

# WINDHAM ENERGY COMMISSION

Monday September 14, 2015 *NOTES*

The meeting started at approximately 6:20 PM but there was no quorum. Commission members in attendance were: Jean de Smet- Chair, Liz Ostwald, and Corey Krohn. Also present: Michael Callahan - Micro-Grid member, Joe Gardner - Town Engineer, and James Finger -staff

## **TOPICS**

- *Micro-grid status report*
- *Electric Vehicle lease-purchase for Building Official*
- *RFQ to update Benchmarking on Town Buildings*
- *RFP on Street light audit for possible acquisition*
- *Fraking waste*
- *Virtual Net Metering-Solar Farm*

**Micro-grid report** - The Chair asked Michael Callahan serving on the Micro-Grid to give an update on the progress of the Micro-grid. Mr. Callahan referred to a handout that had been presented to the Town Council which provided an overview of the project, its current status, and the committee's recommendations.

Engineer's Status reports - The Town Engineer briefed the Commission on the following:

**Electric Vehicle lease-purchase** - The Town took advantage of State Energy credits from the CT Green Bank, as well as CHEPR grant to pay for an electric vehicle that the Building Official will use to conduct inspections and other official duties. The Town will have a short term lease for the vehicle from a local Dealership, and the Dealer will take advantage of a federal tax credit that lowers the overall acquisition cost for the Town (see attached report).

The Building Official will attend an event on September 16, 2015 at Eastern CT. State University: '**Eastern and Windham Charged Up About Electric Vehicles**' to celebrate National Drive Electric Week™ showcasing an electric vehicles (EV) and how they are charged. The event is to demonstrate Eastern's commitment to increasing the state's infrastructure for electric vehicles and promoting public awareness that includes the installation of an electric vehicle charging station on campus at the end of 2014, and Eastern President Elsa Nuñez's recent signing of the "Workplace Charging Challenge." *(The event on Sept. 16 will be held on campus and is free and open to the public. It takes place from 5-7 p.m. on the sidewalk between the new Fine Arts Instructional Center and the Student Center - next to the student center patio).*

*Eastern is teaming up with the New England Electric Auto Association and the Town of Windham to participate in National Drive Electric Week, a celebration to raise awareness of the growing availability of electric vehicles (EVs). National Drive Electric Week is a nationwide celebration organized by Plug In America, the Sierra Club and the Electric Auto Association. Electric vehicles will be exhibited and EV owners will be available to share their experiences and the benefits of driving electric versus traditional vehicles.*

The Town of Windham will feature their newly purchased 2015 Nissan Leaf. The car was purchased for \$30,000, in part through an \$18,000 grant from the Connecticut Green Bank. The town will also be receiving \$3,000 from the Connecticut Hydrogen and Electric Auto Purchase Rebate Program (CHEAPR). Building Official Peter W. Zvingilas will use the car for on-the-job trips. Along with its no-cost

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public charging station at the Windham Town Hall, this new purchase will further increase Windham's energy efficiency.

**RFQ to update Benchmarking of Town buildings** Town Engineer Joe Gardner informed the Commission that he received nine responses to the Request for Qualifications (RFQ) that he issued for the project. He passed out copies to the members present, and said they are all qualified to do the work. Two of the firms have already done work for the Town. He urged the Commission to put this on their agenda for its next meeting on Sept. 28, in order to officially take action to choose two or three firms to interview. Then he will proceed to set up interviews with those chosen.

**RFP on streetlight audit for possible acquisition** - Town Engineer Joe Gardner informed the Commission that he advertised a Request for Proposals (RFP) for the project with a closing date of October 7, 2015. As he explained at a previous meeting, the first task would be to conduct an audit on our street lights, evaluating each one and building a GIS map. The second task would be lighting in parks, and possibly including an evaluation lights on the footbridge. The RFP was sent to the three firms vetted by the Connecticut Conference of Municipalities (CCM).

**Discussion and possible action to establish Energy Commission position on fracking and the expansion of gas pipelines in CT** The Commission discussed the idea of recommending that the Town take a position opposing fracking waste and the expansion of gas pipelines in CT.

**Virtual Net-Metering & Solar Farm** - The Commission reviewed the report from Economic Development Director on his research of the Solar Farm. Mr. Bellano explained that he asked to look into what the Town of Putnam had done regarding their solar farm process and how that might or might not be an option for Windham. Putnam hired Murtha Cullina, who handled the entire process - such as the RFPs, bids, selection of company through project completion, etc. Ultimately, Putnam selected Solar City from its RFP process.

Mr. Bellano explained that he contacted a company representative, who asked some threshold questions that need to be answered before getting into specifics of the project. For example, how many meters does the Town want off-set for electric service; how many KWs of usage are involved; and, what is the timeline for the project?

In addition, the Solar City representative sent some additional questions that are necessary to answer in order to assess a prospective solar farm project:

- *Site addresses for each respective location of interest*
- *12 months of utility data for each site*
- *A brief project overview*
- *12 months of Interval data, sometimes referred to as 15 minute interval data*

The Commission members then discussed the differences of doing a power purchase agreement versus having the Town owning the facility.

Meeting was adjourned at approximately 8:30 PM

Respectfully submitted, James Finger

# Presentation Outline

## September 1, 2015

### Town Council Meeting

#### A. Overview of Micro-Grid Project, Current Status and Recommendations

1. Micro-Grid Project Objectives
  - Shelter with heat and power at WMS and Sweeney schools
  - Minimize Town of Windham's cost
  - Long term savings
2. Recommended configuration
  - 480 VAC interconnection
  - Co-Gen
  - Photovoltaic (PV)
3. Current status and proposed schedule
4. Micro-Grid Committee recommendation to include roof replacement in the Micro-Grid Project
5. To allow the PV to be included in the Micro-Grid Project, the Micro-Grid Building Committee is recommending that the WMS roof be replaced next year as part of the Micro-Grid Project and that the Town Council:
  - Authorize an increase in the Town's contribution to the Micro-Grid Project to cover some of the cost of the roof replacement, and
  - Appoint the members of the Micro-Grid Building Committee as the WMS Roof Replacement Building Committee
6. Answer any questions the Town Council has regarding the Micro-Grid Project

#### B. Rationale for Including the Roof with the Micro-Grid Project

1. Our analysis shows that the cost to the Town will be less if the roof is replaced now as part of the Micro-Grid project as opposed to 2022. (\$ 1.0 M savings)
2. The roof was designed as a 20 year roof and is at the end of its useful life.
  - Installed in 1996
  - Will be 20 years old when replaced
  - Currently leaking
  - Town spends between \$10,000 to \$13,000 per school for repairs.
3. We cannot include the PV panels if we do not replace the roof because the roof uses stone ballast and the structure for the roof will not support the existing ballast and new PV panels.
4. The Town should take advantage of reasonable bonding interest rates
5. We are concerned the State Board of Education reimbursement rates will go down in the future.
6. Including the PV will lower the Town Green House gas emissions
7. Savings from the co-gen and PV will pay for the roof. Total project payback will be 15 years.

<b><u>Microgrid Only</u></b>	
<b>Total Project</b>	<b>Town Share</b>
<b>\$ 2.1 M</b>	<b>\$ 325 K</b>

<b><u>Microgrid w/ Roof</u></b>	
<b>Total Project</b>	<b>Town Share</b>
<b>\$ 4.9 M</b>	<b>\$ 1.2 M</b>

**New Roof as part of the School Facilities Master Plan**

- If the roof were to be replaced as part of a school renovation project, it would be subject to compliance with State Space Standards. Therefore, if the school is not fully occupied, a penalty would be incurred commensurate with the occupancy vs. capacity.

Below is an example of the associated costs if the Middle School roof replacement were to be included as part of an overall school renovation project in 2022. These numbers are based upon a one of several draft proposals Friar Associates presented to the Board of Education as part of the Master Plan studies.

<b>Windham Middle School Roof Replacement as part of a Considered Alteration project</b>					
				Total	%
<b>Total Construction Costs</b>				\$2,060,200	
Estimated Soft Costs				<u>\$787,274</u>	
Construction and Soft Costs				\$2,847,474	
Escalation 4%, 5%* per year	8.5 yrs	40.50%		<u>\$1,153,227</u>	
<b>Total Project Budget</b>				<b>\$4,000,701</b>	
<b>Net State Reimbursement</b>				<u>\$2,112,167</u>	52.8%
<b>Cost to Windham</b>				<u>\$1,888,534</u>	47.2%

\*Escalation Years 1-2 = 4%  
\*Escalation Years 3-10 = 5%

Space Standards	Sq. Ft.	Enrollment		
Existing Square Footage (adjusted)	171,243			
Proposed Square Footage (net)	171,243		1193	
State Allowable Square Footage	107,954	78.97%	942	-251
Square Footage Penalty %		21.03%		
<b>Construction Schedule</b>		6/14/22 - 8/18/23		

<b>State Reimbursement</b>			
Estimate Ineligible Costs	4%		\$160,028
Estimate Eligible Costs			\$3,840,673
State Reimbursement (Alteration)	69.64%		\$2,674,645
Reimbursement Penalty	21.03%		<u>\$562,478</u>
<b>Net State Reimbursement</b>			<b>\$2,112,167</b>

**New Roof with the Microgrid project**

- Adherence to State Space Standards does not apply to projects solely for roof replacements. If the roof renovation were included a standalone project, phased as a part of the Microgrid project, it would not incur any grant penalty for Space Standards.
- Because the roof is 2 years shy of 20 years old (the minimum time for full reimbursement), it will incur a 10% penalty (5% per year) on the grant.

<b>Projected Construction costs</b>	\$2,060,200	
Arch. Design	\$144,214	
Other Prof. Fees	\$25,000	
Contingency	\$309,030	
OH&P	\$309,030	
<b>Total Project Budget</b>	<b>\$2,847,474</b>	
<b>Net State Reimbursement</b>	<b>1,959,317</b>	<b>68.8%</b>
<b>Cost to Windham</b>	<b>888,157</b>	<b>31.2%</b>

<b>State Reimbursement</b>		
Estimate Ineligible Costs	4%	\$113,899
Estimate Eligible Costs		\$2,733,575
State Reimbursement	79.64%	\$2,177,019
Reimbursement Penalty (18 yrs. old)	10.00%	\$217,702
<b>Net State Reimbursement</b>		<b>\$1,959,317</b>

# TOWN OF WINDHAM

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TOWN ENGINEER



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## MEMO

TO: Jean DeSmet, Chair  
Windham Energy Commission

FROM: Joe Gardner, Town Engineer

DATE: September 10, 2015

RE: Electric Vehicle

The final purchase price of the 2015 Nissan Leaf was \$29,684.25

We are receiving \$18,000 from the Connecticut Green Bank

We are receiving \$3,000 from CHEAPR

By doing a two year lease, Nissan was able to access federal funds

The final cost to Windham is \$4,334.33