

Community Alternatives

Building Local Resilience Instead of Locking In New Fossil-Fuel Infrastructure



Town supervisors have more options than choosing between “build the pipeline” and “do nothing.” Communities around New York and the country are demonstrating that local governments can improve energy security, reduce costs, create economic opportunities, and strengthen resilience by investing in distributed energy, energy efficiency, waste-to-energy systems, and locally appropriate infrastructure.

The question for local leaders is not simply How can we bring more fuel through our communities? It is also:

How can we make our communities stronger, more energy-secure and more economically resilient for the next 20–30 years?

Examples of Community Resilience

1. Turn Waste Into Energy - Landfill Gas Recovery

Landfill methane is a wasted energy resource that can be captured and used to generate electricity, provide heat, or be upgraded into renewable natural gas.

The U.S. EPA reports that landfill-gas projects can provide communities with local energy, jobs, revenue and cost savings, while reducing methane emissions. Landfill gas can be used in engines, turbines and microturbines or upgraded for other applications.

Local opportunity to investigate:

Schoharie County itself currently has no active solid-waste landfill; county waste is transported to facilities outside the county. That does not eliminate the opportunity for landfill-gas partnerships. Towns and the County could investigate whether existing regional landfill facilities receiving local waste offer opportunities for energy recovery, revenue-sharing or other partnerships.

Local precedent: The first case study is an application of landfill gas recycling methods at Freshkills Landfill in New York. The project is based on a hydroponic greenhouse called H2Gro. This greenhouse is built on 7.5 acres and it is able to produce 10,000 tons of fresh veg a day.

<https://landfill-gas.com/landfill-power-plant>

2. Anaerobic Digesters: Turn Local Organic Waste Into Energy

Anaerobic digestion uses microorganisms to break down organic material such as farm manure, food waste, wastewater solids and fats, oils and grease. The process produces biogas that can be used to generate electricity and heat or upgraded into renewable natural gas, while the remaining material can potentially be reused as a soil amendment or fertilizer.

For a rural agricultural region like the Schoharie Creekshed, this deserves serious feasibility study.

Potential local feedstocks could include:

- Dairy and livestock manure
- Food-processing waste
- Grocery and institutional food waste
- Restaurant food waste
- Fats, oils and grease
- Wastewater treatment solids
- Agricultural byproducts
- Other locally available organic materials

New York example: Patterson Farms in Auburn operates an anaerobic digester that processes manure and food waste and generates more than 3 million kWh of electricity annually. The farm also receives revenue from food-waste tipping fees, electricity and other products.

<https://www.epa.gov/agstar/project-profile-patterson-farms>

Quasar Energy Group, headquartered in Independence, Ohio, provides another model worth investigating. Its facilities work with municipalities, farms and industry to convert organic waste into renewable energy and fertilizer. Its project portfolio includes facilities in Buffalo and Niagara, New York, as well as numerous municipal and agricultural projects elsewhere.

<https://quasareg.com/projects-2/>

Question for local leaders:

What organic materials are currently being hauled out of our community, and could some of that material instead become a local energy and agricultural resource?

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3. Community Solar — Use Land and Buildings We Already Have

Solar does not have to mean clearing large areas of productive farmland. Communities can investigate solar installations on:

- Municipal buildings
- Schools
- Warehouses
- Commercial rooftops
- Parking lots and parking structures
- Brownfields
- Former industrial sites
- Landfills and capped landfill sites
- Wastewater treatment facilities
- Other already-disturbed land

New York's Community Distributed Generation program allows multiple customers to receive credits from a shared solar project, giving residents, businesses and municipalities access to solar without each customer needing to install panels on their own property. New York has become the country's leading community-solar market, with more than 1 GW of community solar installed and operating.

Local example: The City of Troy's 2.6-MW solar installation on landfill property demonstrates how previously used municipal land can become an energy asset.

<https://www.news10.com/news/local-news/troy-completes-solar-project-expansion-at-former-landfill-site/>

Question for local leaders:

Before approving new energy corridors, have we mapped every suitable rooftop, parking area, brownfield, landfill and other disturbed site in our community?

4. Small-Scale Hydropower — Look at Existing Water Infrastructure

The region's waterways provide another resource worth investigating, but this does not mean building new large dams. The U.S. Department of Energy identifies opportunities to add small hydropower generation to existing dams, water infrastructure, canals, conduits and other already-developed sites. Less than 3% of the nation's more than 90,000 dams currently generate electricity.

New York has identified more than 1,700 existing non-powered dams as potential sites for hydropower assessment. Adding generation to existing infrastructure can avoid some of the costs and impacts associated with constructing an entirely new site.

Local investigation could include:

- Existing dams
- Water-control structures
- Municipal water infrastructure
- Wastewater outfalls
- Existing conduits and channels
- Historic mill sites
- Other locations with sufficient flow and elevation

Important: Each site would require site-specific ecological, engineering and economic analysis. The goal is to identify opportunities where generation can be added without creating new barriers to fish passage or damaging stream ecosystems.

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5. Energy Efficiency Is an Energy Resource

One of the cheapest sources of additional energy is the energy a community does not have to purchase. Municipalities can investigate:

- Municipal building weatherization
- Heat pumps
- LED street lighting
- Building controls and energy management
- High-efficiency water heating
- Municipal fleet electrification
- Energy audits
- Wastewater-treatment efficiency
- Shared purchasing programs
- Residential and small-business efficiency programs

NYSERDA's community case studies show how towns, cities and counties can use municipal buildings, landfills, wastewater plants, transportation systems and other public assets as platforms for clean-energy improvements.

The economic argument: Every dollar a town, school or household does not have to spend on wasted energy is a dollar that can remain available for other local needs.

Think Community-Scale, Not Just Grid-Scale

A major transmission or pipeline project is designed around regional infrastructure. Local governments can also think about infrastructure at the scale of the community:

Town → Village → School → Farm → Business → Household

A resilient energy system may ultimately consist of many smaller pieces, rather than dependence on one large piece of infrastructure.

Solar + Storage + Efficiency + Biogas + Existing Hydropower + Electrification

Communities Already Adapting

Troy, NY — 2.6-MW solar installation on former landfill property.

Auburn, NY — Farm-based anaerobic digestion producing more than 3 million kWh annually from manure and food waste, with multiple revenue streams.

Buffalo & Niagara, NY — Anaerobic digestion projects designed to process approximately 35,000 tons of biomass annually and generate approximately 1 MW of combined heat and power.

Barstow's Longview Farm, MA — Farm and food-industry partnership turning manure and food waste into electricity, heat and fertilizer.

Brunswick Landing, ME — Biogas facility producing up to 1 MW of electricity while processing biomass and producing fertilizer.

The question facing local governments is bigger than whether to accept one proposed project.

What infrastructure will make our communities stronger 10, 20 and 30 years from now?

A community can invest in infrastructure that:

uses resources already here → creates local economic activity → improves resilience → reduces waste → keeps energy dollars closer to home.

The first step is simply to investigate what is possible.

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What Could a Town Do Now?

Ask the Questions Before Choosing the Project

1. Inventory local energy resources - What do we already have?

- Sun
- Water
- Farms
- Organic waste
- Municipal buildings
- Brownfields
- Landfills
- Parking areas
- Existing utility infrastructure

2. Inventory local energy demand - Where are we spending the most money?

- Municipal buildings
- Schools
- Wastewater facilities
- Street lighting
- Transportation
- Heating
- Commercial buildings

3. Identify projects that keep money circulating locally - Could energy expenditures become:

- Local jobs
- Farm revenue
- Municipal savings
- Property-owner income
- Local tax revenue
- Lower household energy bills
- New businesses and services

4. Talk to communities that have already done it

Local officials do not have to reinvent the wheel. NYSERDA maintains a statewide collection of community clean-energy case studies, while EPA maintains extensive databases and resources on landfill gas and anaerobic digestion projects.

5. Conduct a local feasibility study

Before committing to major infrastructure, ask independent engineers and energy planners to evaluate a portfolio of alternatives and compare:

- Capital cost
- Operating cost
- Expected energy production
- Local economic benefits
- Tax implications
- Infrastructure requirements
- Environmental impacts
- Job creation
- Long-term resilience
- Maintenance requirements
- Financing and available incentives

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Resources for Town Supervisors

NYSERDA — Community Solutions Case Studies

<https://www.nyserdera.ny.gov/About/Publications/Featured-Case-Studies/Community-Solutions>

U.S. EPA — Anaerobic Digestion Resources

<https://www.epa.gov/anaerobic-digestion/anaerobic-digestion-resources>

U.S. EPA — Anaerobic Digestion Project Database & Results

<https://www.epa.gov/anaerobic-digestion/anaerobic-digestion-facilities-processing-food-waste-us-2022-2023>

U.S. EPA — Landfill Methane Outreach Program

https://www.epa.gov/sites/default/files/2021-05/documents/lmop_onepager.pdf

U.S. Department of Energy — Hydropower Program

<https://www.energy.gov/cmei/water/hydropower-program>

ACORE — American Council on Renewable Energy

<https://acore.org/>

Quasar Energy Group — Anaerobic Digestion Projects

<https://quasareg.com/projects-2/>