

**CHESHIRE ENERGY COMMISSION – Meeting Minutes**  
**Monday, November 21, 2016**  
**Regular Meeting**  
**7:00 P.M. – Room 210, Town Hall**

Commissioners Present: Chairman Rich Ogurick  
Paul Michalowski  
David Gavin

Commissioners Absent: Rob Brucato  
Walter Gayeski  
Marty Cobern  
Phil Newton

Others Present: Walter Gancarz, Town Engineer  
Frank Biancor, Cheshire Public Schools  
Vincent Masciana, Board of Education  
Tim White  
Hannah Lee, Tesla  
Sean Parnell, Tesla

- I. **CALL TO ORDER** The meeting was called to order at 7:03 p.m.
- II. **PLEDGE OF ALLEGIANCE** All present recited the Pledge of Allegiance.
- III. **DETERMINATION OF QUORUM**  
A quorum was NOT determined for this meeting.
- IV. **APPROVAL OF MINUTES**  
The minutes from the October 24, 2016 meeting could not be approved due to the lack of a quorum.
- V. **COMMUNICATIONS**  
There were no communications to the Energy Commission.
- VI. **OLD BUSINESS**

A. Energy Efficiency Projects

- 1) Town-wide ESPC (Energy Savings Performance Contract) project

Mr. Gancarz stated the M&V phase is ongoing and a report has not been received. Mr. Biancor stated he has been in communication with Ameresco regarding the contents of the report.

Chairman Ogurick asked for a status on the supplemental projects. Mr. Gancarz stated he is not handling the supplemental projects, but is aware that George Noewatne, Director of Public Works received a letter from

ECG dated November 16, 2016 recommending the Town accept the work and fees.

2) Community Pool Energy Efficiency  
There was no discussion on this matter.

3) Dryer Duct Cleaning program  
There was no discussion on this matter.

4) Concession stand renovations  
Mr. Masciana stated ground was broken on this project on November 16, 2016. Mr. Masciana shared a memorandum dated October 26, 2016 outlining the energy efficiencies included in the project as a result of the \$13,500 allocation from the Energy Commission.

5) Energy Storage  
Mr. White invited Hannah Lee and Sean Parnell from Tesla to present information regarding the use a BESS (Battery Energy Storage System) to the Energy Commission.

The following information was presented:

***Inside the Powerpack***

*Tesla has been building integrated battery systems in cars for over 10 years. The same degree of expertise, quality control and technological innovation has informed our process of developing high-performance batteries for the grid.*

*Every Powerpack contains 16 individual battery pods, each with an isolated DC-DC converter. Pod architecture and onboard power electronics optimize performance across the array and enable easy swapping at any time.*

*Powerpack supports a host of applications that offer commercial consumers and energy providers greater control, efficiency and reliability across the electric grid.*

**Smart Energy Consumption**

**1. Peak Shaving**

*Discharge at times of peak demand to avoid or reduce demand Charges.*

**2. Load Shifting**

*Shift energy consumption from one point in time to another to avoid paying high energy prices. Where applicable, this price optimization accounts for solar or other on-site generation.*

**3. Emergency Backup**

*Provide intermediate backup power to your business in the event of a grid interruption. This function can be standalone or tied to solar.*

**4. Demand Response**

*Discharge instantly in response to signals from a demand response administrator to alleviate peaks in system load.*

*The Powerpack system scales to the space, power and energy requirements of any site, from small commercial businesses to regional utilities. It can be configured in various arrangements, offering far more modularity than competing models.*

*The Powerpack is a fully integrated, AC-connected energy storage system with everything needed to connect to a building or utility network. It dramatically simplifies installation, integration and future support, offering system-wide benefits that far outweigh those of standalone batteries.*

### **Overall System Specs**

- AC Voltage 380 to 480V, 3 phases
- Energy Capacity 210 kWh (AC) per Powerpack
- Communications Modbus TCP/IP; DNP3
- Operating Temperature -22°F to 122°F / -30°C to 50°C
- Power 50kW (AC) per Powerpack
- Enclosures Pods: IP67
- Powerpack: IP35/NEMA 3R
- Inverter: IP66/NEMA 3R
- Scalable Inverter Power from 50kVA to 625kVA (at 480V)
- System Efficiency (AC)\*  
88% round-trip (2 hr system) 89% round-trip (4 hr system)
- Depth of Discharge 100%
- Certifications Nationally accredited certifications to international safety, EMC, utility and environmental legislation.
- Dimensions
  - Powerpack
  - Length: 1,308 mm (51.5")
  - Width: 822 mm (32.4")
  - Height: 2,185 mm (86")
  - Weight: 1622 kg (3575 lbs)
  - Industrial Inverter
  - Length: 1,014 mm (39.9")
  - Width: 1254 mm (49.4")
  - Height: 2192 mm (86.3")
  - Weight: 1200 kg (2650 lbs)

\* Net Energy delivered at 25°C (77°F) ambient temperature including thermal control

### **Powerpacks**

*Powerpacks house the world's most sophisticated batteries. Each Powerpack is a DC energy storage device containing 16 individual battery pods, a thermal control system and hundreds of sensors that monitor and report on cell level performance.*

### **Grid Interface**

- *Bi-Directional Inverter* The inverter converts AC grid power to DC for Powerpack storage, then converts this DC power back to AC for grid interconnection.
- *Powerpack Controller* This onsite computer interface creates control signals and relays commands to the inverter and DC combiner based on integrated application control software, or control signals relayed from a SCADA system.
- *Software* State of the art battery management software controls performance at the cell, pod and pack level. Built in control software enables dispatch from a locally hosted interface, a direct Modbus/DNP3 connection and scheduled or autonomous operation. No additional software or integration is necessary.

After a lengthy discussion it was decided that next steps should be taken to determine if the use of a BESS (Battery Energy Storage System) makes sense for the Town at this time.

### **B. Benchmarking**

- 1) **Energy Star Portfolio Manager**  
Mr. Gancarz stated he recently received an email from Mike Manzi at Eversource indicating the energy usage downloads will hopefully be available by January.
- 2) **Town Energy Use Graphs**  
There was nothing to report on this matter.

### **C. Publicity / Education / Outreach**

- 1) **News articles and letters to the Editor**  
Mr. Michalowski shared an article regarding the opening of a food waste-to-energy processing plant in Southington.
- 2) **Energy Achiever Awards**  
Chairman Ogurick stated the Energy Commission should be considering potential candidates to be presented with the Energy Achiever Award.
- 3) **1,000 LED bulbs to be given to the Cheshire Food Pantry**  
Mr. Gancarz stated he received an email confirming that 1000 LED bulbs from the Fall Festival will be donated to the Cheshire Food Bank.

### **D. Clean Energy**

- 1) **Solar on town-owned landfill**  
There was no discussion on this matter.
- 2) **Solar possibilities on other Town-operated buildings**

Mr. Masciana stated the roof at Dodd has been considered, but it is old and needs replacement. Mr. Masciana stated the roof at Cheshire High School have also been considered, but snow loads are a concern.

E. PBC Projects        There was no discussion on this matter.

F. Grants, Rebates & Utility Programs

1)     Early Involvement of Eversource in all Town building projects  
      There was nothing to report on this matter.

2)     Bright Idea Grants  
      Mr. Gancarz stated he received an email confirming that 1000 LED bulbs from the Fall Festival will be donated to the Cheshire Food Bank. There is still a balance remaining of \$3,758.00 on this grant.

3)     Clean Energy Communities Grant - balance remaining  
      Mr. Gancarz stated there is \$5,000.00 in grant money remaining which must be dispensed by December 31, 2016. It was recommended by those present that the \$5,000.00 be given to the concession stand project. No formal action was taken due to the lack of a quorum.

G. CL&P Energy Reliability Program - Tree Trimming  
      Mr. Gancarz stated the tree trimming is on-going.

## **VII. NEW BUSINESS**

A. Tesla - integrated home system consisting of glass roof tiles that include solar cells and a storage battery that can power a typical house for a day or more

B. Eversource - winter energy prices to drop for Cheshire resident

C. Eversource - Commercial Building Energy Use data - Chairman Ogurick will distribute to commissioners.

D. 2017 Plan Update to the 2016 - 2018 C&LM Plan

E. Proposed meeting dates for 2017

The following dates for 2017 were accepted by those present. No formal action was taken due to the lack of a quorum.

January 30, 2017

February 27, 2017

March 27, 2017

April 24, 2017

May 22, 2017

June 26, 2017

July 31, 2017

August 28, 2017  
September 25, 2017  
October 30, 2017  
November 27, 2017  
December - no meeting  
January 29, 2018

**VIII. ADJOURNMENT**

The meeting adjourned at 9:10 p.m.

Attest,

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Karen M. Gill