

Town of Newtown, CT

3 Primrose Street, Newtown, CT

THESE MINUTES ARE SUBJECT TO APPROVAL BY THE SUSTAINABLE ENERGY COMMISSION

11-19-15

The Sustainable Energy Commission held a regular meeting Thursday, November 19, 2015 in shared meeting room 3 of the Municipal Center located at 3 Primrose Street, Newtown, CT 06470.

The meeting was called to order by Chairman, Kathy Quinn at 7:00 pm.

Present: Chairman, Kathy Quinn, Steven Gogliettino, Mark Sievel, Dave Stout, Barbara Toomey, Bryan Dougherty

Also Present: Fred Hurley, George Brown, Conrad Reilly and Alex Kimball, two scouts attending the meeting working on the citizens in the community merit badge, which is required to become an Eagle Scout.

Absent: Joe Borst

Communications: Ms. Quinn introduced George Brown, a resident interested in becoming a member of the Sustainable Energy Commission. Mr. Brown relayed his background to the commission.

Public Comments: None.

Acceptance of Minutes: Ms. Toomey made a motion to accept the minutes of the October 15, 2015 meeting minutes Mr. Stout seconded. The motion passed unanimously.

Business:

Status of Landfill Solar Projects: Mr. Hurley and Ms. Quinn attended a meeting relative to virtual net metering (att.) Mr. Hurley said there is an equivalent of \$10 million in cap credit that has been approved; the municipal que was filled before the program even started. It is being requested that the remaining 60% of the cap be open for municipalities. There may be enough capacity to take care of all the municipal landfill solar projects. We are looking for virtual net metering, allowing offsite buildings to tie in to the landfill. Mr. Hurley shared the legislative priorities for the landfill solar project, which has also been shared with the state representatives and Senator Hwang (att.). Under ZREC (Zero Renewable Energy Credit) solar landfill projects should be operational by October 2016; the federal tax credit goes away after Dec. 31, 2016. Newtown is one of the eleven "stranded" communities, one that has a completely ready to go project and is waiting on the virtual net metering que to open to continue with the project. Mr. Hurley hopes something to be passed during the short session.

Newtown Energy Challenge (Solarize II): An information session was held and better attended. The program was explained to the scouts attending the meeting.

EV Charging station: This item is on hold for now, waiting for the next round of grant applications. Mr. Hurley will request funding for electric vehicles in the 2016-2017 budget.

Organic Recycling Program startup: The kick off was very successful with 197 residents registered and over 100 people have picked up the bins. Residents can register at any time at www.HRRA.org; bins can be picked up at the Public Works Department. Ms. Quinn said she would contact the Newtown Bee to do an article on all recycling as residents may not be aware of all that can be recycled without a permit.

Clean Energy Community Reward: this item not addressed.

Energy Savings Program Update

Celtic projects-Municipal Center: (att.) RFP's & RFQ's were sent to all firms listed with the state as qualified; equivalent to the state bid program. The natural gas line will be available for Middle Gate School in time for the July budget. The plan is to put in high efficiency gas boilers. Celtic recommends Lantern. Mr. Hurley asked the commission to read through the attached; this item will be addressed further at the December meeting.

Municipal Energy Plan & Energy Star Portfolio Manager: no update on this item.

Eversource Template: no update on this item.

Energy Star Portfolio Manager/Updating procedure: no update on this item.

Street Lighting: Mr. Hurley will be meeting with CCM after Thanksgiving. He has a complete audit of every street light in town, broken down by account and wattage. A pole by pole survey will be done to verify there is no duplication. Mr. Hurley has a proposal to purchase street lights; the background information will be vetted to be sure it is in line with the proposal and will be addressed further at the December meeting.

Bridgeport Eco-Tech Park – next steps: Mr. Dougherty asked for an update. Mr. Hurley said that the volume level we could sustain is limited. Mr. Dougherty spoke to Bridgeport Diesel, it sounds like they are trying to get into markets around here.

Outreach to Schools: HRRRA will hold a region wide third grade education efforts to put something into as many school classrooms as will participate.

ADD TO AGENDA: Mr. Dougherty moved to add to the agenda the appointment of a new member. Ms. Toomey seconded. The motion was carried unanimously.

Mr. Stout moved to appoint George Brown to fill the vacancy to expire January 6, 2018. Ms. Toomey seconded. The motion was carried unanimously.

Mr. Hurley shared a proposal for preliminary planning for a Fairfield Hills microgrid feasibility study (att.) saying the area with the most potential for a microgrid is Fairfield Hills because there is a correctional facility, a school, the municipal offices, the high school, the middle school, NYA, the Newtown Volunteer Ambulance and the EOC.

Adjournment: Ms. Toomey made a motion to adjourn the meeting at 8:27pm. The motion was seconded by Mr. Stout. The motion was carried unanimously.

The next regular meeting will be held on Thursday, December 17, 2015 at 7:00 pm at the Newtown Municipal Center in Shared Meeting Room 3.

Submitted, Susan Marcinek, clerk

Attachments



Memorandum:

To: Fred Hurley – Town of Newtown
Kathy Quinn – Town of Newtown
CC: Jim Pagliaro, Project Manager (Celtic Energy)
Chris Halpin, PE, President (Celtic Energy)
From: David-John Plis, PE, Senior Energy Engineer (Celtic Energy)
Date: November 17, 2015
Subject: Newtown Municipal Center Contractor RFQ Response Summary

Summary:

The purpose of this memorandum is to provide a summary of qualifications and experience from the six (6) contractors who responded to the Town's request for qualifications. The six (6) contractors include (in no particular order) Nxegen LLC, Lantern Energy, JK Energy, Green Leaf Energy Solutions, Energy Solutions CT, and Earthlight Technologies. All contractors are approved for the Small Business Energy Advantage program, which will provide utility rebates as well as 0% on bill financing for projects up to \$100,000 per meter. The summaries below consist of unbiased information summarized (or directly quoted) by Celtic Energy for each contractor's submittals. Please refer to the email sent on November 17, 2015 for the complete package of responses provided by the contractors.

Nxegen

Direct experience with numerous municipalities throughout Connecticut, and has a Certified Energy Manager on staff. Has capabilities for energy procurement, energy auditing, consulting, load monitoring and rate analysis. They state in their narrative that they "have experience in many areas, including billing evaluations, energy procurement services, lighting technologies, cogeneration, variable speed drives, central plant measures (boilers/chillers), building envelope, HVAC upgrades, motors and drives, HVAC equipment replacement, electric and gas supply management, water conservation, BAS/EMS platforms and electric demand curtailment. In addition, NXEGEN can engage the services of highly qualified channel partners who provide a concentrated expertise in specific technology classifications."

"NXEGEN has demonstrable expertise in implementing comprehensive solutions including:

- *HVAC System:*
 - *Split AC condensers/DX systems, packaged terminal units, heat pumps*
 - *Packaged rooftop systems (H/C)*
 - *Air distribution upgrades (CV to VAV conversions)*
 - *Boiler system (fuel switching, condensing, modulating burners, reset controls)*
 - *Forced air natural gas unit heaters*
 - *Domestic hot water systems*
 - *Secondary systems (fan coil units, unit ventilators, etc.)*
- *Power Quality:*
 - *Power factor evaluation and correction (automatic systems) – with harmonic testing (as required)*
 - *Transformers (dry-type)*



- *Building Automation:*
 - *Wireless thermostats*
 - *EMS upgrades / installations*
 - *RTIS® (proprietary, real-time information system)*
- *Process Support:*
 - *Air compressors (variable-speed driven), refrigerant/regenerative dryers*
 - *AC motors and variable frequency drives*
 - *Laundry ozone systems*
- *Other:*
 - *Kitchen hood ventilation controls*
 - *Refrigeration upgrades:*
 - *Electronically commutated (EC) motors*
 - *Case cooler controls (anti-sweat door heaters, night shut-off)*
 - *Fan inter-locking controls (cycling and speed control)*
 - *Temperature & defrost controls “*

They state they have used ESC Controls as a subcontractor for some projects involving HVAC and controls measures.

Projects listed include:

- East Lyme Community Center: oil to gas boiler conversion, variable flow condenser water delivery system, DDC control upgrades, and attic insulation
- RPM Industries, Inc.: New air compressor and air drier, remote access Energy Management System, wireless thermostats
- Crescent Road Partners LLC: HVAC equipment replacement, electric to natural gas duct gas heater, dual enthalpy control, central occupancy scheduling and setbacks, demand control ventilation, VFDs on HVAC fans, LED lighting
- Kidcity Children’s Museum: Optimal start/stop for AHUs, dual enthalpy controls for AHUs, demand control ventilation, and exhaust fan controls

Lantern Energy

Their company has two main divisions, residential and commercial. The company has *“recently received the honor of being the highest rated company in both Massachusetts and Connecticut out of 82 Contractors in both states for the HES Program and MassSave Program. Our expertise is providing a holistic approach to buildings and energy conservation.”* They will provide a list of prior customers upon request, however their most recent project is with the Town of Portland schools and municipal buildings and involved lighting upgrades, infiltration reduction, and vendingmisers. Their team can self-perform air sealing, insulation, and electrical work. Their network of subcontractors can perform HVAC and plumbing improvements.

JK Energy Solutions

Awarded a certificate of merit for completing the most comprehensive projects in the first half of 2015. They have energy managers on staff. *“JK Energy Solutions has differentiated itself from lighting only contractors by being a comprehensive energy services company that addresses multiple measures for both electric and*

gas conservation. We offer a significant suite of practical measures that we believe are highly suitable for the Town.” Familiar measures include boiler reset controls, refrigeration controls, demand control ventilation, EMS upgrades, fume hood controls, gas conversions, and large mechanical equipment replacements.

Green Leaf Energy Solutions

Primary focus is in educational and municipal markets. Their narrative states that their team has worked with many municipalities including Newtown. They state they have in-house capabilities to assess and install LED lighting, EMS controls, computer management systems, vendingmisers, and transformer upgrades. They have a 5 year, no cost service agreement including labor with all projects.

Projects listed include:

- Edgehill Senior Living Center: Lighting upgrades
- New Fairfield Public Schools: lighting controls
- Town of Rocky Hill: Currently installing interior and exterior lighting and controls throughout the town
- Taft School: LED lighting
- Canterbury School: multiple projects over the past decade
- The Town of New Milford
- The Darien Public Library

Energy Solutions CT

Energy Solutions plans on partnering with ESC for mechanical measures. They label themselves as a ‘design-build’ contractor.

Projects include:

- 88 Danbury Rd: Cooling Tower VFD Conversion, BMS, pneumatic controlled VAV boxes to DDC, LED upgrades, daylight harvesting dimming and occupancy based controls, and vendingmisers.
- Naugatuck Valley Savings and Loan: BMS with remote site management for 9 branches, VFD with static air pressure control for 13 VAV boxes, vendingmisers, and lighting upgrades
- Westport Inn: Automated thermostats for guestrooms, refrigeration motor upgrades, refrigeration controls, vendingmisers, and lighting upgrades

Their project sub, ESC Controls, has developed comprehensive projects for New Canaan Public Schools which include mechanical equipment upgrades, BMS upgrades, burner upgrades, lighting, upgrades, and lighting controls.

Earthlight Technologies

Earthlight is a family owned business and was started in 2007. *“Earthlight has been a leader in comprehensive, custom energy conservation in these programs. Some of our projects include municipal jobs (schools and town garages), laundromats, fast food restaurants, office buildings, libraries, car dealerships,*

and convenience stores. Earthlight has over 33 years of experience in lighting and controls and also has a solar division to lock-in long term savings and switch to renewable energy.”

Past projects include:

- Ellington BoE: HVAC upgrades and lighting retrofit
- Town of Hartford Samuel Arroyo Center: New energy management system and lighting retrofit
- Town of East Windsor Sewer Commission: VFDs on grinder pump motor and upgraded SCADA controls
- Talcott Mountain Science Center: Lighting upgrades, heat pumps with economizers
- Swiss Cleaners: Waste water heat recovery and lighting retrofit

“Earthlight’s methodology for implementing the above ECMs identified in the original IGA is as follows:

- 1. Pre-Installation Project Manager Walk Through*
- 2. Order Materials*
- 3. Sub-Contractors Assigned – Statements of work are sent to selected Sub-Contractors*
- 4. Materials Received and Issued to Staging*
- 5. Materials Delivered to Job Site – Usually an Earthlight vehicle*
- 6. Walk through with Foreman and/or Sub-Contractor – Prior to installation a walk through is conducted with the foreman or sub-contractor*
- 7. Install – After the walk through is complete the installation begins*
- 8. NU Post Inspection*
- 9. Make Repairs/Modifications – If the NU inspection requires repairs or modifications Earthlight is required to schedule and complete the work. If sub-contractors are involved they have to be contacted and scheduled*
- 10. Compare final Documents to Modifications – Final documents are compared to the documents originally presented to the customer*
- 11. Get Documents Resigned – If there were differences between the original documents and the final documents the documents need to be resigned by the customer*
- 12. Send Thank you and make Follow Up Call”*

Next Steps

CEI has reviewed the qualifications of each firm, and as we expected, most seem to be specialized in lighting. Although they all offer to conduct “comprehensive” projects, almost all examples are sub-contracted to ESC, which doesn’t apply to the Municipal Center as the Town will be using ABS to do any HVAC and controls work, as a sub to the selected contractor. This eliminates Energy Solutions CT, Green Leaf, and JK Energy. We have personal experience with Nxegen and Earthlight Energy and don’t feel their performance histories are appropriate for a demanding client like Newtown. Therefore, based on our knowledge of their actual performance, their histories in the local market, and unique capabilities with building envelope measures, CEI recommends that the Town selects Lantern Energy.



TOWN OF NEWTOWN
PUBLIC WORKS DEPARTMENT

Legislative Priorities For Newtown Landfill Solar Project

1. Support a bill in the short session that opens up all remaining "Virtual Net Metering Capacity" to the "stranded" municipalities that have a shovel ready project with an approved ZREC and vendor contracts in place. Oppose putting this off till the larger session.
2. Support any legislative direction to PURA that allows an extension of the ZREC implementation deadline for the current round beyond October 2016.
3. Support any legislation that will speed up any or all approvals of these municipal landfill solar projects to preserve the 30% Federal Investment Tax Credit that expires 12/31/16.

November 18th Virtual Net Metering / Solar Electric Landfill Projects

Background

The Town of Newtown Landfill Solar Project was one of many encouraged by State of CT energy policy to “Green” brownfield sites such as its landfill.

This project with 4,200 solar panels can generate 1 Megawatt of electricity and produce 1,733,451 Kilo Watt Hours, its first year of operation.

This production equals 70% plus of all the electrical consumption of all municipal public buildings, except schools, for a full year. When added to Newtown’s other solar projects, total solar electrical production would cover almost 90% of all municipal consumption annually.

This project, with a guaranteed price for 25 years and no price escalation, would save the Town over \$2.3 Million in electricity cost over the length of the contract. It provides a direct benefit to all Newtown taxpayers by stabilizing the Town electrical cost.

The Problem?

The Town of Newtown, like dozens of other municipalities, did not know that there was no room in the “queue”, for “municipal virtual net metering”, until after they had completed the process to obtain a successful ZREC (Zero Renewable Energy Credit) from DEEP and Eversource. Even while there was continued promotion for “virtual net metering”, the primary responders (municipalities), found their queue already over-subscribed.

The municipal queue was one of three (3) covering the capacity approved by the Legislature. The municipal queue, as noted, was oversubscribed. The State and Agriculture queues had no application and one (1) application respectively. This

meant that nearly 60% of the total available virtual net metering capacity has gone undersubscribed. Yet, we have dozens of municipal projects that could use that capacity immediately. Newtown has its vendor contract in place for installation of the project noted above. We have a deadline on our ZREC grant to have our project operational by October, 2016. We need movement on virtual net metering.

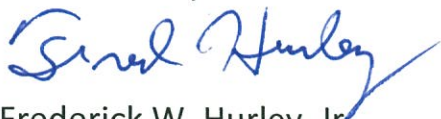
The Solutions!

The most obvious and most immediate solution is to open the remaining virtual net metering capacity and guarantee that all the current shovel ready municipal projects are covered. This would include Newtown.

However, as all these municipal projects are of a direct public interest nature that provide a financial return to the taxpayers by stabilizing public sector electrical costs, you might consider a more robust program that targets additional net metering capacity for municipal brownfield development.

The greening of brownfields can be a lengthy process often delayed because there is no viable revenue producer for the site. Knowing that a brownfield could be turned into a solar energy electrical producer can break down development impediments and potentially speed up a process that is pure public benefit and the best example for public/private partnership for the common good.

Submitted by:



Frederick W. Hurley, Jr.
Director of Public Works
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November 19, 2015

Frederick Hurley Jr.
Public Works Director
Town of Newtown
4 Turkey Hill Road
Newtown, CT 06470

RE: Proposal for preliminary planning for a Fairfield Hills microgrid feasibility study

Dear Fred,

Thanks to you and Kathy for spending time with us to discuss your ideas for the potential Fairfield Hills microgrid (MG). Pursuant to the blanket services agreements between Celtic Energy (CEI) and the Town of Newtown (the Town), executed on August 17, 2015, CEI proposes to perform preliminary planning for a MG feasibility study scope of work (SOW) and high-level opportunity assessment as set forth in the Scope of Services on a flat fee basis, shown below.

Scope of Services

This proposed preliminary plan for a MG feasibility assessment study and opportunity evaluation project has the primary objectives of assessing potential MG project opportunities, conceptual design and procurement options, and identifying the scope of work for further study of MG options for the Town's consideration. Initial discussions suggest that viable options exist to retrofit existing facilities with distributed energy resources, and to develop and/or modify electrical distribution infrastructure, to enable grid-independent MG operation and facility energy surety.

CEI proposes to conduct an initial scoping study for a subsequent MG feasibility assessment on a flat fee basis plus expenses. CEI will develop a scope of work for analysis of MG development potential, with very high-level comparative analysis of the relative technical and cost/benefit implications of primary MG options, and procurement and financing "business models" for MG configurations and strategies. This will not include cost/benefit analysis or estimated costs and savings except at a very general level. This process will enable the Town to assess its options at a high level, and identify preferred strategies for deeper analysis in a subsequent task order. We will work closely with the Town and provide biweekly progress reports. Our scope assumes the Town will provide facility data and other related information in a prompt and thorough manner. We will leverage the information provided to the Town by the facility audit process recently conducted by an ESCO, which we already can access.

The elements to be included in this Task Order are as follows:

1. Identify critical facilities to be included in Fairfield Hills MG feasibility analysis.



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www.celticenergy.com



2. Analyze buildings' electricity and natural gas usage data provided by the Town.
3. Consider potential distributed energy resources and generation options including cogeneration, solar, storage, backup fossil generators, and load reduction.
4. Describe conceptual design options for potential MG energy systems and infrastructure.
5. Describe procurement business model options, financing strategies and potential sources of capital and operating support, *e.g.*, DEEP MG grant, C-PACE, utility incentives, etc.
6. Meet and communicate with Town and project stakeholders, to a maximum of three visits (including multiple meetings per visit) including summary presentation.
7. Prepare and present summary report of initial findings deliverable, with 1–2 page executive summary and roughly 10 pages of report and attachments.

Fee Schedule (confidential and proprietary)

For the task elements shown in the Scope of Work CEI shall be compensated on a flat fee basis of \$7,500 for engineering consulting services as requested by the Town, plus expenses (primarily mileage at the IRS standard rate). The cost of any materials specifically required to complete our work would be passed through to the Town. Consulting fees shall be billed monthly, based upon per cent complete tasks, and will be due within 30 days.

We look forward to providing these services to the Town. Please contact me with questions or comments. If this proposal meets your requirements as described herein, please have an authorized representative of the Town accept the terms by signing below, converting this proposal into an authorized Task Order. Or if the Town prefers, you may issue us your own Purchase Order referencing the terms of this proposal.

Thank you and the rest of the Town team for selecting CEI, and we will work very hard to exceed your expectations!

Best Regards,

Walt Donzila

Walt Donzila, C.E.M, C.P.C.

Director of Business Development

CC: Kathy Quinn
Chris Halpin
Jim Pagliaro
Dawn Rausch

As an authorized representative of the Town of Newtown I accept the terms of this proposal and am converting it to a Task Order so work may commence.

Authorized Representative

Title

Date