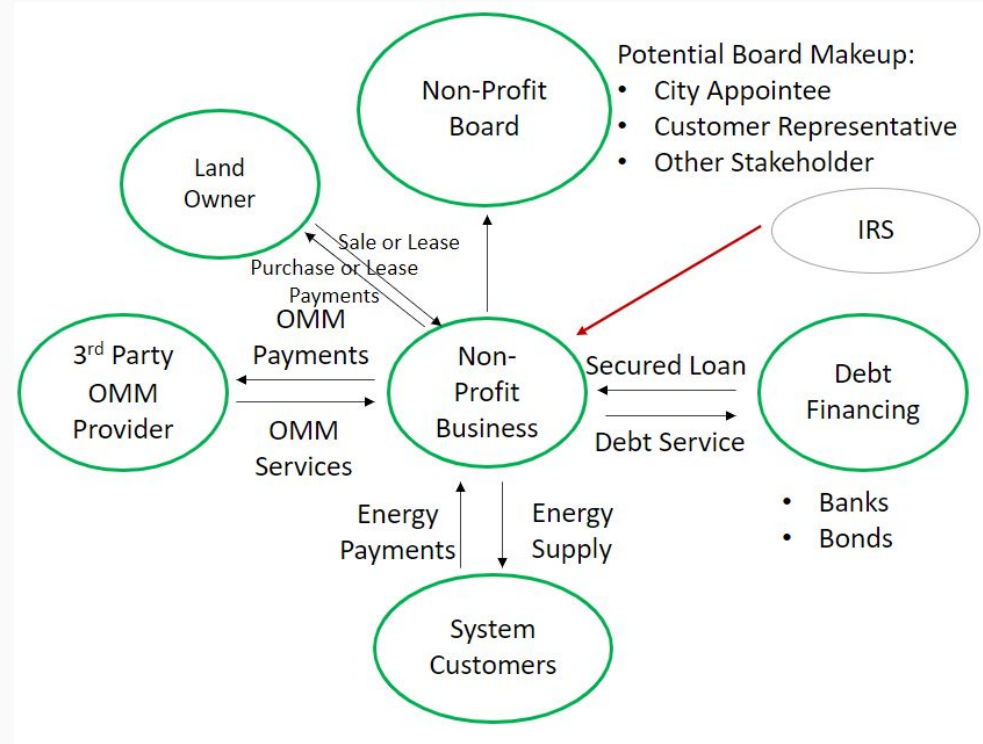
If so, what might be a motivating (or de-motivating) factor?

- Scalability
- Ensuring community buy-in
- Economics
 - Use of financing and financial resources
- Distribution of responsibilities, based on expertise and capacity

Model #4: Captive Non-Profit TEN

TEN is owned by a 501(c)(3) nonprofit that may or may not operate equity or employees

- Can seek debt financing from a variety of sources (bonds, green banks, private entities, etc.) in search of the lowest cost of capital
- The TEN is operated, maintained, and managed by a specialty 3rd party provider
- Municipality may participate in governance through the non-profit board



Example: Ever-Green Energy's Systems

District Energy St. Paul: nonprofit utility providing heating and cooling services

St. Paul Port Authority: owner, master developer of 112-acre, redevelopment project

Ever-Green: to provide OMM services, complete installation of district geothermal system (aquifer thermal energy storage - first of its kind at a commercial scale)

The Heights Community Energy: new NGO that will own and operate TEN



Credit: The Heights St. Paul, District Energy St. Paul

Model #4: Captive Non-Profit TEN

Advantages

- Involvement of a non-municipal entity unlocks lender agnostic debt financing options
- Relatively simple model
- Independent governance, while allowing municipality to retain some control through the non-profit board
- Eligible for IRA tax credits

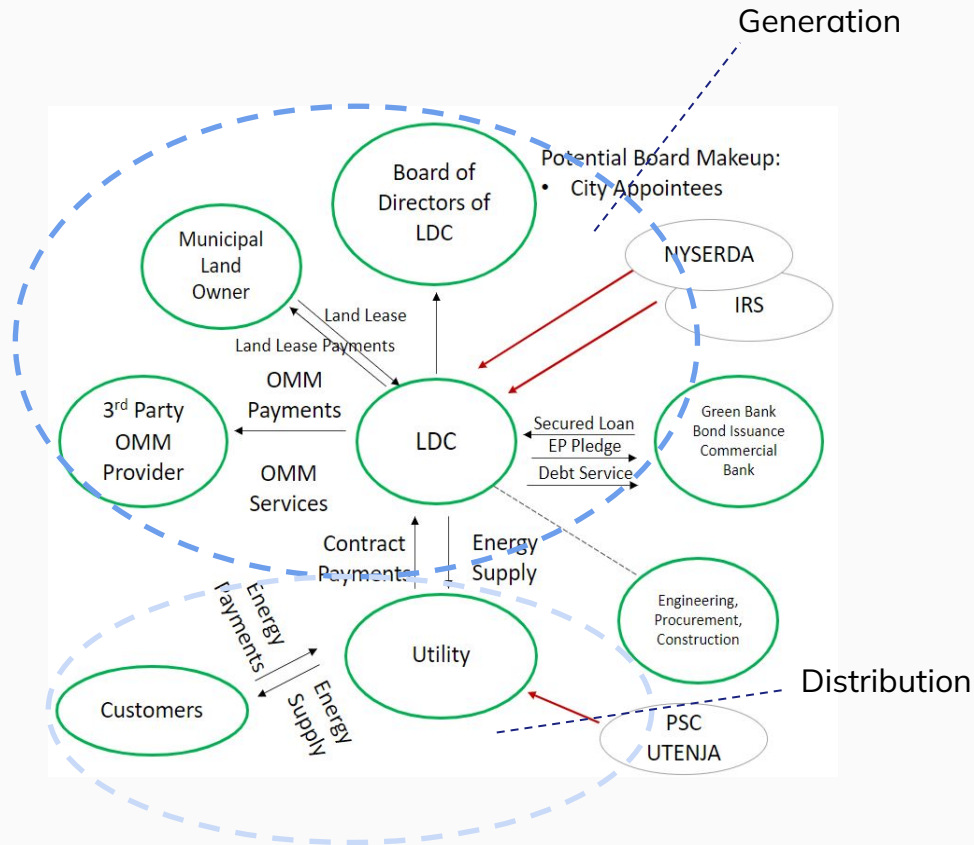
Disadvantages

- Revenue is given up through the 3rd party OMM provider and debt service
- When considering NYS laws and regulations, the non-profit must be prepared to be fully regulated as a utility (unless exempted)

Model #5: Hybrid Municipal TEN

Municipal-utility model where ownership of generation is separate from distribution. A Local Development Corporation (LDC) generates/sources the heat and the utility is responsible for delivering it to customers and billing for it

- The TEN is operated, maintained, and managed by a specialty 3rd party provider
- LDC – Utility contract scalable fee paid to LDC with commitment to maintain quality of service, covers debt service, LDC admin & overhead, and land lease payments



Model #5: Hybrid Municipal TEN

Advantages

- Separation of generation from distribution means that the municipality (through an LDC) is only responsible for generating the thermal resource – a utility partner can deliver it to individual customers
- Doesn't require the LDC to be regulated as a utility
- Leverages strengths of public and utility sectors
- Can be scalable

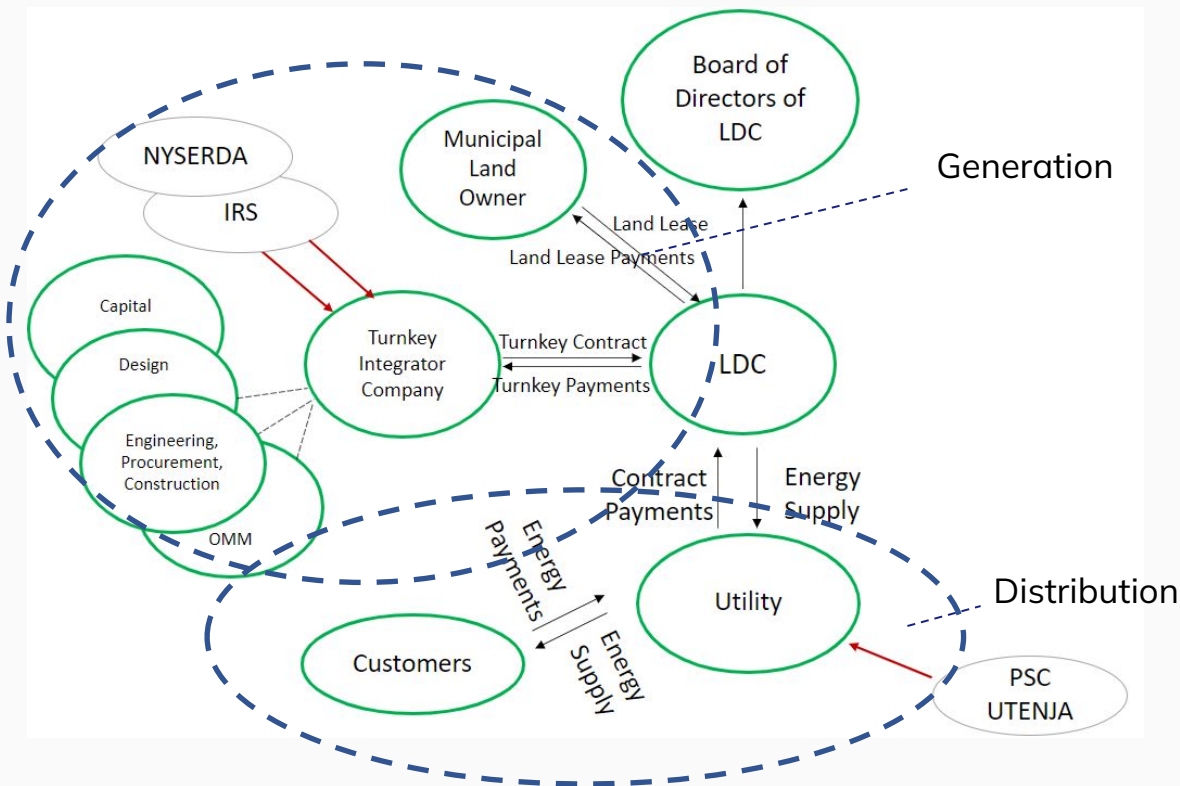
Disadvantages

- Revenue is given up through the 3rd party OMM provider, the utility contract, and debt service
- May be ineligible for IRA tax credits
- Lots of complexity in contract development and governance

Model #6: DBOOM/DBOOT

Design, Build, Own, Operate,
Maintain/Transfer

- As with the previous model, generation and distribution are separated
- Minimal control and involvement from the municipality
- Developer delivers system end-to-end



Model #6: DBOOM/DBOOT

Advantages

- Low or no upfront cost to the municipality - private sector bears the risk
- Can allow for accelerated development
- Flexible contracting

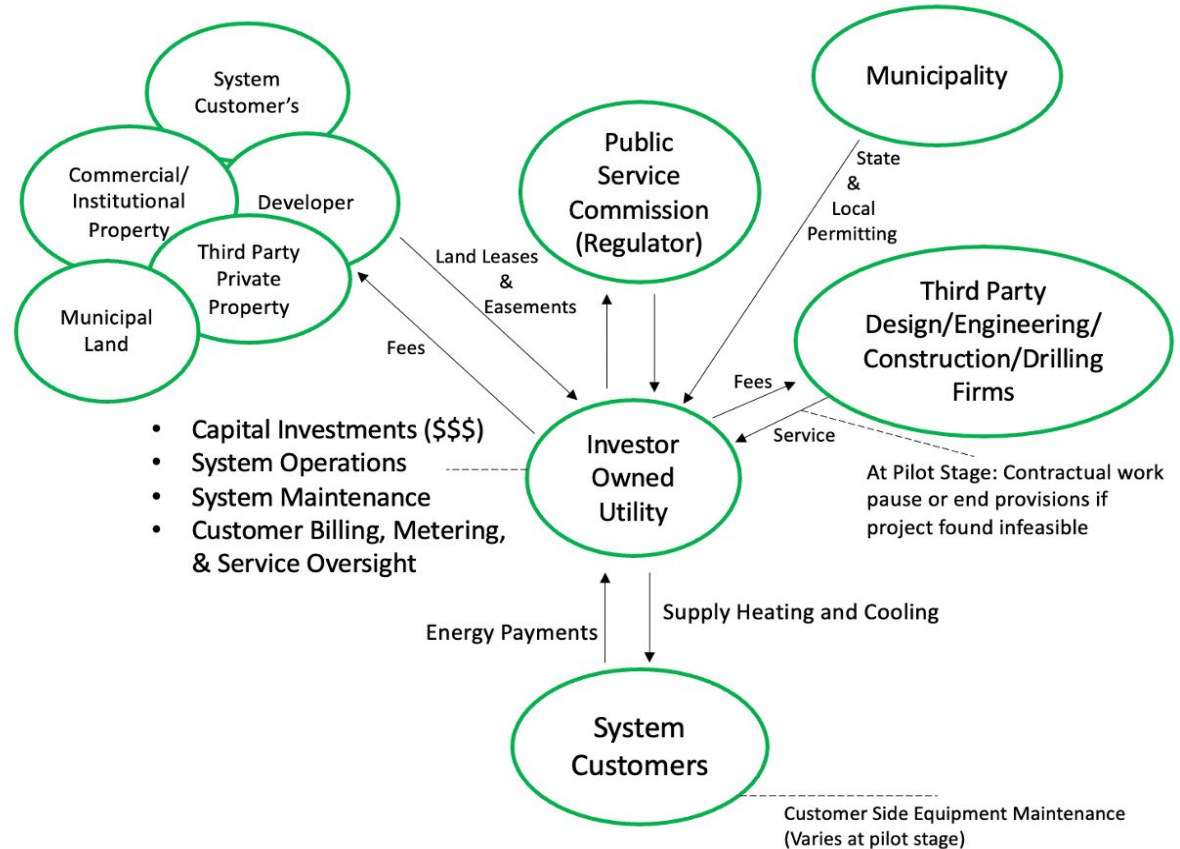
Disadvantages

- Almost all of the system revenue is given up by the municipality
- May be ineligible for IRA credits
- Reduced local control in the early stages

Model #7: Investor-Owned Utility Ownership

The Investor-Owned Utility:

- Funds system through capital investments
- Owns & operates core infrastructure
- Oversees billing, metering, customer service
- Contracts with 3rd-party firms for design, drilling, construction services



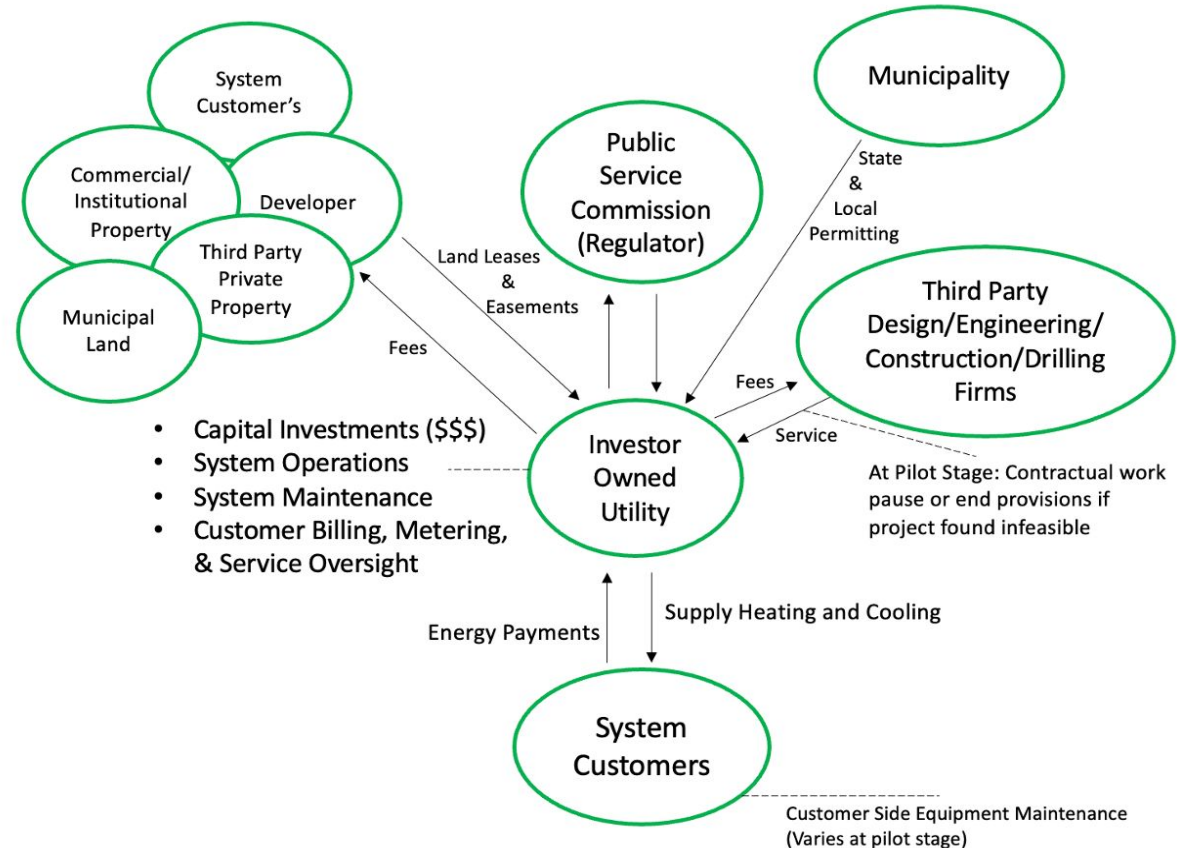
Model #7: Investor-Owned Utility Ownership

System Customers:

- Retrofits/conversions often subsidized during pilots
- Exit flexibility included in pilot terms
- Rate designs remains in development. Pilots include capped BTU rates, flat service fees, and more

Regulations, Permits, Land Approvals:

- Land access via leases and/or easements
- Permits issued by municipal and state agencies
- Regulated by PSC per UTENJA
- Utility retains full governance and control



Model #7: Investor–Owned Utility Ownership

Advantages

- Fully leveraging utility scale and experience
- Guaranteed oversight from PSC, collective learning
- Simplifies implementation

Disadvantages

- May be ineligible for IRA tax credits
- As we move away from pilots/”proofs of concept”, may see limited opportunities for local governance and reinvestment

Pause for Questions

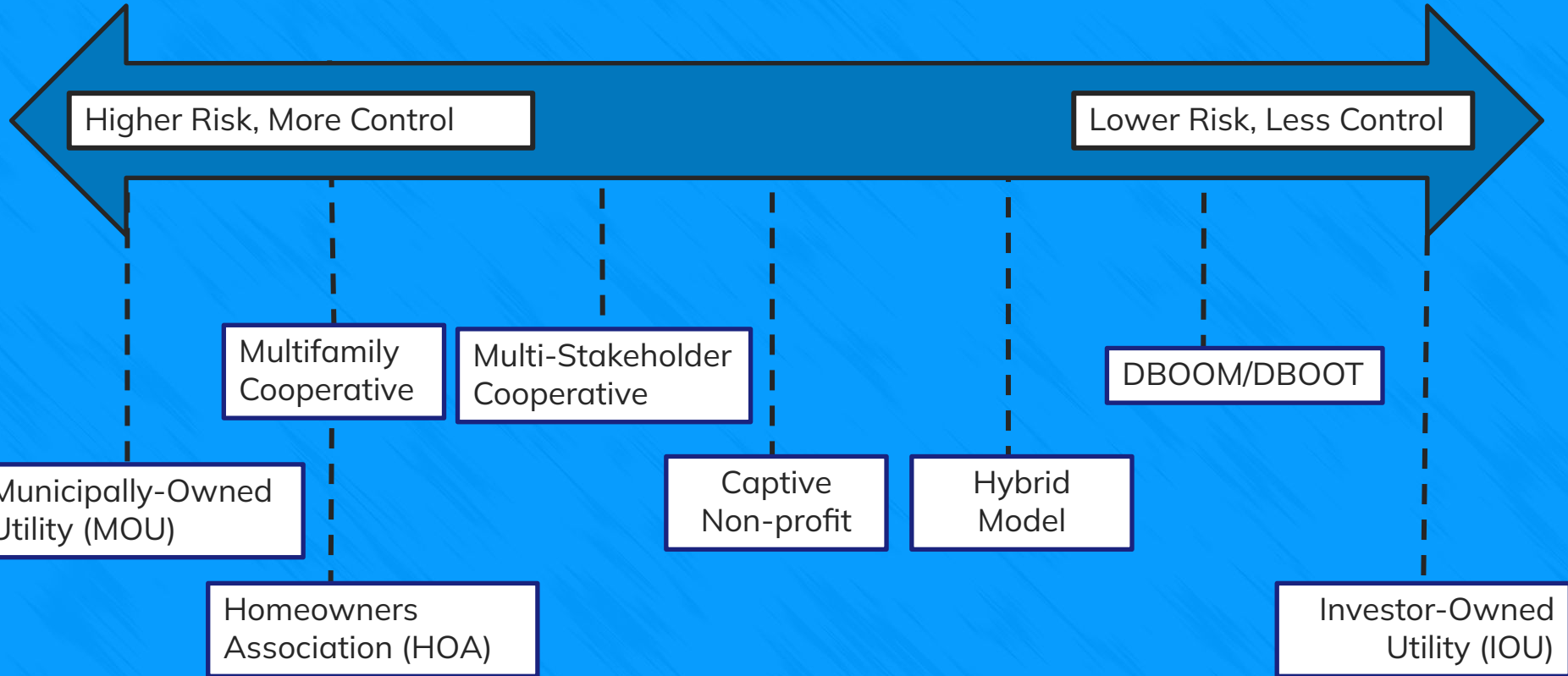


For consideration:

The last few ownership models we discussed are more layered in terms of overall structure and the types of stakeholders involved.

Do you think municipalities would be more hesitant about pursuing these ownership models, given this added complexity?

Scale of Control and Risk



Planning Ahead for 1-on-1s

Based on what we've covered so far, what topics would you like to discuss further during our 1-on-1s?



Could include:

- Additional clarity on specific ownership structures
- Laws and regulations: where things are now in NYS, what other states are pursuing...
- Assistance with identifying potential sites for an MTEN / TEN

Thank you!

