

THESE MINUTES ARE SUBJECT TO APPROVAL BY THE SUSTAINABLE ENERGY COMMISSION

The Sustainable Energy Commission held a regular meeting Thursday, May 18, 2017 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 7:00pm

Present: Chairman Kathy Quinn, Allen Adriani, George Brown, Graham Clifford, Jeff Jorgenson, Mark Sievel, Thomas Snayd, Dave Stout, Barbara Toomey

Also Present: Fred Hurley, Chuck Litty.

Communications: Household Hazardous Waste Day is May 20 at the Newtown Dept. of Public Works. The next one isn't until the fall in Danbury. Ms. Quinn said that her Eversource contact thinks Hawley School may be eligible for an energy star certificate.

Public Comments: none.

Acceptance of Minutes: Mr. Sievel moved to accept the minutes of 4/20/17. Ms. Toomey seconded. All in favor.

Business

Discussion and possible action:

- a. **Status of Landfill Solar Project:** Eversource is scheduled to do the upgrades to the power system in July and August and provide the starting point for Tezla. Tezla is scheduled to do on site construction in September/October. The intrusion permit, from DEP, needs to be extended because the original permit expires in June.
- b. **Reed School solar project:** This project is going very well. Direct Energy has been outstanding throughout the project as well as working around the schedule of the school.
- c. **Solomon Solar project:** this is on hold due to virtual net metering being on hold at the state level.
- d. **MLS Group – Nunnawauk Meadows – solar:** There is no new information on this.
- e. **Batchelder site – potential for solar:** Rob Sibley, Christal Preszler and Fred Hurley have interviewed on sight developers. There are three parts: development, remediation and solar. The state is interested in virtual net metering for brownfields. The town indebtedness has been forgiven.
- f. **Grant Funds – EV charging station:** Mr. Hurley will meet with Fairfield Hills Authority. The RFP is being finalized. The proposed EV charging station will be a double headed, type two charger and will be a smart station. Funding is available through the commission and public works.
- g. **Energy Savings program update:**
Public Works – this project will be all lighting. The waste oil burner will be a separate project.

Rec'd. for Record 5-22-2017
Town Clerk of Newtown 1:06 pm
Debbie Aurelia Halstead

Library – no update.

Head O' Meadow – this project is being re-written and will be primarily a lighting package. Board of Education will fund a high efficiency fuel oil burner.

New Construction Projects: Ms. Quinn communicated with Bob Mitchell, Chair of Public & Site Commission to request energy saving options are incorporated in the new buildings (Community Center, Senior Center and Police Department) and that the location allow for possible future solar on the buildings. Mr. Mitchell confirmed these would all be considered. Mr. Hurley stated he is in the process of completing an RFP for solar at Sandy Hook School. Mr. Stout said that the ZREC program is opening next week as well as one in October. There are three applications for the small REC program, the two Sandy Hook fire departments and Dodgingtown fire department.

General plan to use Eversource programs for remaining buildings: Mr. Stout shared a document on energy efficiency programs offered by Eversource that are designed to help municipalities save money (att.) Mr. Hurley said the buildings are improved, consumption is cut down which stabilizes cost. Programs can be combined. Eversource will rebate up to 50% based on various energy conservation measures. Ms. Quinn said they are looking primarily at the High School, the Middle School, Reed School, Hawley School, the library and smaller buildings. Ms. Quinn suggested doing all four schools in the summer and will connect with Mr. Faiella to get that set up. Mr. Hurley said that geothermal may need to be a separate project, beyond the SBEA program; a capital investment over a longer period of time.

- h. **Microgrid feasibility study:** Mr. Hurley discussed storage for solar with Sound Solar, to balance the demand curve in some buildings. Electrical usage is being monitored to see where storage might be a good candidate. They are looking at possibly adding storage to the Reed project. Mr. Stout said that Direct Energy partnered with Solar City and are developing an exclusive partnership with Tesla as far as redundancy is concerned.
- i. **Street Lighting:** the RFP will go out the first week of June, due back at the end of June.
- j. **Funding for High School program:** Ms. Toomey spoke with the principal of the high school regarding the possibility of funding projects. High school students may be interested in getting involved in the plastic bag initiative. Mr. Hurley is looking to set something up at the transfer station for plastic bags.
- k. **High School Sustainability course:** A greenery instructor will be hired. Ms. Toomey will meet with the new instructor to discuss sustainability programs.
- l. **Dashboard for website:** Mr. Stout shared a document (att.) relative to the solar dashboard. It is a wi-fi based monitoring measurement and verification system. Any circuit, at any level, can be monitored allowing the owner to see what every system is producing. The system learns over time. There is currently an intro program. An application can be downloaded, alerts sent and savings identified. Mr. Clifford said an API key is needed to allow the raw data. Mr. Stout will arrange for someone to come in to speak to the commission on this topic. Mr. Hurley would be interested in learning more about this system.
- m. **Funding for Organic recycling kits:** Mr. Brown moved to authorize \$2,800 for organic recycling kits. Ms. Toomey seconded. All in favor.
- n. **Summer Vacation:** Mr. Stout moved to take 8/17/17 off the meeting schedule for 2017. Ms. Toomey seconded. All in favor.

Additional Items for discussion:

1. **Sustainable CT:** Mr. Litty was involved in another working meeting, working on actions for the website. The timeline is on track, expecting to finish up the actions in June. Data testing with towns will begin in July. Mr. Litty is unsure when the program will go live; he anticipates something more actionable within six months from July. The program is funded by three philanthropic organizations.
2. **Newtown Forward:** This group has offered help if the commission needs it. They are working on the bottle bill and banning plastic bags.
3. **Municipal Energy Plan:** no update.
4. **Energy Star Portfolio Manager:** this is almost finalized with updates on electric and gas.
5. **Web Site:** no update.
6. **Organic Recycling:** The organic program has exceeded 465 organic kits. Action for more under item (m).
7. **Fracking Waste:** The House passed a ban on fracking waste.

Adjournment: Having no other business, Mr. Stout moved that the Sustainable Energy Commission adjourn their regular meeting at 8:35p.m. Ms. Toomey seconded. All in favor.

The next regular meeting will be held on June 15, 2017.

Attachments: Eversource Program Highlights; Panoramic Power document.

Submitted, Susan Marcinek, clerk

Eversource Program Highlights

SBEA (Small Business Energy Advantage) and EO (Energy Opportunity) Programs

The energy efficiency programs offered by Eversource are designed to help municipalities and businesses save money with little or no out of pocket capital costs, while using the energy savings to offset the 0% interest program loans.

It is the Sustainability Commission's recommendation to request energy audits for all buildings, using our preapproved SBEA contractors to get program information, designs and savings analysis.

The program offers a 0% financing for municipalities for both the SBEA and EO programs. All the buildings in Newtown fall under the SBEA program except the Middle and High schools. Eversource will allow the Town of Newtown to aggregate all the buildings together under the SBEA program, which includes the Middle and High schools.

If a design is received from one of our preapproved vendors where the designs project costs are less than the energy savings, the Commission would plan to recommend moving forward with the project. If multiple designs are received the Commission will review and choose the best design for the town. Simple paybacks are expected to be less than 48 months with the savings exceeding the 0% monthly cost.

The program highlights include:

- 30% -50% incentives for energy efficiency measures (LED Lighting, Mechanical Controls, insulation, etc.)
- 10%-30% incentives for high efficiency mechanical replacements (Boilers, Roof Top Units, etc.)
- 0% interest free financing of net cost after incentive (up to 100K per project)
- Fixed, Prescriptive pricing set by Eversource for all standard measures
- Typically applies to customers with a 200kw demand threshold and below. However, if multiple sites are being considered, all the sites can be aggregated together to include sites which may otherwise not fit into the program due to high demand.
- The project utility incentives will be determined by the total KWH and CCF savings. If multiple energy conservation measures (ECM's) are being considered in the same project, there may be additional benefits, such as comprehensive bonus incentives. Maximum incentive is 50% and is difficult to achieve.
- Each project is reviewed and approved by Eversource directly.
- Turn Key Program. Auditing, project development, materials purchasing, project management, installation and disposal is included.
- Starts with an assessment from an authorized Eversource representative

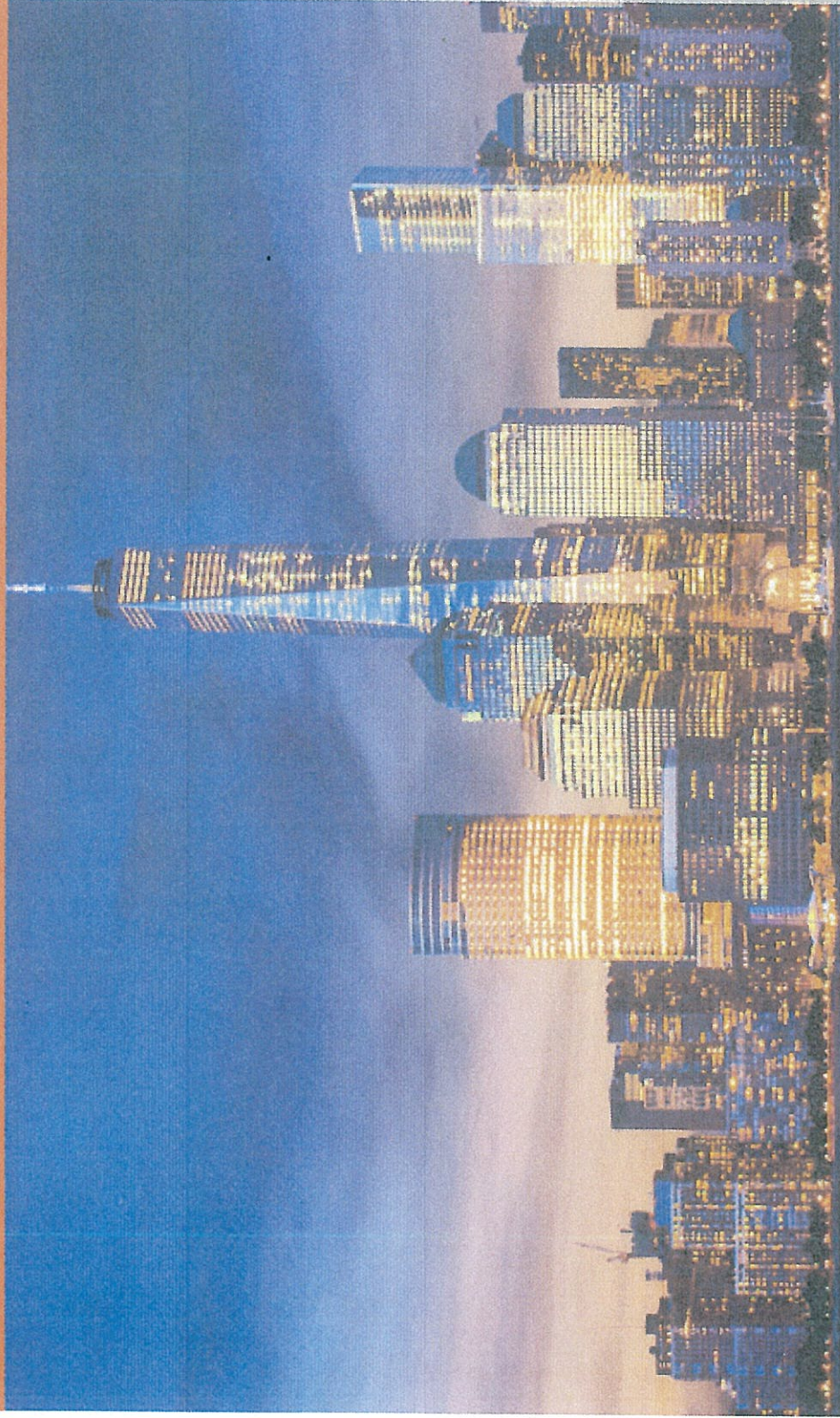
The Sustainability Commission would like to propose having the preselected SBEA approved contractors submit proposals for each building that still needs updating. Even though many

measures are prescriptive pricing, like lighting, there are different solutions offered through the program that would have different costs. Also, some of the more custom measures are priced by the contractors and approved by Eversource. Overall solution prices could vary based on designs which would also affect the rebates or incentives.



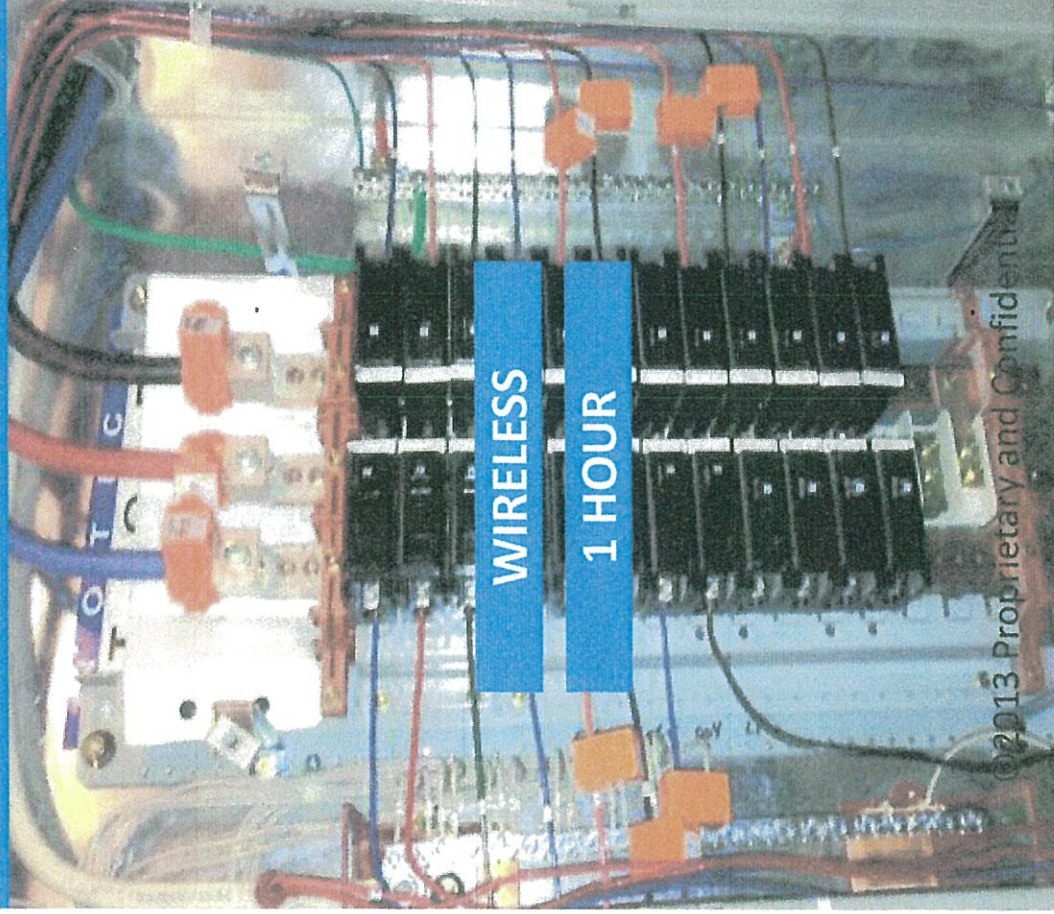
**Direct
Energy.**
Business

Panoramic Power Energy Management



Easy to deploy in a couple of hours

Panoramic Power

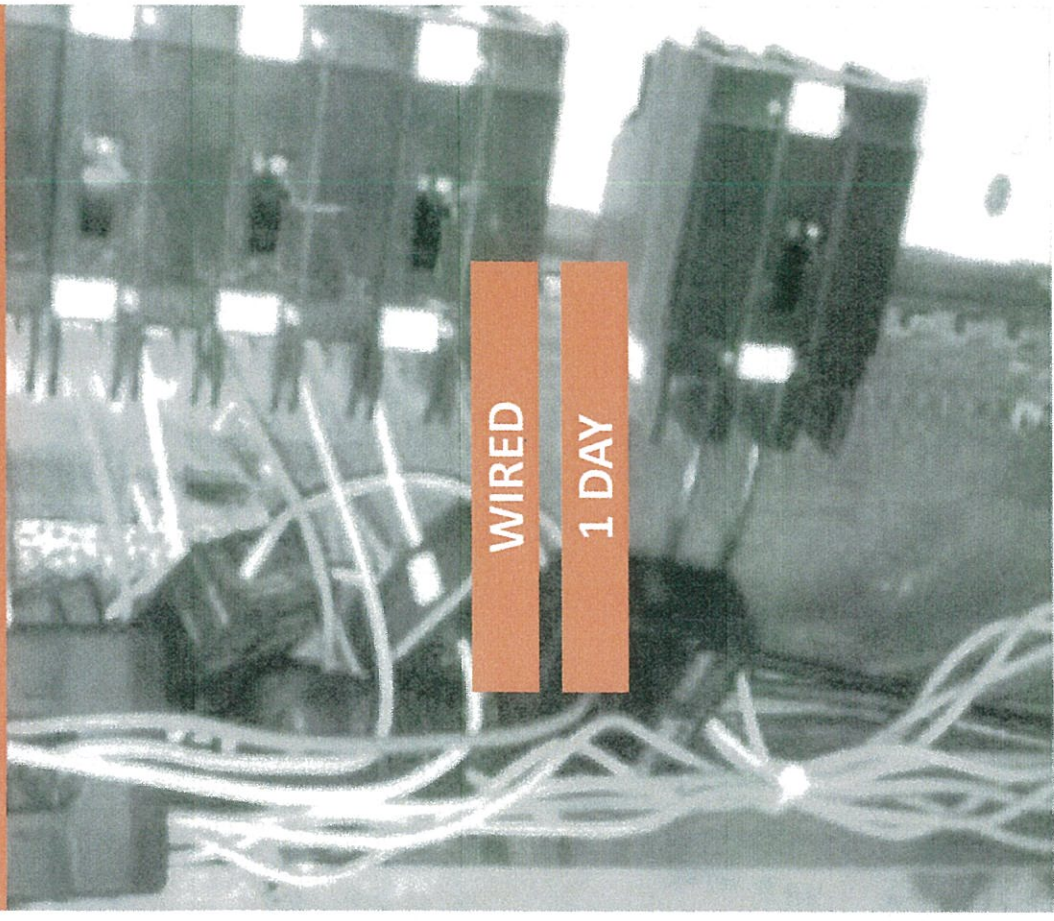


WIRELESS

1 HOUR

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Competition



WIRED

1 DAY

System Reports, Alerts, and Dashboards

- Automated Reports
- Energy Triggers & Alerts
- Deep Learning
- Dashboards
- Mobile Application



We provide a real-time device-level energy analytics platform to improve facility operations with actionable energy and operational insights

Panoramic 30,000-Foot View

Tiny

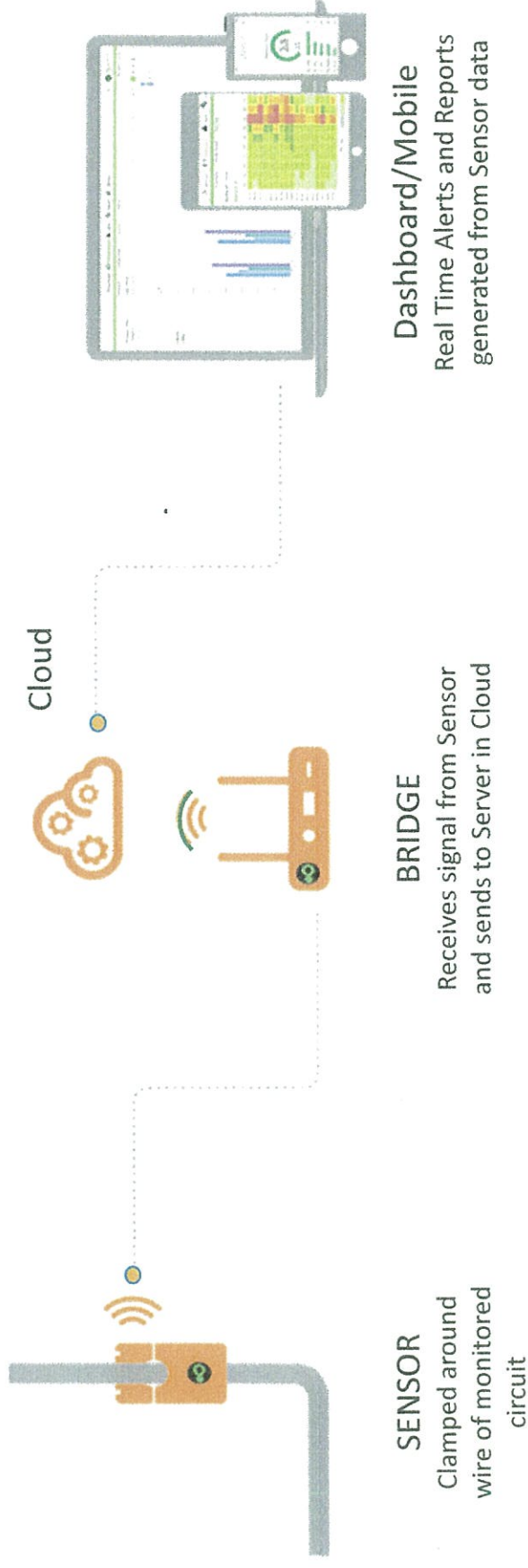
Wireless

Self-powered

No service required



How it works

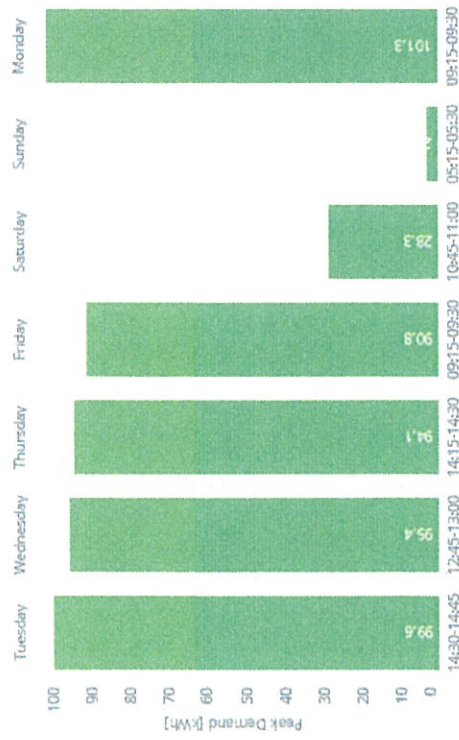


Portfolio of Sensors & Meters

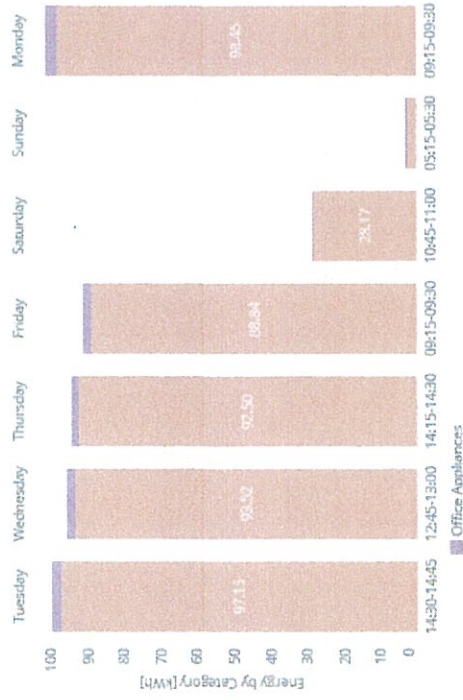


Automated Reports

Daily Peak 15 Minutes Interval

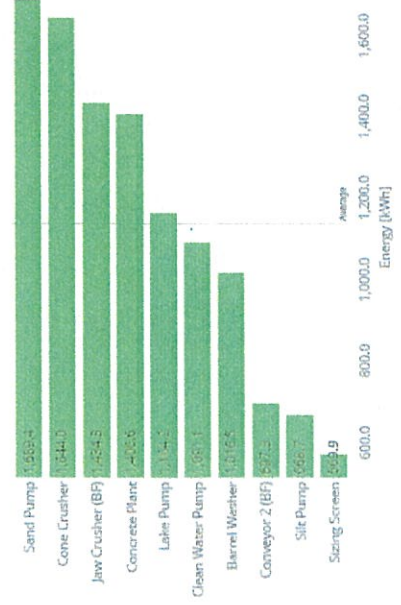


Daily Peak 15 Minutes by Category



Weekly Consumption of Top 10 Devices

- ☐ Total Daily Energy Bar Chart
- ☐ Total Consumption - Day to Day
- ☐ Weekly Consumption vs. Temperature
- ☒ Weekly Consumption of Top 10 Devices
- ☐ Weekly Energy Cost of Top 10 Devices
- ☐ Daily Energy Cost
- ☒ Weekly Energy Cost - Day to Day
- ☒ Daily Energy Cost vs. External Temperature
- ☐ Off-Hours Energy Cost per Day
- ☐ Off-Hours Energy Cost Day to Day
- ☐ Off-Hours Energy Cost of Top 10 Devices
- ☐ Daily Peak - 1 Hour Intervals
- ☐ Daily Peak - 1 Hour Intervals by Category
- ☒ Daily Peak - 15 Minutes Intervals
- ☒ Daily Peak - 15 Minutes Intervals by Category
- ☒ Weekly Energy Consumption by Category
- ☐ Weekly Energy by Category vs. Previous



Energy Triggers & Alerts

Trigger Types		Examples		
Consumption		High/low amps/energy, on off, off hours		
Operational		Idling, Cycling,		
System level		Connectivity loss		
Date	Event Type	Severity	Orig. Site	Details
2017-02-19 16:00:00	Device idling	Low	היב... Dairy	Device idling at 20.4KW.
2017-02-19 05:50:00	Device idling	Low	היב... Dairy	Device idling at 24.6KW.
2017-02-19 04:40:00	Device idling	Low	היב... Dairy	Device idling at 30.9KW.
2017-02-19 03:50:00	Device idling	Low	היב... Dairy	Device idling at 31.2KW.
2017-02-19 03:20:00	Device idling	Low	היב... Dairy	Device idling at 27.0KW.
2017-02-19 00:20:00	Device idling	Low	היב... Dairy	Device idling at 20.9KW.
2017-02-17 12:10:00	Device idling	Low	היב... Dairy	Device idling at 20.4KW.
2017-02-17 11:50:00	Off hours consumption	High	1 ג... Coffee	Off hours power consumption is 69.0kW.
2017-02-17 11:40:00	Device idling	Low	היב... Dairy	Device idling at 20.7KW.
2017-02-17 11:00:00	Device stopped working	Low	Co... Confectionery Sweets	Consumption has not been reported for 10 minutes.
2017-02-17 10:00:00	Device idling	Low	היב... Dairy	Device idling at 22.9KW.
2017-02-17 07:00:00	Device idling	Low	היב... Dairy	Device idling at 31.9KW.
2017-02-17 06:10:00	Device idling	Low	היב... Dairy	Device idling at 31.8KW.
2017-02-17 00:30:00	Device idling	Low	היב... Dairy	Device idling at 25.8KW.
2017-02-16 03:10:00	Device idling	Medium	Air... Dairy	Device idling at 723.8KW.

Deep Learning & Insights

Manufacturer
Name

Report: Energy & Operational Efficiency – Semi-Annual Report
Report Date: Q4 | December 2016 | Facility: CUSTNAME#, Sayreville, NJ

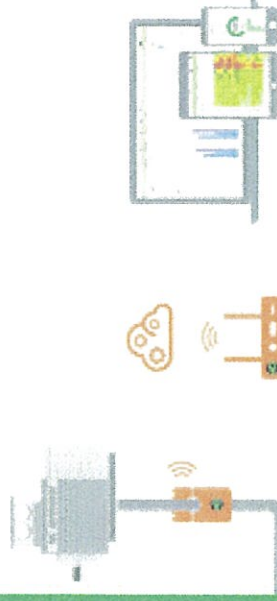
PROGRAM GOALS

- Analyze energy consumption patterns to identify inefficient device operations.
- Identify opportunities to reduce energy consumption.
- Diagnose operations pattern which may shorten equipment life.

MAJOR FINDINGS

- Air Compressors #1 & #2 exhibit different consumption patterns.
- Air Dryer operation is not interlocked with air compressor operation.
- Several Motors show significant current imbalances.

EXECUTIVE SUMMARY



ESTIMATED SAVINGS (ANNUAL)

Sabert Corp.
No Quantifiable Savings Identified for this reporting period

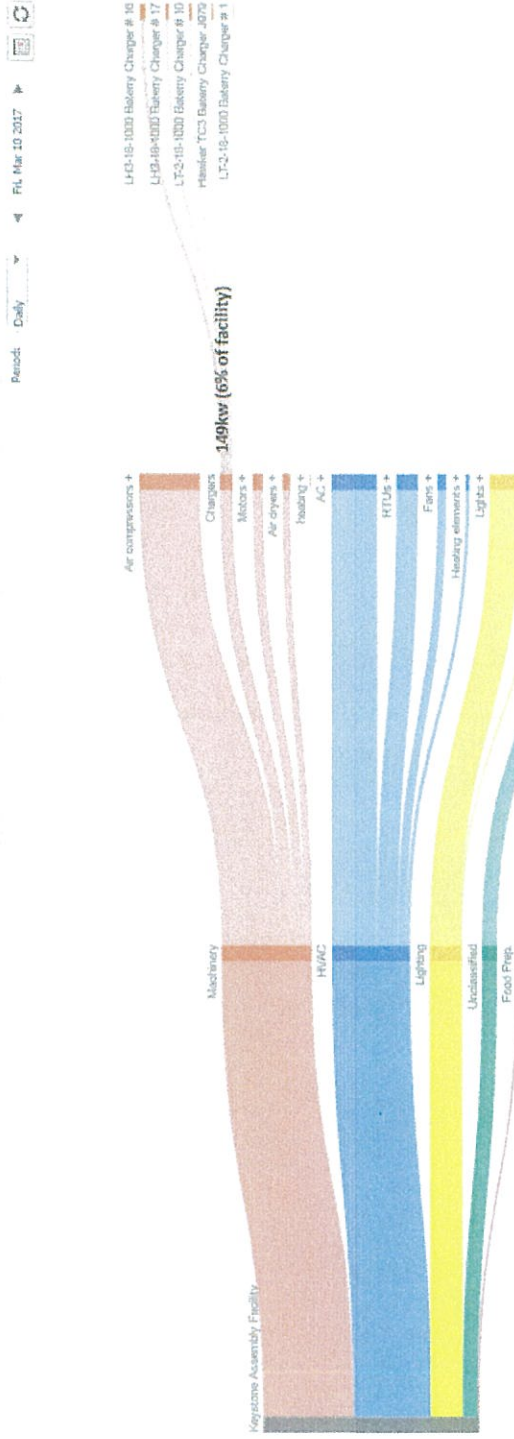
OBSERVATIONS BY DEVICE

Device	Issue	Savings
Air Dryers #1 & #2	Devices Lack of Correlation/Dependency	N/A
Air Compressors #1 & #2	Unusual Consumption Pattern	N/A
Motors (Multiple)	3-Phase Excessive Current Imbalance	N/A

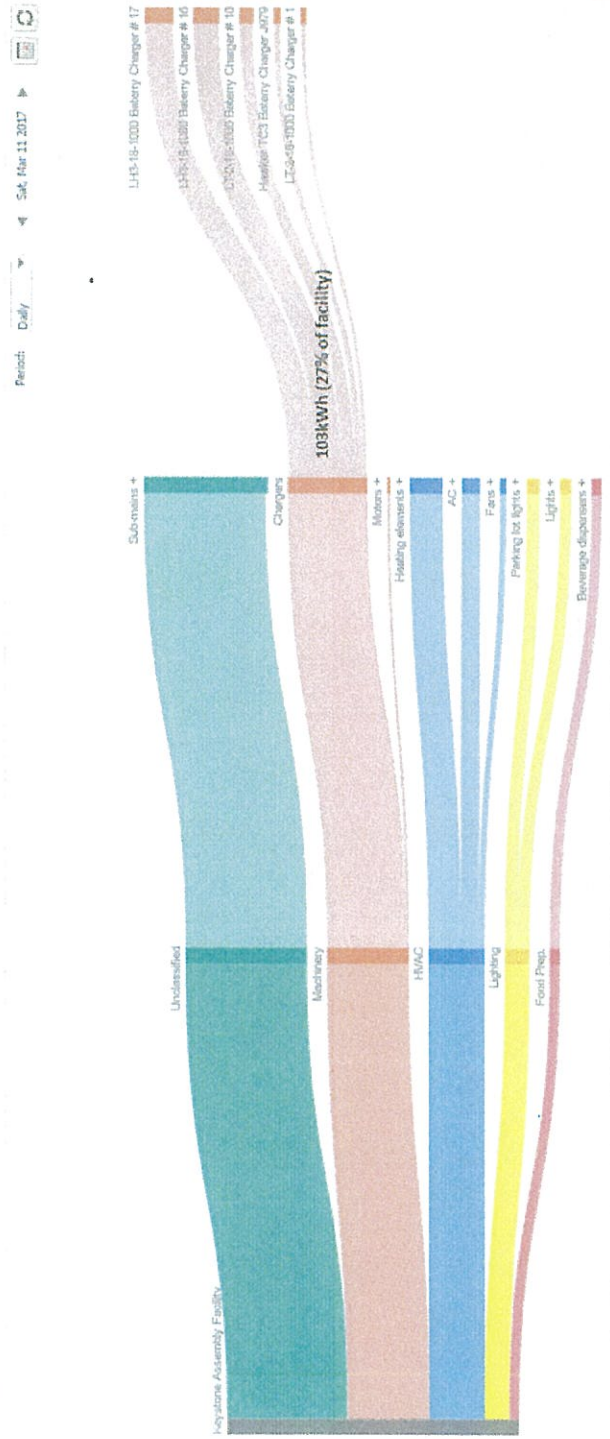
Number of Sensors Deployed	78
Number of Bridges Deployed	12

Dashboards – Waste Identification

Energy Flow



Energy Flow



Device View

