

ENERGY EFFICIENCY AT NEMT AND WHS

Both schools are being designed to achieve exceptional energy performance and qualify for an additional **2% Massachusetts School Building Authority (MSBA) reimbursement.**

Key Features Include:

- ✓ LEED-S Certified design standards
- ✓ More than 20% greater energy efficiency than Massachusetts baseline requirements
- ✓ Variable Refrigerant Flow (VRF) heat pump heating and cooling systems
- ✓ Energy-efficient LED lighting
- ✓ Enhanced insulation and high-performance building materials
- ✓ Advanced electric and water metering systems
- ✓ Full structural and electrical support for solar energy systems
- ✓ Electric vehicle charging infrastructure

BUILDING A MORE RESILIENT FUTURE

The WMGLD Energy Park represents a strategic investment in Wakefield's future by:

1. Supporting affordable electric rates for residents and businesses.
2. Advancing clean energy and sustainability goals.
3. Reducing construction costs for local schools.
4. Lowering long-term operating expenses.
5. Providing hands-on educational opportunities for students.
6. Expanding electric vehicle charging infrastructure.
7. Improving energy reliability and resiliency for critical community facilities.

Wakefield Municipal Gas & Light Department

Local Power. Local Control. Local Commitment.

Investing today in a cleaner, more reliable, and more affordable energy future for Wakefield.



ENERGY PARK

An Innovative, Modern Microgrid for Wakefield



Powering Wakefield's Future

The Wakefield Municipal Gas & Light Department (WMGLD) Energy Park is a forward-thinking energy project designed to support Wakefield residents, WMGLD ratepayers, local schools, and the environment. By combining renewable energy, battery storage, and reliable backup generation, the Energy Park will help ensure a resilient, sustainable, and cost-effective energy future for our community.

A SMARTER ENERGY SOLUTION FOR WAKEFIELD

The Energy Park will function as a **microgrid** interconnected with:

- Wakefield Municipal Gas & Light Department's electric system
- The new **Northeast Metro Tech (NEMT)**
- The new **Wakefield High School (WHS)**

Both Schools Will Feature:

- ✓ All-electric heating and cooling systems
- ✓ 300 kW roof-mounted solar arrays at each school
- ✓ Five electric vehicle charging stations at each school
(10 EV charging connections per school)

INSIDE THE ENERGY PARK

Located on **Hemlock Road**, the Energy Park will include:

Battery Energy Storage System (BESS)

- 5 MW / 22MWh battery storage unit
- Charged through energy generated by the schools' solar arrays

Clean Natural Gas Generation

- One high-efficiency natural gas generator
- Replaces two separate diesel generators previously required for the schools

Reliable Emergency Power

- The battery system, supported by solar and the generator, will provide emergency power to both schools
- Capable of serving as the primary power source during rare, extended outages

Peak Shaving Technology

- Battery and generator resources will help reduce demand during peak energy usage periods
- Supports WMGLD's efforts to manage rising energy costs and maintain affordable electric rates

BENEFITS OF THE ENERGY PARK FOR WAKEFIELD

Keeping Electric Rates Affordable

The combination of solar energy, battery storage, and efficient generation helps WMGLD reduce peak power costs and support the goal of maintaining low electric rates for all customers.

Supporting Sustainability Goals

The project promotes electrification, reduces carbon emissions, and supports Massachusetts' goal of achieving net-zero emissions by 2050.

Lower Construction Costs

By replacing two separate diesel generators with a centralized energy solution, the project is expected to save approximately \$1.2 million per school in construction costs.

Reduced Operating Expenses

The solar installations will significantly reduce electricity costs for both schools through a partnership with WMGLD.

Educational Opportunities

Students at NEMT and WHS will have unique opportunities to learn about:

- Renewable energy
- Battery storage technology
- Energy management systems
- Electric vehicle infrastructure
- Sustainability and environmental stewardship

Electric Vehicle Infrastructure

Each school will receive:

- 5 EV charging stations
- 10 total charging connections

