

THE FOLLOWING MINUTES RE SUBJECT TO APPROVAL BY THE BOARD OF
SELECTMEN

The Board of Selectmen held a regular meeting Monday, November 15, 2021. The meeting was held in the Council Chambers at the Newtown Municipal Center. First Selectman Rosenthal called the meeting to order at 7:36p.m.

PRESENT: First Selectman Daniel C. Rosenthal, Selectman Maureen Crick Owen and Selectman Jeff Capeci.

ALSO PRESENT: Finance Director Robert Tait, Purchasing Agent Rick Spreyer, Chair of Public Building & Site Commission Art Norton, Sustainable Energy Commission Chair Kathy Quinn, Director of Public Works Fred Hurley and three members of the public

VOTER COMMENTS: none.

ACCEPTANCE OF THE MINUTES: Selectman Crick Owen moved to accept the regular meeting minutes of November 1, 2021. Selectman Capeci seconded. All in favor.

COMMUNICATIONS: none.

FINANCE DIRECTORS REPORT: none.

NEW BUSINESS

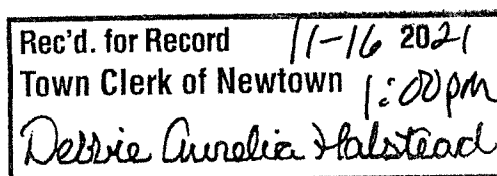
Discussion and possible action:

1. Sustainable Energy Commission Presentation: Kathy Quinn and Fred Hurley presented the Sustainable Energy update to the board (att.). Energy plans can be applied to commercial and residential. The SBEA (Small Business Energy Advantage Program) plans have been done extensively in schools. The Energy Star Portfolio Manager tracks electric and natural gas. Through knowledge of rebate programs and system reviews the Sustainable Energy Commission has found substantial savings in the cost of electric at municipal buildings. It is important that businesses are aware of, and take advantage of, these Eversource programs. There has been more progress within the schools with the help of Bob Gerbert, Director of Facilities for the schools. The commission would like to connect with Planning & Zoning and the Economic Development Commission to discuss what can be done throughout the approval process of new developments or businesses, such as laying conduit in new parking lots for EV charging stations or putting solar on new buildings. More information can be found at www.energizect.com, www.ctgreenbank.com and www.energy.com.

2. Approval of the Construction Manager for Hawley School HVAC Project: Rick Spreyer noted that Downes Construction has worked with Christopher Williams Architects on the preconstruction and produced a budget; they also have knowledge of materials and timelines. Art Norton said the timeline is most critical. An RFQ would bring the process into next year; the estimates were predicated on the bids going out sooner. The project will be publicly bid and should be done as soon as possible due to procurement and lead time concerns. The bid packages are ready to go out. The Town Attorney reviewed this and the purchasing policy allows for it. All bids are scoped and a GMP requires Board of Selectmen approval. Selectman Crick Owen moved to approve retaining Downes Construction Company as the construction management firm for the duration of the Hawley HVAC project. Selectman Capeci seconded. All in favor. Mr. Tait noted this does not have to go to the Legislative Council.

3. Appointments/Reappointments/Vacancies/Openings: none.

4. Driveway Bond Release/Extension: none.



5. Tax Refunds: Selectman Crick Owen moved to approve Tax Refund #9 in the amount of \$14,822.52
Selectman Capeci seconded. All in favor.

VOTER COMMENTS: none.

ANNOUNCEMENTS: First Selectman Rosenthal said that with the support from both Selectman Crick Owen and Selectman Capeci the last four years has been fun. They worked well together in a non-partisan manner. First Selectman Rosenthal looks forward to working with Mr. Capeci as a Legislative Council member. Selectman Crick Owen said it has been a great four years and she appreciates how the board worked well together. She looks forward to working with Mr. Capeci on the LC and looks forward to working with Ed Schierloh on the Board of Selectmen. Selectman Capeci said it has been a pleasure and honor to serve on the Board of Selectmen with both selectmen; it has been a great experience.

ADJOURNMENT: Having no further business the regular Board of Selectmen meeting was adjourned at 8:38p.m.

Att: Sustainable Energy Commission Presentation to the BOS 11/15/21;

Respectfully submitted,
Susan Marcinek, clerk

SUSTAINABLE ENERGY COMMISSION



Town of
Newtown
Connecticut

Presentation to Board of Selectmen

Nov. 15, 2021

AGENDA

- SEC Mission
- Municipal energy plan & progress
- Recommendations

EXECUTIVE SUMMARY



84% of all electricity for Newtown municipal buildings comes from solar

Energy upgrades to schools and municipal buildings will result in significant savings

4 new EV charging stations worth \$350k via Electrify America (in progress)

Savings realized via rebates, incentives, energy generation (solar) & reduced energy consumption

SEC MISSION

The Sustainable Energy Commission shall identify, implement, and support renewable energy use, energy efficiency, energy conservation programs and strategies for sustainable material use and recycling in which the Town's residents, businesses, organizations, and Town agencies can participate and that may result in cost savings and reduction in environmental footprint for the Town or school district

MUNICIPAL ENERGY PLAN

MEP is designed to guide the town toward greater energy efficiency and sustainability. Benefits to residents and businesses include;

- Reduce our carbon footprint and contribution to climate change
- Savings – reduced energy expenditures
- Health – improved air quality with resultant health benefits (notably lower asthma rates)
- Resilience – reduce weather-related outages
- Comfort – homes and businesses

MEP GOALS

- Increase our municipal renewable electricity usage from current 84% to 95% by 2022
- Strive for 100% carbon-free electricity by 2040 (CT State Goal)
- The path to 100% renewable comprises two complementary actions
 - Decrease in overall energy consumption
 - Shift to clean, renewable energy

KEY ELEMENTS

1. Increase energy efficiency of public and private buildings
2. Promote the use of solar energy while also pursuing regional solutions for a cleaner grid
3. In collaboration with Eversource, modernize local electric grid and incorporate microgrids to enable higher levels of renewable energy
4. Transition of heating and cooling to heat pumps and other new technologies
5. Transition to electric vehicles

1. ENERGY EFFICIENCY IN BUILDINGS

- Building emissions are 34.3% of CT's GHG. When electric power generation is included, buildings represent 50.9% CT's GHG
- High ROI savings est. from 25-50%
- 87% of Net zero buildings reported having less than 1% construction cost premium
- Programs for both residential and commercial buildings e.g. C-PACE, Energize CT

Benefits

- Lower GHG emissions
- Savings
- Creates local jobs
- Improved health
- Greater resiliency during extreme weather
- Comfort

PROGRESS-TO-DATE (I)

- Small Business Energy Advantage (SBEA) to reduce energy use in town buildings
 - Municipal Center
 - WasteWater Treatment Plant
 - Multipurpose Building on Riverside Rd
 - Public Works Dept.
 - Edmond Town Hall, (Partial)
 - Library (Partial)
- Energy conservation and renewable energy in new Police Station

PROGRESS-TO-DATE (II)

- Identified issues at new Community/Senior Center
- Energy Star Portfolio Manager to quantify saving more precisely
- Streetlights converted to LED
- HES campaign and upgrades at Nunnawauk Meadows (129 units) and 172 residential
- 22% of households and 24% of businesses participated in Energize CT Efficiency programs

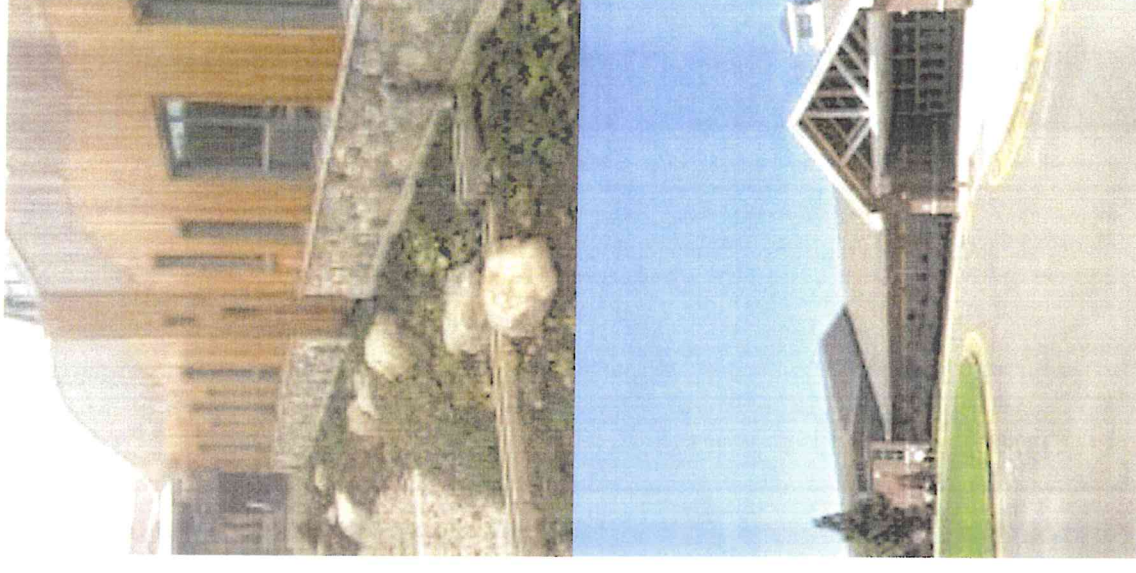
PROGRESS-TO-DATE (III)

- Middle School & Middle Gate Elementary
 - Natural gas line extended to school
 - New boilers installed
 - LED lighting retrofit
- Hawley
 - New boilers
 - LED retrofit interior and parking lot
- Head O'Meadow
 - LED lighting retrofit
 - Savings 156,517 kWh/annum



PROGRESS-TO-DATE (IV)

- Newtown High School
 - New boilers, hydronic heat pumps Indirect tanks for water heating
 - LED lighting retrofit
- Sandy Hook School
 - Identified excessive use of energy (Building management systems, boiler temperature control, kitchen hood fan, parking lot lights) savings est. \$125k/ annum
- Reed – (in progress)
 - New boilers – est. savings 11,171 CCF /annum
 - LED Retrofit – est. savings of 261,323 kWh/annum

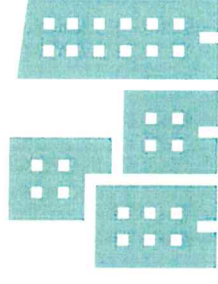


LEVERAGING ENERGY REBATES

- Head O Meadow Elementary School
 - \$286,600 in 2021 for LED lighting upgrade
 - \$86,100 in utility rebates
 - \$200,500 final cost. Paid through on-bill financing (zero out-of-pocket)
- Reed Intermediate School
 - \$926,125 new boilers and LED lighting upgrade
 - \$280,764 Utility rebates
 - \$645,361 final cost

FINANCING ENERGY EFFICIENCY

- Energize CT energizect.com
 - Provides rebates, services and financing for residential and commercial buildings
- CT Greenbank ctgreenbank.com
 - Established by CT General Assembly to promote clean energy. Provides low-cost financing for green energy projects; residential, commercial, industrial and institutional
- CPACE – commercial property assessed clean energy
 - Financing for energy efficiency, renewable energy, etc with repayments via an assessment on property tax bill, remains with property even if sold. Facilitates long-term investment.



ENERGY EFFICIENCY

- Encourage energy efficient building via adoption of 2021 International Energy Conservation Code
- Monitor energy usage in buildings and develop plan to reduce peak demand
- Create schedule of efficiency upgrades in town properties
- Information sessions on energy services available to low- and moderate-income residents
- Continue to promote Small Business Energy Advantage (SBEA) and C-Pace financing of commercial projects

2. SOLAR

- Newtown currently derives 13% of its electricity from solar.
- Approximately 84% of the municipal electric usage is derived from solar
- Estimated that by 2022 95% of municipal electric usage will be solar



SOLAR PROGRESS-TO-DATE

Site	Size (KW)	Output/yr (KWH)	Launch Date	Site	Size	Output/yr	Launch Date
WWTP	79	134,000	2012	SH Sub Station	12	14,900	2017
Middle School	150	205,000	2013	Dodgingtown Fire House	8	10,600	2017
Parks & Rec	85	117,700	2014	VNM Griswold	2000	3,215,700	2019
Animal Shelter	12	17,300	2014	VNM Hampton	2000	3,200,000	2020
Reed	528	712,000	2017	Police Station	100	150,000	2020
Landfill	1000	1,853,000	2018	Comm Ctr	100	150,000	2020
SH School	200	282,200	2017	Hook & Ladder	60	89,000	2020
SH Fire House	60	89,700	2017	VNM-Pike Hampton	1000	1,600,000	2022
TOTAL					7394	11,841,100	

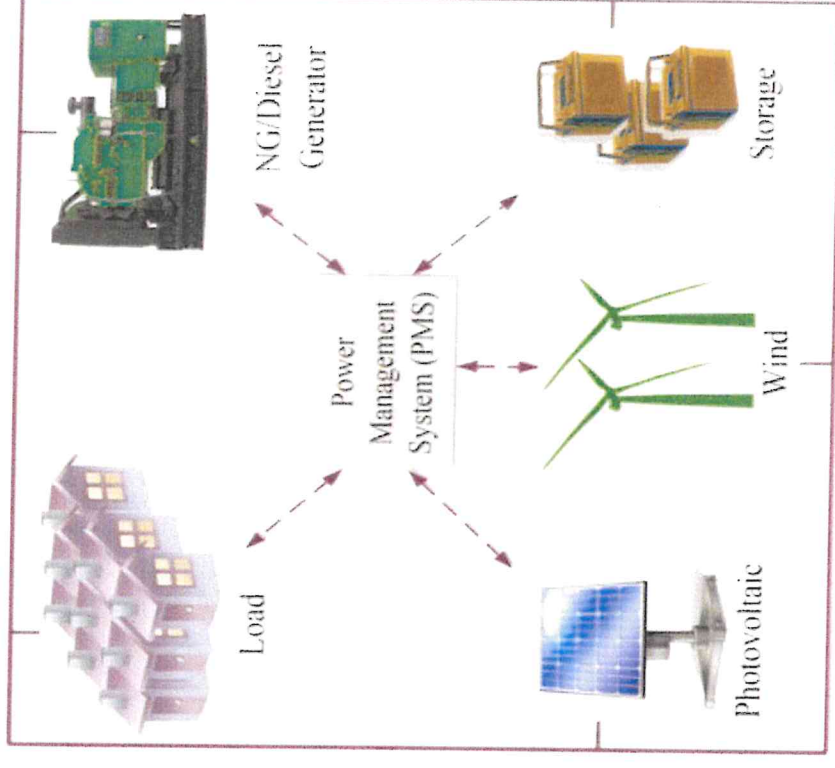
SOLAR – PROGRESS TO DATE

Total of 464 arrays with total capacity of almost 8 MW within Town limits

- 1.4MW - 27 Commercial/industrial units
- 2.4 MW Municipal
- 4.1 MW Residential – 437 units
- An additional 4 MW solar virtual net metering contracts at 2 sites in CT

3. MICROGRIDS

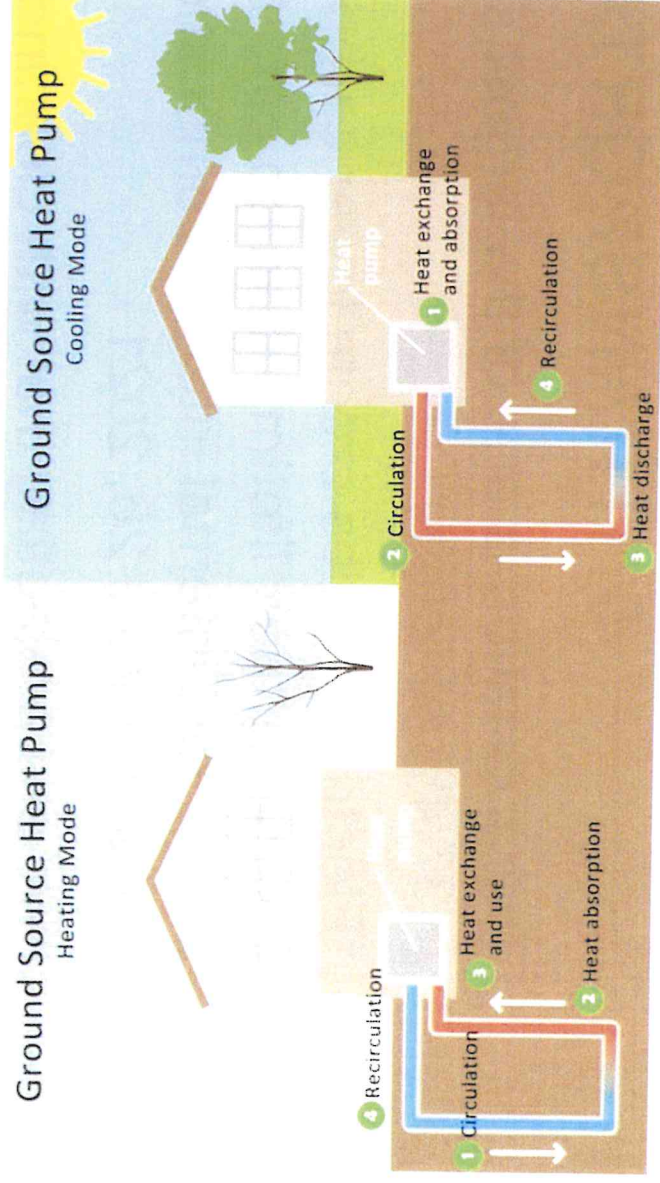
- Small subsets of power sources, users, wires and controls
- Resiliency - allows independent operation in the event of an outage or as part of the larger grid



MICROGRIDS

- Enables more renewable energy through integration of storage and smart controls. Electricity flows in multiple directions
- Greater resiliency, microgrid operates when broader grid is down
- As price of solar and batteries decline, Microgrids offer cost savings
- Gives local residents flexibility and control of their energy usage and generation

4 AIR- & GROUND-SOURCE HEAT PUMPS



Benefits

- Lower GHG emissions
- Lower heating and cooling costs (20-60% savings)
- Safety – no gas leaks
- Improved air quality
- Comfort – maintains very constant temp

5. TRANSPORTATION

- Transportation is one of the largest sources of GHG in CT (~37.4% of totals)
- “Electric vehicles create lower carbon footprint over the course of their lifetime than do cars & trucks that use traditional, internal internal combustion engines”
Choudhury Jul 26, 2021
- “We are projecting that with cleaning up the grid, we can reduce emissions from electric vehicles by 75%, in 2050.” MIT Energy Initiative Nov 2019

PROGRESS TO DATE

- Chevy Bolt added to town fleet in 2018
- Two port car charging station installed at Municipal Center 2017
- Four fast charge EV installations in Sandy Hook thru Electrify America (worth \$350,000) in progress



ENERGY TRACKING & MANAGEMENT

- Peak demand influences energy costs and size of infrastructure. Renewable energy can reduce peak demand
- Through participation in demand management programs we can respond to requests to reduce energy demand

RECOMMENDATIONS

- Adopt energy efficient building codes
 - Solar-ready roofs on all new construction, geothermal, heat pumps, battery storage
 - Tax incentives, when applicable,
- Continue to expand and upgrade solar, e.g. 2MW solar at Batchelder site, Municipal Bldg, traffic control signage, LED lighting in parking lots
- Additional EV charging facilities and municipal EVs
- Encourage use of available programs eg SBEA, C-PACE, Energize CT, CT GreenBank

REFERENCES

- U.S. Green Building Council CT Chapter ctgbc.org
- Nov 2019 Insights into Future Mobility
MIT Energy Initiative
- Feb 2018 International Council on Clean
Transportation Report
- May 20, 2019 Forbes J. Ellsmoor
- Jul 26, 2021 Sustainable Future S.R. Choudhury