

Warwick Administrative Costs for Managing the Decarbonization Accelerator Grant

Administrative tasks for the proposed projects will be provided by the Buildings and Energy Manager.

Tasks include:

Tracking projected vs actual project costs; managing procurement processes; reviewing and writing progress reports, reimbursement requests, and quality assurance reporting upon each project's completion; turning in reimbursement requests to the town; documenting and tracking both permitting and utility inter-connection as well as rebate requirements; participating in project calls; providing building access for hired work; reporting developments, reimbursement requests, and progress to the Buildings and Energy Committee and the Town Coordinator; and writing and submitting quarterly and final reports for the DOER.

To compensate for the necessary administrative work, Warwick is requesting that an additional 3% of our total project costs be covered by the accelerator grant at the sum of \$24,000.

Warwick Community School Climate Leaders: Grant Application

Project Title

Warwick Community School Climate Leaders: Student Data, Educator Capacity, and Community Engagement for Net Zero 2050

1. Project Overview and Purpose

Warwick has committed to becoming a Net Zero community by 2050, eliminating fossil fuels from municipal operations and significantly reducing energy use and emissions. Municipal data indicate that approximately 40% of energy use comes from buildings and about 60% from vehicles, meaning both sectors must be transformed to meet Net Zero goals. This project positions Warwick Community School (WCS) as a key partner in that effort, using student-led data collection, educator learning, and community engagement to build a strong foundation for long-term decarbonization.

Warwick Community School's vision is to provide innovative, engaging, and hands-on education through nature-centered, place- and project-based learning on its 25-acre woodland campus. The school is committed to project-based learning in which students pursue personalized investigations that connect local issues to global environmental and social justice questions. This Climate Leaders project is a direct expression of that mission: students will investigate how Warwick uses energy in

buildings and vehicles, how the community understands climate challenges, and what actions residents and town leaders might take to move toward Net Zero.

During the 2026–2027 school year, third–fourth graders and fifth–sixth graders will participate in a structured program across 25 Fridays, organized into four phases: (1) knowledge-building, (2) survey development, (3) data collection and analysis, and (4) public presentation and recommendations. The project will be led by an In-School Climate Ambassador, supported by classroom teachers and instructional assistants, and enriched by visiting technical experts. It aligns with state-level decarbonization plans and the Climate Leader Communities program, which focus on planning, technical support, and community engagement to eliminate fossil fuels from municipal operations.

The proposal requests **\$100,000** to:

- Build student capacity as “climate data leaders.”
 - Deepen educator knowledge and curriculum integration around energy, climate, and data literacy.
 - Generate local data on community knowledge and attitudes about building and vehicle energy use.
 - Lay groundwork for future building energy dashboards and community “easy-lift” climate actions (no-idling, tree planting, and building efficiency education) without committing to implementation in this grant period.
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2. Standards Alignment

This project is deliberately designed to align with Massachusetts curriculum frameworks in Science, Technology and Engineering (STE), English Language Arts (ELA), and Mathematics, so that Climate Leader goals advance core instructional priorities as well as municipal decarbonization.

Science, Technology & Engineering (STE) – Climate Education

Massachusetts climate education guidance emphasizes interdisciplinary climate standards that help students understand human impacts on the carbon cycle, global warming’s effects on water and ecosystems, and climate justice. In this project:

- Students study local building efficiency measures—mini-splits in every classroom, window inserts (“wind certs”), insulation, and air sealing—as concrete examples of how human choices can reduce energy use and emissions in their own school building.
- Students use the school’s 25-acre property (vernal pool, bog, forest, and fields) as outdoor learning stations to explore shade and heat, ecosystem services like carbon sequestration, and the impacts of climate change on local environments.
- Field trips to the Highway Department, Town Hall, and library connect learning about transportation, municipal services, and energy use directly to Warwick’s Climate Leader and Net Zero commitments.

These activities align with STE standards focused on energy, climate systems, human impacts, and engineering solutions, while grounding abstract climate concepts in the students’ immediate environment.

English Language Arts – Opinion, Argument, and Communication

The Massachusetts ELA and Literacy Framework emphasizes opinion and argument writing, use of evidence, and speaking and listening in authentic contexts. In this project:

- Students will write opinion and argument pieces that use their collected survey data to support claims about what climate actions should be prioritized in Warwick (e.g., no-idling policies near the school and town buildings, expanded tree planting and shade strategies, and community education about building efficiency).
- Students will prepare and deliver oral presentations of their findings and recommendations at exhibitions of learning and at public meetings such as Selectboard sessions or Town Meeting, practicing academic speaking and listening standards in real civic spaces.
- Students will engage in collaborative discussions with peers, educators, and visiting experts, interpreting technical information and translating it into clear, audience-appropriate messages.

These tasks align with ELA standards for opinion/argument writing, use of data and sources as evidence, and oral communication with authentic audiences.

Mathematics – Data Analysis and Interpretation (Statistics)

Massachusetts mathematics standards for upper elementary grades include representing and interpreting data and understanding measures of center such as mean, median, and mode. In this project:

- Students will design and administer a community survey about energy knowledge and attitudes, then organize responses into tables and graphs using accessible tools such as Google Forms, Google Sheets, and graphing apps.
- Students will calculate simple statistics (e.g., mean, median, mode, and range) and interpret what these measures of center and basic variability show about the community's climate understanding, support, and concerns.
- Students will compare different groups of respondents (for example, families versus staff, or different age groups) and discuss what patterns mean for how Warwick might communicate about buildings, vehicles, and climate actions.

These experiences provide authentic, standards-aligned practice in data representation, interpretation, and basic statistics, directly connected to Warwick's Net Zero planning. Together, the STE, ELA, and math components ensure that this Climate Leader project is not a stand-alone enrichment activity but a core, standards-aligned learning experience that advances WCS's mission and prepares students as informed community members.

3. Project Phases and Activities

Phase 1: Knowledge Building (September–early November 2026; ~7 Fridays)

Fifth- and sixth-grade students (along with third- and fourth-grade peers) will attend presentations and participate in hands-on projects led by local climate leaders and municipal partners. These sessions will introduce:

- Warwick's Buildings and Energy Committee and its role in ensuring the town has a positive, solutions-oriented impact on climate change.
- The town's goal to generate as much energy as it uses (approaching net zero) through solar panels on municipal buildings, window inserts, mini-splits for electric heating and cooling, and improved insulation and air sealing.

- Existing improvements visible in the school itself: mini-splits, solar panels, electric school bus, LED lighting, composting and recycling, and other building upgrades.
- Vehicle energy use and ways to reduce environmental impacts, such as driving electric vehicles, turning off gasoline and diesel engines to avoid idling, and purchasing more efficient town vehicles.

Students will use the school building as a “living laboratory” and the surrounding campus as outdoor learning stations, strengthening their understanding of climate science, energy, and local solutions.

Phase 2: Survey Development (mid November 2026–February 2027; ~6 Fridays)

From December through February, students will develop and disseminate a community survey to determine local knowledge, beliefs, and attitudes about climate change and energy conservation and efficiency initiatives. Drawing from the Knowledge Building phase, students will:

- Develop unbiased survey questions with neutral, specific phrasing that avoids leading language.
- Create a balanced and symmetrical response scale pairing opposite anchors consistently (e.g., 5-point Likert scales).
- Design approximately twenty Likert-scale items plus a space for open-ended comments.

The survey will be made available:

- In paper form at multiple town buildings (school, Town Hall, library, transfer station).
- Online via a Google Form link (shared through the town newsletter and school communications).
- Potentially sent home by students to families, caregivers, and other household members to broaden participation.

Phase 3: Data Collection and Analysis (February–April 2027; ~7 Fridays)

From February through April, students will collect and analyze the survey data. They will:

- Enter responses into digital tools and represent data sets graphically using dot plots, histograms, and box plots, as appropriate to grade level.
- Apply the dataset to their study of mean, median, mode, and range, comparing different ways to aggregate and summarize data.
- Look for patterns and trends that illuminate community understanding and attitudes, including areas of strong support, misunderstandings, and questions or concerns that may require future outreach.

Students will connect these mathematical and analytical findings to Warwick's climate and decarbonization priorities, considering where additional communication or engagement may be most helpful.

Phase 4: Data Presentation and Recommendations (May–June 2027; ~5 Fridays)

From May through June, students will synthesize and present their learning:

- Students will create posters and visual displays that give clear, concise, accurate, and well-rounded representations of the data collected.
- Professional-quality large displays (up to \$1,000 in contracted printing/lamination services) will be produced for use in the school, Town Hall, and other community venues.
- Students will present their findings to the community during an Exhibition of Learning, and displays will remain available in the school and Town Hall to inform residents.
- Oral presentations and written pieces will focus on questions such as:
 - What did you find most interesting about this project?
 - What was one surprising thing you learned?
 - What would be an interesting next question to research?
 - How might your learning help the community in Warwick?
 - How might your learning help your own household?

These presentations serve both as assessment of student learning and as authentic civic engagement, helping residents understand local climate efforts and student perspectives.

4. Educator Capacity-Building

To ensure sustainability and deep integration into core instruction, the project invests substantially in educator learning time:

- **Two Classroom Teachers (Grades 3–4 and 5–6)**
 - Each teacher will have approximately 2 hours per week after school for about 36 weeks (~72 hours per educator).
 - Focus: building content knowledge in energy, climate, and data literacy; designing project-based lessons aligned to STE, ELA, and math standards; integrating Friday project experiences into daily instruction.
 - **Two Instructional Assistants**
 - Each instructional assistant will also have about 2 hours per week (~72 hours) to support small-group work, data entry and analysis practice, and preparation for field experiences and exhibitions.
 - This ensures equitable participation and support across classes and grade levels.
 - **In-School Climate Ambassador**
 - The Ambassador will coordinate visiting experts, design field experiences (school grounds, Highway Department, Town Hall, library), and coach educators in connecting technical content to standards and project-based practices.
 - This role is central to translating Warwick's Climate Leader and Net Zero plans into age-appropriate, standards-aligned classroom experiences that support both municipal and educational goals.
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5. Draft Budget

A. Personnel

- In-School Climate Ambassador – **\$25,000**
- Two Classroom Teachers (learning and curriculum stipends) – **\$16,000**
- Two Instructional Assistants (learning and support stipends) – **\$12,000**
- Visiting Expert Honoraria – **\$18,000**

Subtotal Personnel: \$71,000

B. Materials, Equipment, and Field Experiences

- Outsourcing large-format printing and laminating for displays – **\$1000**

- Student materials and field station supplies (chart paper, markers, clipboards, notebooks, simple environmental sensors) – **\$4,000**
- Local field trip and outreach costs (safety gear, signage, printing for no-idling and tree-planting awareness, incidentals) – **\$6,000**

Subtotal Materials/Field: \$11,000

C. Additional Program Costs

- Additional student and family engagement activities (community events, exhibition materials, outreach supports) – **\$18,000**

Total Request: \$100,000

6. Alignment with Climate Leader Grant Priorities

This project supports Warwick's Climate Leader and Green Communities work by:

- Providing locally generated data on community knowledge and attitudes about building and vehicle energy use, informing future technical support and accelerator projects.
- Building educator and student capacity to understand decarbonization options and their benefits, improving future public engagement and decision-making about municipal projects.
- Connecting classroom work directly to municipal operations through field trips and partnerships with town departments.
- Laying conceptual groundwork for building energy dashboards and behavior-change campaigns (e.g., no-idling, tree-planting, building efficiency outreach) that can accompany future thermal or PV projects funded under Climate Leader grants.

Mower Project Summary

The Town of Warwick proposes purchasing one **EGO Power+ ZT5216L Electric Zero-Turn Riding Mower** for the maintenance of Town-owned properties.

The proposed purchase replaces equipment that has reached the end of its useful life and supports the Town's adopted Sustainable Purchasing Policy, Green Communities designation, and Climate Leader Community goals.

Estimated Project Cost

Equipment: EGO Power+ ZT5216L Electric Zero-Turn Riding Mower

Purchase Price: **\$6,499**

Estimated Delivery: **\$20**

Total Estimated Cost: \$6,519

10% Community Contribution: **\$652**

Total Grant Request: **\$5867**

Statement of Need

The Cemetery Commission has identified that the Town's existing riding mower has reached the end of its useful life.

As documented by the Cemetery Commission, Town employees are currently relying on personal lawn equipment to maintain municipal property. Mr. Perkins has been bringing his personal mower to maintain the cemetery, and employees have also been using personal equipment to mow the Town Common.

Purchasing a Town-owned mower will replace aging equipment and eliminate reliance on privately owned equipment for routine municipal maintenance.

Municipal Use

The mower will serve as a shared municipal asset supporting maintenance of multiple Town-owned properties. In addition to the cemeteries and Town Common, it may be used to maintain the Town Hall grounds, where the Town currently compensates an employee for the use of personal mowing equipment.

Sustainability & Climate Benefits

This project supports the Town of Warwick's adopted:

- Sustainable Purchasing Policy
- Green Communities designation
- Climate Leader Community goals

Replacing aging gasoline-powered equipment with battery-powered equipment is consistent with the Town's commitment to reducing greenhouse gas emissions and incorporating environmentally preferable products into municipal purchasing decisions.

The proposed mower:

- Eliminates gasoline use during operation, including 34 avoided round trips (14 mi) to the nearest gas station to fetch gas (5 gal each trip): $476\text{mi} @ 20\text{ mpg} = 23.8\text{ gal} \times \$4/\text{gal} = \$95.20$ saved.
- Eliminates routine gasoline engine maintenance such as oil changes, spark plugs, air filters, and fuel filters.
- Operates with lower noise than comparable gasoline-powered equipment.
- Charges using a standard electrical connection supplied with the manufacturer's charging system.

Battery Platform

The EGO Power+ platform uses compatible 56-volt batteries across a wide range of outdoor

power equipment, including trimmers, blowers, chainsaws, hedge trimmers, snow blowers, and other compatible tools, including the existing EGO equipment in town..

Adopting this platform provides the Town with the opportunity to standardize future battery-powered outdoor equipment purchases using compatible batteries, chargers, and equipment should the Town expand its battery-powered fleet in the future.

Storage & Charging

The mower requires only a standard 120-volt electrical outlet for charging.

The Town has municipal facilities capable of storing and charging the mower. The final storage location will be designated prior to placing the equipment into service. No specialized charging infrastructure is required.

Funding Considerations

A review of available incentives found that this mower does not meet the battery-capacity requirements for the current Mass Save commercial lawn equipment rebate. Accordingly, the Climate Leader Community Grant represents an appropriate funding opportunity for this project. The estimated purchase price is below \$10,000. The Town Accountant has advised that no formal procurement process is required for a purchase of this amount beyond the Town's normal purchasing practices, including researching pricing and selecting equipment appropriate for the Town's needs. The Cemetery Commission will vote on the purchase, and the Town will follow all applicable municipal purchasing procedures. The 10% community contribution will come from the Cemetery Revolving Fund.

Local Funding

If awarded, the Town anticipates utilizing the Cemetery Commission Revolving Fund to purchase the mower and seeking 90% reimbursement through the Climate Leader Community Grant program, subject to grant requirements.

Proposed Timeline

- Consideration by the Buildings & Energy Committee – July 22nd
- Selectboard approval, if applicable – July 27th
- Inclusion in the Climate Leader Community Grant application – When submitted
- Purchase through the Town's procurement process – After grant approval, Oct-26?
- Delivery and placement into municipal service – Oct-26

Conclusion

This project addresses an identified municipal equipment need while advancing Warwick's adopted sustainability initiatives. Replacing an aging gasoline-powered mower with a battery-powered municipal asset will eliminate reliance on employees' personal equipment, support maintenance of multiple Town-owned properties, and further the Town's commitment to environmentally responsible municipal operations.