THESE MINUTES ARE SUBJECT TO APPROVAL BY THE SUSTAINABLE ENERGY COMMISSION

Sustainable Energy Commission held a regular meeting Thursday, November 21, 2019 in shared meeting room 3 of the Municipal Center located at 3 Primrose Street, Newtown, CT 06470. Chairman Kathy Quinn called the meeting to order at 7:00pm

Present: Kathy Quinn, Allen Adriani, Vanessa Villamil, Mark Sievel, Zach Marchetti, Erik Weiss, David Stout
Absent: Tom Snayd, George Brown
Also Present: Director of Public Works Fred Hurley, Jack Thatcher

Communications – A. Adriani, F. Hurley and K. Quinn presented to the Board of Selectman.

Public Comments – J. Thatcher asked if this committee had the thought of going carbon natural in 10 or 15 years. K. Quin explained they do have goals but that is aggressive. F. Hurley explained that we will have our 5th MW solar done next year. Between the direct and virtual net metering they will be 90% solar.

Minutes – M. Sievel moved to approve the minutes of the 10/17/19 meeting. V. Villamil seconded, motion unanimously approved.

BUSINESS

2020 meeting scheduling – M. Sievel moved to approve the 2020 meeting schedule (Attachment A). A. Adriani seconded, motion unanimously approved.

Discussion with Robert Gerbert regarding the schools and energy savings measures – R. Gerbert was not able to attend the meeting but provided updates regarding items addressed at the October meeting (Attachment B).

Promotional reusable bags – Discussion of what the artwork should look like on the bag was discussed. M. Sievel will work on this for the next meeting.

ZREC for Community Center, Hook and Ladder and new Police Station – Proposals were submitted today and F. Hurely presented a breakdown of the results (Attachment C). There are questions for H&L if the roof can handle the load or if a ground mount would be required. V. Villamil moved to authorize F. Hurley to vet the proposals and recommend an award after verification of all references and authority to recommend an award to the next lowest responsible proposal if the initial lowest bid proposal is withdrawn or doesn't hold up to review. M. Sievel seconded, motion unanimously approved.

VNM new 2 NW (AC) systems/Credit for High School – This is a system on Voluntown Road is Griswold. This should go on line the end of the year. It will cover the balance of Sandy Hook, Reed, Middle and Head of Meadow schools.
Electric Vehicles-Charging Stations – There were more articles in the Danbury News Times regarding charging stations coming in the spring (Attachment D). F. Hurley is collecting RFP's so when they are ready they can use them as a guideline.

Energy Savings program:

Community Center/Senior Center – No update

Police Department – All the bids are in and approved. There was a ground breaking on Wednesday 11/20/19.

General plans for schools – A. Adriani, reported that B. Gerbert sent him drawings for Hawley School. The boiler at Head of Meadow school needs to be done now. However, the BOE the boiler replacement and lighting upgrade in year 4. Reed school is doing HVAC upgrades. Edmond Town Hall have put a flat room replacement in the CIP. The Library has HVAC upgrades and the following year lighting and window replacement. There was discussion questioning the order of upgrades. The windows should be done before the HVAC.

Develop/update: Municipal Energy Plan, Web Site, Facebook page and Power Point Presentation, Incorporate demand reduction and Energy Star Portfolio Manager– A. Adriani suggested that all the projects that have and plan to be done, be part of the energy plan. K. Quinn and D. Stout will work on the website.

ADDITIONAL ITEMS TO BE ADDRESSED
Organic Recycling/ School program – Included in Attachment B.
General Recycling – K. Quinn spoke about an article describing how they take garbage and turn it into a plastic component to be used for other things.
Outline Sustainable Newtown Program – None
Batchelder site for future solar/installation/community solar site – They are going to put an electric meter on Batchelder to establish security lighting per DEEP request.

Next meeting is December 19, 2019.

Having no further business, the meeting was adjourned at 8:24pm.

Respectfully Submitted,
Arlene Miles, Clerk

Attachment A

SUSTAINABLE ENERGY COMMISSION
NEWTOWN MUNICIPAL CENTER
3 PRIMROSE STREET, NEWTOWN, CT 06470

2020 MEETING SCHEDULE

Meetings are held on the third Thursday of the month, in Shared Meeting Room #3, and begin at 7:00pm.

January 16

February 20

March 19

April 16

May 21

June 18

July 16

August 20

September 17

October 15

November 19

December 17

January 21, 2021

Attachment B

From: Gerbert, Bob <gerbertr@newtown.k12.ct.us>
To: Quinn <quinnka@aol.com>
Cc: Al Adriani <aladriani@gmail.com>
Subject: SEC Meeting on Nov. 21st
Date: Thu, Nov 21, 2019 9:10 am

Hi Kathy,
Hope all is well. I will not be able to attend tonight's meeting. Here are a few things addressed since the October meeting.

(1) Faulty lighting controller replaced at Sandy Hook. We received a new controller under warranty. This was installed in-house and programmed. All outdoor lighting is now on a time schedule for operation.

(2) I attended a recycling workshop at CCSU which focused on cafeteria recycling efforts. Main recycling efforts are driven by separate bins for different waste streams such as cartons, liquids, food, bottles/cans, etc. I'll try to get some things implemented by taking small steps. I have ordered various garbage cans for Sandy Hook to try that school as a pilot.

I will plan to attend the December meeting. Hope you have a wonderful Thanksgiving holiday.

Best regards, Bob Gerbert

--
Bob Gerbert, PE
Director of Facilities

Attachment C

Company	Contract Term	Hook and Ladder	Community Center	Police Department
64 Solar LLC	15 years	$.075	$.075	$.075
	20 years	$.059	$.059	$.059
	25 years	$.055	$.055	$.055
Davis Hill Development	15 years	N/A	N/A	N/A
	20 years	$.044 (roof) $.078 (ground)	$.04	$.04
	25 years	N/A	N/A	N/A
Earthlight Technologies	15 years	N/A	N/A	N/A
	20 years	N/A	N/A	N/A
	25 years	$.0908	$.0708	$.0813
conEdison Solutions	15 years	N/A	N/A	N/A
	20 years	$.069	$.069	$.069
	25 years	N/A	N/A	N/A
Sun-Wind Solutions	15 years	N/A	N/A	N/A
	20 years	$.095	$.075	$.072
	25 years	N/A	N/A	N/A

Attachment D

EARTH MATTERS

More electric car charging stations on their way to Danbury area

ROBERT MILLER

Hearst Connecticut Media file photo

Ridgefield First Selectman Rudy Marconi demonstrates how the town-owned electric car is charged at a charging station at the Ridgefield Playhouse in 2013. Behind him from left is Allison Stockel, executive director of the Ridgefield Playhouse and Molly McGeehin and Carson Fincham with RACE.

If you're leaf-peeping in western Connecticut in your Nissan Leaf, you can always stop at the Minor Memorial Library in Roxbury, check out a few books and charge the car's batteries.

"We're on the map," said Roxbury First Selectman Barbara Henry.

Ditto the town halls in Kent and New Fairfield, and Bridgeport Hall in Newtown — all have electric vehicle changing stations.

There are two stations each in Bethel, New Milford and Ridgefield and a handful in Danbury. Mayor Mark Boughton said the city now is applying for a grant to add five more at the City Hall parking lot.

But in some small towns — including Redding, Brookfield, and Bridgewater — you have to hum down the road to another town to power up.

Bridgewater First Selectman Curtis Read acknowledged that in the future, more people will be driving electric cars. But in a small town like Bridgewater, he said, it may not be costeffective for the town to install a charging station.

"Who pays for it?" he said. "Is it appropriate in a rural town?"

This is one of the issues the state Department of Energy and Environmental Protection raises in its draft report "Electric Vehicle Roadmap for Connecticut" released in October.

In fact, the report says, people in rural towns — who have to drive farther to commute to work, run errands, or just to shop — would benefit more by having electric cars. Because they have to drive more, owning a gas-powered car means spending more money on gasoline and on car repairs.

Electric vehicles will save them a lot of that money. And, instead of polluting the air, they'll be driving a clean car, reducing carbon dioxide emissions by an estimated 3 metric tons a year — nearly twice the pollution reduction achieved by urban drivers who switch to electric vehicles, but drive shorter distances.

"The benefits of EV adoption in rural towns are significant," the report said.

People can read the draft at: **https://bit.ly/34g5fB8**

They have until Nov. 11 to send written comments on the draft. These comments can be filed electronically on the DEEP Energy Web Filing webpage or submitted by email to DEEP.Energy **Bureau@ct.gov**

The agency wants to greatly increase the number of electric cars on the state's roads. Connecticut should have 125,000 to 150,000 electric vehicles on the road by 2025, the report says, and 500,000 by 2030.

By doing so, it will reduce air pollution. Currently, nearly 40 percent of the state's air pollution comes from internal combustion motor vehicles.

"There are multiple sources of pollution," said Keri Enright-Kato, the DEEP's director of the Office of Climate Change, Technology and Research. "But automobiles play a large role."

And because the state is committed to reducing air pollution levels to 45 percent of what they were in 2001 by 2030, and 80 percent by 2050, cutting automobile pollution is a way to reach those levels.

But to get people to drive them, there have to be far more charging stations.

Connecticut has 344 changing station in the state, with 823 outlets. Of these, only 34 are directcurrent fast chargers, which can charge a car in an hour or so.

The DEEP report says to get people driving electric vehicles, those numbers should rise to 5,858 workplace chargers and 3,848 public charging stations, with 282 of these being fastcharging stations.

Enright-Kato said that 80 percent of electric car owners in the state charge their cars at home. But having public electric charging stations as available as gas pumps will put electric car drivers at ease.

"It will reduce range anxiety," she said.

The DEEP report also said that electric cars make ideal fleet vehicles — the cars driven by state or municipal employees short distances every day. The City of Hamden now has a pilot program testing electric buses. One of Ridgefield's fleet cars is a Nissan Leaf.

As the cost of batteries goes down, and the range of electric cars increases, people will start buying more of them. They're more economical to drive, they pollute less, and they're quieter.

That's happening now. Ridgefield First Selectman Rudy Marconi said there are always people using the town's charging station.

"It's busy all day long," he said.

In Bethel, First Selectman Matt Knickerbocker said the town's two charging stations used to be vacant.

"Now, I say we see cars in there half the time," he said. "Sometime next year, I'd like to double what we have."

Contact Robert Miller at **earthmattersrgm@gmail.com**

Electric cars a key part of state's reduction efforts

By Luther Turmelle

Hearst Connecticut Media file photo

E-vehicle charging stations at the Whalley-Blake Public Parking Lot in New Haven.

As Connecticut sets its sights on having 125,000 electric vehicles on the road in the next five years, questions arise as to whether they will yield the environmental gains state officials are projecting.

The state's goal is to reduce greenhouse gas emissions by 2030 to a level that is 45 percent lower than 2001 levels. That is no easy task: Emissions from motor vehicles in the state account for the largest source of greenhouse gases, 38 percent as of 2016, the most recent year for which data is available.

Electric vehicles are said to be better for the environment because they produce zero emissions. But as a May 2016 article in Scientific American points out, whether electric vehicles are beneficial for the environment depends on how the power used to charge their batteries is produced.

The two dirtiest-burning fuels used to run power plants — coal and oil — have virtually disappeared from New England over the last two decades.

The regional power grid operator, ISO New England, reports that oil generated 19 percent of the region's electricity 20 years ago and coal accounted for 15 percent. Today, both combined account for one percent of the region's fuel mix for power generation.

Connecticut's last coalfired power generation unit, at Bridgeport Harbor Station, is scheduled to be decomissioned over the next two years.

Natural gas is, by far, the dominant fuel that power plants in New England operate on, by almost a two-to-one margin over nuclear energy.

"And natural gas produces fewer greenhouse gases," said Rick Rosa, a principal business development professional for Orange-based utility holding company Avangrid. "There's also an increasing amount of renewable energy sources being brought onto the grid."

Electricity from renewable resources, such as solar and wind, accounted for 13 percent of the New England power grid's fuel mix during a spot check done Friday of the ISO-NE website.

David Reichmuth, a senior engineer with the Clean Vehicles Program for the Union of Concerned Scientists, said the group's most recent analysis of emissions found electric vehicles to be the clear winner over gas-powered vehicles.

"We compared from the start to finish, from the emissions associated with the production of the fuel as well as its use to run the vehicle," Reichmuth said. "We found that to get the same level of emissions from an internal combustion engine vehicle as you do from an electric vehicle, the gas-powered vehicle would have to get 80 MPG, 102 (MPG) in New England. Electric vehicles are much more efficient in terms of energy use."

Rosa said electric vehicles are 80 percent to 90 percent efficient, reflecting the amount of energy used to propel the cars forward.

"An internal combustion engine is only 20 percent efficient," he said. "To think of it another way, for every dollar of gas you put in, only 20 cents go towards actually moving the vehicle forward."

Generally speaking, the state's two largest electric distribution companies — Eversource Energy and The United Illuminating Co. — are supportive of efforts to try to get more electric vehicles on the road.

Eversource Manager of Research & Business Development Kevin Boughan said broader use of electric vehicles in the state "has the potential to create downward pressure on electric rates."

"It's because you're spreading your fixed costs over a broader area," Boughan said.

To encourage wider use of electric vehicles in Massachusetts, Eversource officials in 2018 got approval from regulators in that state to launch a five-year program to expand charging stations, he said. The goal is to get 400 new charging stations in place over the life of the program and, so far, 84 already are operating, according to Boughan.

Eversource pays for 90 percent of the costs associated with getting the charging station infrastructure in place, he said. The remaining 10 percent of the cost — the actual charging unit that plugs into an electric vehicle — is covered by whoever is hosting the station.

"Some are being hosted by municipalities, some by business destinations like movie theaters," Boughan said. "There's really a significant upfront cost associated with developing these charging stations. But to date, private investment in public charging infrastructure has adequately addressed the range anxiety people have."

Range anxiety is the term used to describe the fear consumers have that if they own an electric vehicle, they won't be able to find a charging station when they need one.

To date, Eversource hasn't proposed a similar effort in Connecticut, he said. But later this month, state utility regulators will open up hearings to review how Eversource and UI are incorporating electric vehicles into their system planning.

Boughan said he expects members of the Public Utilities Regulatory Authority to develop a request for proposals as a result of its findings from the hearings. That could include a request for proposals similar to Eversource's charging station build-out efforts in Massachusetts. **luther.turmelle@hearstmediact.com**