


**New Milford Board of Education
 Special Meeting Minutes
 June 2, 2021
 Sarah Noble Intermediate School Library Media Center**

Present:	Mrs. Wendy Faulenbach Mr. Pete Helmus Mr. Brian McCauley Mrs. Tammy McInerney Mrs. Eileen P. Monaghan Mrs. Olga I. Rella
Absent:	Mr. Joseph Failla Mrs. Cynthia Nabozny


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 NEW MILFORD, CT

Also Present:	Ms. Alisha DiCorpo, Superintendent of Schools Mr. Nestor Aparicio, Assistant Director of Facilities Ms. Jamie Terry, Technology Director Mr. Anthony Giovannone, Director of Operations and Fiscal Services (via Zoom) Mayor Pete Bass (via Zoom)
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1. A.	Call to Order Pledge of Allegiance The special meeting of the New Milford Board of Education was called to order at 7:04 p.m. by Mrs. Faulenbach. The Pledge of Allegiance immediately followed.	Call to Order A. Pledge of Allegiance
2.	Public Comment <ul style="list-style-type: none"> ● There was none. 	Public Comment
3. A.	Item for Information and Discussion Presentation by Energy Systems Group (ESG) <ul style="list-style-type: none"> ● Christian Michel, Doreen Hamilton and Ed Daly presented for ESG. Steve Wells joined via Zoom from NV5. ● Mrs. Faulenbach noted that a presentation has also been made on the Town side. ● Dr. Steve Wells said NV5 is a large corporation that acquired Celtic Energy about two years ago. He is a VP of Operations for their Energy Efficiency Services group. They have been 	Item for Information and Discussion A. Presentation by Energy Systems Group (ESG)

working on the New Milford project for over two years. They are a third party independent owner's representative for energy projects, in this case energy savings. They are the overseer of the project for New Milford. NV5 worked with Town and BOE representatives to develop a preliminary assessment of the schools and Town energy profile. They co-authored an Energy Performance Contract (EPC) project request for proposals (RFPs), and worked to evaluate all bidders and set up interviews. Five proposals were submitted. ESG was selected. ESG guarantees savings and includes annual measurement and verification reviews. There are no out of pocket costs from the Town. The project is financed through debt service. Once the debt is paid off, it is all savings.

- The project begins with an Energy Baseline review of usage for all buildings.
- Mrs. Faulenbach asked if that included the East Street building. Mr. Michel said it did.
- Mr. Michel said as a result of the project, energy use reduction will be significant. This is primarily due to the solar piece of the project. Thermal will also be offset. There will be a significant carbon footprint reduction too.
- Energy and infrastructure measures being proposed include boiler replacements, LED lighting, solar, chiller and RTU replacements and more. Two gas-fired engine-generators will be installed at NMHS for on-site power generation and resiliency.
- Mrs. Faulenbach asked what buildings will have the solar piece and where it will be physically mounted.
- Mr. Michel said on the SNIS and HPS roofs. He said their approach at the beginning was to consider all buildings for solar. They then applied to Eversource through a reserve auction for offsets of Renewable Energy Credits (RECs) to help pay for the projects. Of the ten arrays they entered for bidding, only four were awarded. ESG looks for what will provide the most payback.
- Mrs. Faulenbach said the roofs are included in the capital plan for replacement.

- Mr. Aparicio said the HPS roof replacement is coming up in three years on the capital plan. He asked how that affects the solar piece.
- Mr. Michel said they will move the panels on and off, with no warranty issues.
- Mr. Aparicio asked if the type of roof matters. Mr. Michel said yes, standing seam is the easiest for installation.
- Ms. Hamilton said they will work with the chosen architect and engineers on design.
- Mrs. McInerney asked what the age of the SNIS roof was. Mr. Aparicio said two to three years.
- Mrs. Faulenbach recommended that ESG work with the Municipal Building Committee.
- Mr. Aparicio asked if they will be looking to add solar to other schools in the future.
- Mr. Michel said this is the last year of the current REC program so they are compiling information to be ready for the next one.
- Mrs. Monaghan asked what the initial cost of the panels are to the Town. Mr. Michel said there are no upfront costs; they are included in the price of the project.
- Ms. Hamilton said the Town will be at almost a net zero for the schools in energy use through the solar component of the project.
- Mr. Helmus asked if the REC program is what makes the solar projects feasible. Mr. Michel said it depends on the largeness of the array.
- Mr. Helmus asked why carports were not considered then. Mr. Michel said they are the most expensive type of solar due to the steel used.
- Mr. Aparicio said the district had previous issues with roof damage due to weather. He asked what happens if something similar happens in the future and the solar is damaged.
- Mrs. Faulenbach asked if these proposed structural changes had been run through the Town's insurance carrier, CIRMA.
- Ms. DiCorpo asked if an increase to the cost of insurance was possible as a result of changes.
- Mr. Daly said they would be happy to meet with CIRMA.
- Ms. DiCorpo asked if the cogenerator will need to follow a maintenance process. Mr. Daly said

	<p>yes and ESG will set that up and streamline it for ease.</p> <ul style="list-style-type: none">● Mayor Bass said it is important to remember why we are doing this project. It will allow us the ability to get much needed capital improvements through a net neutral cash flow. He said the project will provide approximately \$12 million in capital for net neutral cost.● Ms. Hamilton said it will provide energy savings and infrastructure upgrades.● Mrs. Faulenbach said that is a great point. The project funds capital with less taxpayer burden. She asked why all districts are not doing this?● Ms. Hamilton said the biggest conversion is with lighting upgrades, almost 13,000 retrofit fixtures are proposed. These include exteriors and parking lots.● Ms. DiCorpo said the capital plan includes consideration of paving projects at SMS and NES. She asked how this might affect the lighting.● Ms. Hamilton said they could hold off in that area until the study is done. She said the contract includes a “change order” provision, as well as a \$150,000 contingency for changes.● Mrs. McInerney asked about the implementation, especially as it relates to children in schools.● Ms. Hamilton said it is 12-18 months total and they will schedule work in collaboration with Facilities, adhering to all Board policies and building protocols. They prefer first and second shifts but without students present.● Mr. Daly said they will work to maximize summer construction.● Mayor Bass noted that the projects presented tonight in totality can be viewed as a first phase. If additional things want to be done in the future, another phase can be added through cash flow. He asked what other towns have done combined school/town projects.● Ms. Hamilton listed Colchester, Enfield, Stratford, East Haven, Branford, Tolland, Southington and Cheshire.● Mr. Helmus said East Street was listed as part of the LED project. He questioned that in light of the building’s uncertain future as well as the	
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fact that East Street does not show up on the project list otherwise.

- Mr. Michel said they did develop a scope of East Street where their priority was items that provide quick payback, of which lights are one.
- Ms. Hamilton said they will research the specifics further and provide feedback.
- The financing of the project will be through a bond or tax exempt lease purchase (TELP).
- Mr. Daly said this is a good time since interest rates are attractive.
- The project is guaranteed and self-funding. It is estimated at \$15,038,900 over 20 years. There is projected \$1,879,152 in renewable energy credits and utility incentives included, with \$17,685,731 in guaranteed energy savings. Three years of measurement and verification are included.
- Mrs. Faulenbach said energy costs are included in the operating budget. How will this project affect that?
- Mr. Daly said that would still be budgeted at the same rate, but some of that budgeted amount would now be used to pay the debt through the energy savings.
- Ms. DiCorpo said the budgeted amount might in fact need to increase each year due to delivery charge increases.
- Mr. Daly said the additional utility controls that are part of the project may help with energy demand management.
- Mrs. Faulenbach said she would like to see an example of year 1 from the operating budget.
- Mr. Giovannone said for 2021-22, the operating budget shows \$990,569 for electricity. He envisions that once the project starts, that amount with any needed escalator provided by the Town, will have a sub account showing the amount that will go towards payback.
- Mayor Bass said that will be similar on the Town side.
- Mr. Helmus said budget approval can sometimes be contentious in New Milford and he is concerned that the taxpayers will be expecting to actually see savings reflected in a reduced budget.

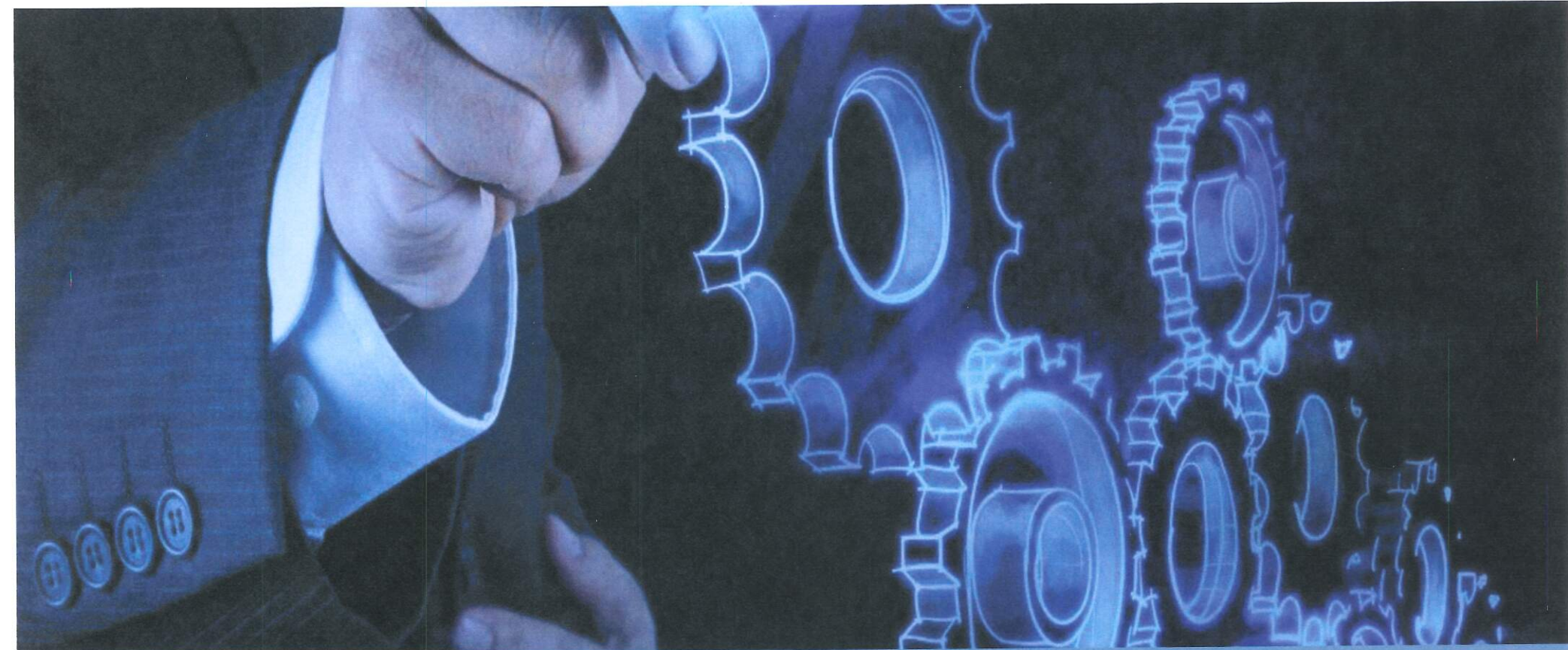
- Mayor Bass said we are leaving out a big part. There is \$17 million in capital through this project that we are not having to pay for in the balance sheet. This should be relayed to the taxpayers as a financing opportunity that they should be thrilled with.
- Mrs. Faulenbach said these conversations are important. We want to make sure that the project succeeds for both the Board and Town. We know there are capital expenses coming, so how can we best fund without taxpayer burden. It is important for the public to know details.
- Regarding the guarantee, Mrs. Faulenbach asked if ESG has ever written checks and Mr. Daly said they had.
- Mrs. Faulenbach asked about the timeframe going forward.
- Ms. Hamilton said they are currently working to finalize the contract, review the scope of work, and then circle back for final approvals, with a July/August start.
- Mrs. Faulenbach asked about warranties and if they had looked at fluid warranties. Mr. Daly said the warranty comes from the manufacturer but they will be looking to leverage their buying power.
- Mrs. Faulenbach asked about the bidding process and project oversight. Mr. Daly said they will facilitate all subcontractors. There will be a project manager on site, shared with Board and Town projects.
- Mrs. Faulenbach noted again that the capital is fluid and that there are ongoing conversations between the Board and Town. She asked that ESG be cognizant of that.
- Ms. DiCorpo said there are three contracts in process with the Town attorney: an MOU, the service agreement, and work scope proposal. She asked if that is because the Town holds the note. Mr. Daly said typically there is only one side reviewing, especially when using an owner's agent.
- Mrs. Faulenbach said this has been an extremely helpful conversation and provides important transparency as we enter this significant project. She encouraged Board members to send her any additional questions.

4.	Adjourn Mrs. Monaghan moved to adjourn the meeting at 8:42 p.m., seconded by Mr. McCauley and passed unanimously.	Adjourn Motion made and passed unanimously to adjourn the meeting at 8:42 p.m.
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Respectfully submitted:



Tammy McInerney
Assistant Secretary
New Milford Board of Education



NEW MILFORD BOARD OF EDUCATION
ENERGY PERFORMANCE CONTRACT

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June 2, 2021

energysystemsgroup.com

Organizational Structure

N|V|5



energysystemsgroup.com

WHO IS NV5?

- **NV5 is an international provider of engineering and consulting services** to public and private sectors, delivering solutions through multiple business verticals. By teaming and cross-selling between our groups, we provide highly specialized services to meet a variety of client needs.
- **NV5's Professional Consulting Services include- 70-Year History**
 - Sustainability & Resiliency Advisory Services
 - Energy Efficiency and Renewable Energy Consulting
 - Environmental Compliance and Air Permitting
 - Design Engineering
 - Commissioning (Cx), RCx, MBCx
 - Power Delivery (Utility Services)
- **NV5 provides Independent Owner's Representation (Third-Party Consulting) and helps clients manage Quality Assurance for energy projects such as:**
 - Energy Savings Performance Contracts
 - Public-Private-Partnership (P3) projects such as Energy-as-a-Service (EaaS)
 - Power Purchase Agreement (PPA) projects such as solar installations with battery backup
 - Sustainability, Resiliency, Microgrid projects involving CHP or distributed generation systems



OVERVIEW OF PROCESS WITH NEW MILFORD

N|V|5

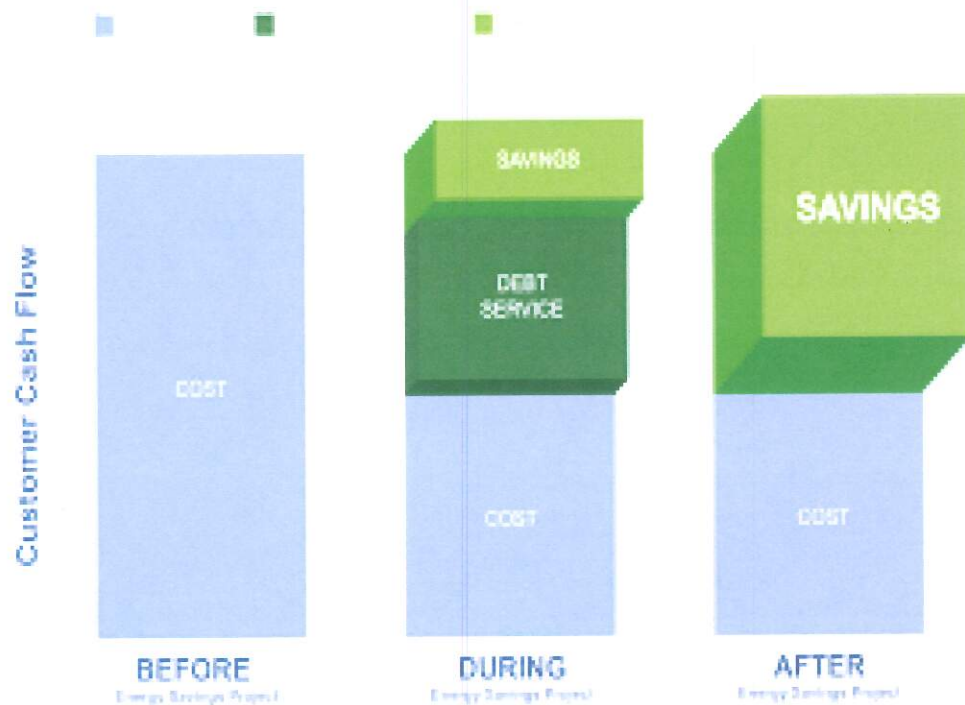
- Was selected by the Town/Schools to be the Owners Agent for an Energy Performance Contract
- Developed a preliminary assessment of schools and town energy profile (06/26/2019)
- Co authored Energy Performance Contract (EPC) project Request for Proposals (01/13/2020)
 - Developed a preliminary building assessment
 - 5 proposals were submitted on Energy project
- Worked to evaluate all of the bidders and set up interviews
 - Energy Systems Group was selected
- We perform Measurement and Verification reviews to ensure clients get what they paid for - **Guaranteed**
- We endorse this project based on our numerous hours of review/discussions and site visits



ENERGY PERFORMANCE CONTRACTING

NV5

Performance Contracting: A Budget-Neutral Solution



- Project funds itself over time
- Upgrades to buildings energy & infrastructure
- All projects completed within 12-18 months
- Energy Guarantee
- Oversight by NV5

A decorative graphic consisting of several parallel diagonal stripes in shades of blue, yellow, and grey, extending from the left side of the page towards the right. A large, solid blue rectangular block is positioned on the right side of the page, containing the text for the Board of Education.

Board of Education New Milford Public Schools

Presented by:

Doreen Hamilton
Christian Michel
Ed Daly

Agenda

- Your Project
- Implementation Schedule
- Financial Overview
- Any Questions?



Your Project



Energy Baseline

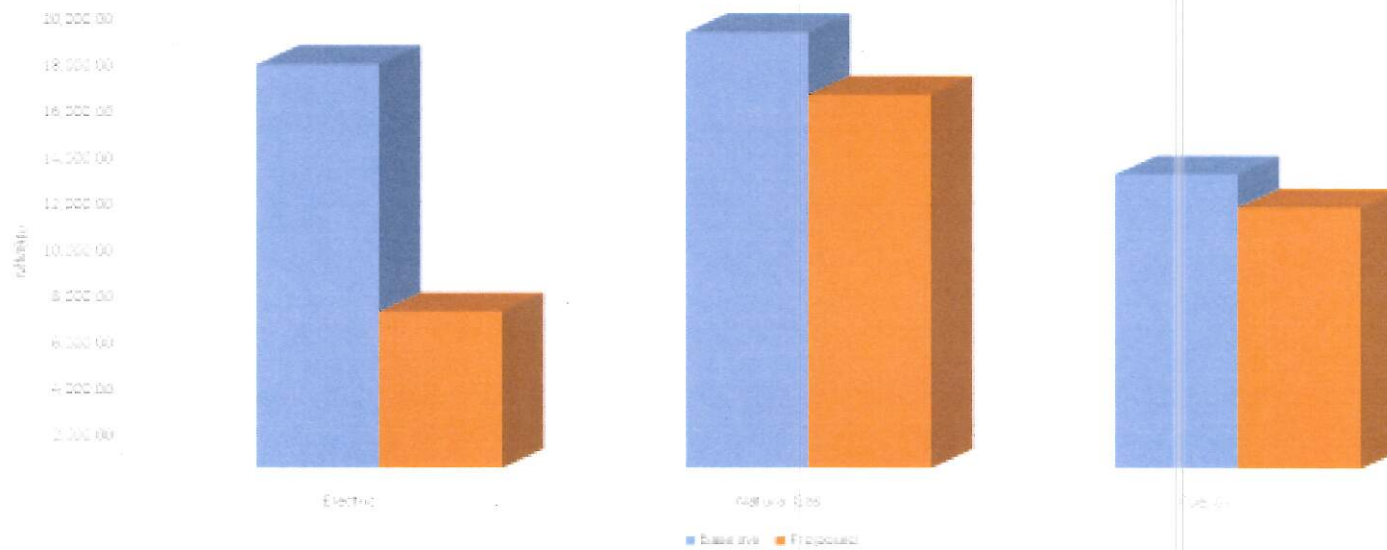
Baseline Data			Electric			Natural Gas		Fuel Oil		Propane		Water		Total Utility Cost
Facility Name	Population	Square Feet	Peak Monthly kW	Annual kWh	Total \$	Therms	Total \$	Annual Gallons	Total \$	Annual Gallons	Total \$	Annual kGal	Total Cost	
Schools	4,601	741,076	1,734	5,101,343	\$ 859,433	187,846	\$ 179,596	91,040	\$ 175,804			5,081	\$ 28,757	\$ 1,243,590
Town	110	235,944	638	2,423,220	\$ 360,899	93,771	\$ 132,571	22,375	\$ 44,319	8,836	\$ 12,258			\$ 550,048
Total	4,711	977,020	2,372	7,524,563	\$1,220,332	281,617	\$ 312,167	113,415	\$ 220,123	8,836	\$ 12,258	5,081	\$ 28,757	\$1,793,637

Energy data will be put into EPA Portfolio Manager and the buildings will be benchmarked

Energy Cost Reduction

Energy Use Reduction – Schools

New Milford Schools – EPC Energy Usage Reduction



Carbon Emissions Reductions

Green House Gas Reductions

✓ **2,167** metric tons of CO₂e

Equivalents:

Cars removed from road:	376
Homes annual energy use:	167
Barrels of oil:	4,571
Waste Recycled:	662
Acres of pine forest planted:	419
Seedlings grown for 10 years:	50,401
Railcars of coal burned:	10
Tanker trucks removed from road:	26

- ✓ Significant Carbon footprint reduction
- ✓ Solar provides near net zero for electricity with school solar projects
- ✓ Portfolio Manager for benchmarking

Your Energy & Infrastructure Measures

ECM	ECM Number	New Milford High School	Schaghticoke Middle School	Sarah Noble Intermediate School	Northville Elementary School	Hill & Plain Elementary School	Town Hall	DPW Building 1-6	Lanesville Fire	Ambulance Barn	Police	Richmond (Senior Center)	Probate Court & IT	The Maxx	Lynn Deming Park Bath house	P&R Barn - Behind Town Hall	WWTP - WPCA
Boiler Replacement - All Condensing Boiler Option (w/ HW Reset)	TC.1.1B	X		X													
Boiler System Optimization	TC.1.2	X		X													
Cogeneration	TC.10.1	X															
Solar PV	TC.11.1			X		X					X						X
Transformer Replacement	TC.12.1	X		X	X												
Water Conservation	TC.13.1	X	X	X	X	X	X										
Demand Response	TC.14	X	X														
Plug Load Controls	TC.19.1	X	X	X	X	X	X	X			X	X	X	X			X
Air Cooled Chiller Replacement	TC.2.1		X	X													
Condenser Water System Optimization	TC.2.3	X															
Install DDC System; Town	TC.3.1						X				X	X	X				X
Install DDC System; Schools	TC.3.2	X	X	X													
DDC System Expansion, Integration & ReCx	TC.3.3	X	X	X													
DCV Control	TC.3.4		X	X													
Web Enabled Programmable Thermostats	TC.3.6								X						X	X	
Cooling Tower Replacement (w/ CW Reset)	TC.4.1	X															
AHU/RTU Replacement	TC.4.4			X													
Lower Pressure Drop AHU Filters (MERV 13)	TC.4.8	X															
LED Lighting - Interior and Controls; Basic	TC.5.1a		X		X	X	X	X				X	X	X			X
LED Lighting - Interior and Controls; Enhanced	TC.5.1b	X		X													
LED Lighting - Exterior	TC.5.2	X	X			X											X
Building Envelope - Weatherization, Insulation	TC.6.1	X	X	X	X	X	X	X	X	X	X		X	X			X
Pipe, Valve & Fitting Insulation	TC.7.1	X	X	X	X		X			X			X	X			X

Schools Energy & Infrastructure Measures

ECM	ECM Number	New Milford High School	Schaghticoke Middle School	Sarah Noble Intermediate School	Northville Elementary School	Hill & Plain Elementary School
Boiler Replacement - All Condensing Boiler Option (w/ HW Reset)	TC.1.1B	X		X		
Boiler System Optimization	TC.1.2	X		X		
Cogeneration	TC.10.1	X				
Solar PV	TC.11.1			X		X
Transformer Replacement	TC.12.1	X		X	X	
Water Conservation	TC.13.1	X	X	X	X	X
Demand Response	TC.14	X	X			
Plug Load Controls	TC.19.1	X	X	X	X	X
Air Cooled Chiller Replacement	TC.2.1		X	X		
Condenser Water System Optimization	TC.2.3	X				
Install DDC System; Town	TC.3.1					
Install DDC System; Schools	TC.3.2	X	X	X		
DDC System Expansion, Integration & ReCx	TC.3.3	X	X	X		
DCV Control	TC.3.4		X	X		
Web Enabled Programmable Thermostats	TC.3.6					
Cooling Tower Replacement (w/ CW Reset)	TC.4.1	X				
AHU/RTU Replacement	TC.4.4			X		
Lower Pressure Drop AHU Filters (MERV 13)	TC.4.8	X				
LED Lighting - Interior and Controls; Basic	TC.5.1a		X		X	X
LED Lighting - Interior and Controls; Enhanced	TC.5.1b	X		X		
LED Lighting - Exterior	TC.5.2	X	X			X
Building Envelope - Weatherization, Insulation	TC.6.1	X	X	X	X	X
Pipe, Valve & Fitting Insulation	TC.7.1	X	X	X	X	

Mechanical Improvements

- **Boiler Replacements**

- Two (2) new boiler plants at High School and Sarah Noble with a combined six (6) new boilers and pumping optimization



- **Chiller Replacements**

- Two (2) new chillers at Schaghticoke and Sarah Noble with a combined cooling capacity of 580 tons



- **Cooling Tower Replacement**

- One (1) new cooling tower at the High School; replacing aging equipment and optimizing the performance of the existing chiller plant



- **RTU Replacements**

- Replacement of the remaining eight (8) RTUs at Sarah Noble; replacing aging, R22 equipment



Cogeneration (Combined Heat and Power)

- Installation of two (2) 75kW gas-fired engine-generators at the High School for **on-site power generation and resiliency**
 - Proposed footprint approx. 4'x8' per unit, to be sited in the existing mechanical space
- Waste heat will be recovered and used to heat the boiler loop in the heating season (“**free**” heating).
- Overall efficiency levels 2-3x that of grid-purchased commodities.
- Approximately **\$18,000/year of Class III RECs (incentive)** available



Solar Photovoltaic (PV)

- **1.51MW** of on-site renewable energy generation at four (4) locations

Building	kWDC Planned
New Milford WPCA	292
New Milford Police Station	175
Sarah Noble Intermediate School	843
Hill & Plain Elementary School	200
Total	1,510

- Near **net-zero** electric consumption at the two (2) school locations
- Zero emissions renewable energy credits (ZRECs) secured with Eversource
 - Approximately **\$785,000** of incentive over the term of the project



LED Lighting Conversion

- New LED Fixture Installations with integrated controls
 - High School and Sarah Noble
 - Built-in occupancy and dimming controls
 - Qualifies for higher incentive tier through Eversource
- LED tube retrofits of existing fixtures
 - Type C LED tubes with new, external drivers
 - Elimination of fluorescent ballasts
- Installation of new site lighting at Hill and Plain drop-off circle

Building Name	Location	Retrofit Fixtures
Board of Ed / Central Office / Lillis Admin	Interior	253
Hill & Plain Elementary	Interior	1,094
	Exterior	55
New Milford High	Interior	3,254
	Exterior	159
Northville Elementary	Interior	1,356
Pettibone Community Center	Interior	1,058
Probate Court and IT	Interior	93
Public Works Department	Interior	162
Richmond Senior Center	Interior	207
Sarah Noble Intermediate	Interior	2,030
	Exterior	115
Schaghticoke Middle	Interior	2,118
	Exterior	97
The Maxx	Interior	113
Town Hall Central Office	Interior	387
Water Pollution Control Authority	Interior	296
	Exterior	77
Total		12,924

Building Management System (BMS) Improvements

▪ Town Buildings

- Installation of a new, open-source DDC controls platform and integration to a common head-end computer
 - Town Hall
 - Police Station
 - Senior Center
 - Probate Court & IT
 - WPCA
- Networked, programmable thermostats for enhanced temperature control
 - Lanesville Fire
 - Lynn Deming Park Bath House

▪ School Buildings

- Integration of new mechanical equipment into a new, open-source DDC controls platform.
 - Foundation of a longer-term conversion from the current proprietary system to a unified, district-wide, open-source platform
- Recommissioning at the High School
- Demand Response control sequences & renewed program participation

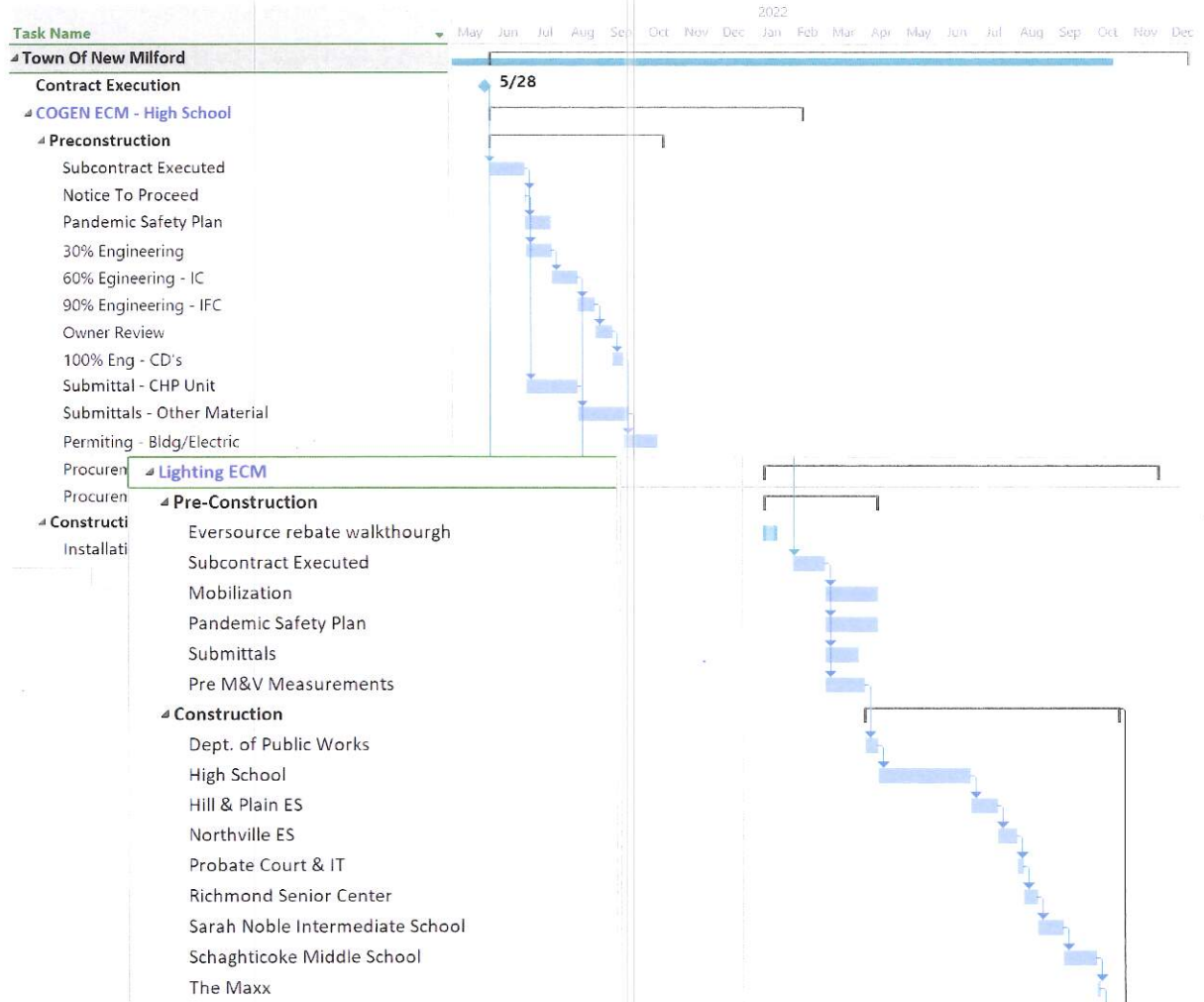
Additional Measures

- Building envelope improvements
 - Sealing of 16,701 linear feet of envelope openings (“crackage”)
- Pipe, valve and fitting insulation
 - Insulation of 1,848 linear feet of bare pipe
- Transformer upgrades
 - Installation of 2,080kVA worth of low-loss electrical distribution equipment
- Water conservation
 - Replacement of 423 fixtures with low-flow versions
 - Toilets at the school buildings excluded due to operational concerns
- Plug load controllers
 - Installation of 443 individually scheduled plug load controllers

Project Management

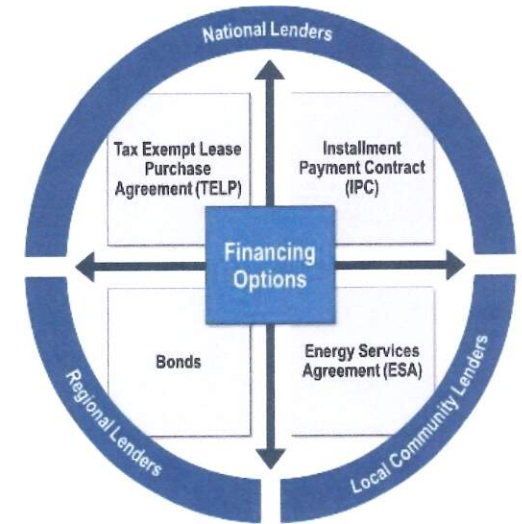
The value of our project delivery team is that we bring:

- Transparency & Singular Point of Contact
- Dedicated Project Manager
- Daily Communication and Coordination
- Vendor and Subcontractor Selection
- Overall Project Schedule
- Two Week Look Ahead
- Project Meetings
- Quality Control and Inspections
- Ensure Safety Protocols are followed
- Covid 19 cleanliness
- Training and Training Materials



Financial Capabilities

- Provide overview of project financing options
 - Numerous letters of interest –2 in proposal
 - Tax exempt Lease Purchase (TELP)
 - Bonds
- Goal is to identify best & most cost-effective financing solutions
 - National Lenders
 - Regional Lenders
 - Local Community Lenders
- Perform a collaborative review of funding options
- Assist your Financial Advisor (as appropriate)
- Develop cash flow models
- Develop the RFP for financing



Financing Entity	Indicative Rate	Tax Exempt Lease Term
Sterling Bank	2.45%	20 Years
Bank of America	2.50%-2.60%	20 Years

Financial Pro-forma

Proposed project – ***Guaranteed and self-funding***

- \$15,038,900 project shown, *no capital outlay*
- \$1,879,152 in renewable energy credits & utility incentives
- \$17,685,731 in guaranteed energy savings
- 3 years of Measurement & Verification(M&V) included in our costs.
- Oversight/detailed review by NV5

Benefits

- Project is funded from offset savings- funded entirely
- No need for bond/capital monies/low interest rates
- Multiple infrastructure improvements
- All work completed over 16-18 months
- Multiple outside funding sources – utility incentives, solar rec's, demand response savings equates to over \$1.8M+
- Energy savings are guaranteed



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