

SUSTAINABLE ENERGY COMMISSION
Regular Meeting
Public Works Department, 4 Turkey Hill Road, Newtown
Thursday, October 20, 2022
Called to order at 7:00M

*THESE MINUTES ARE SUBJECT TO APPROVAL BY THE SUSTAINABLE ENERGY
COMMISSION*

Present: Kathy Quinn, David Stout, Mike Oristaglio, Carol Walsh

Absent: Derek Pisani, Dana Myjak, George Brown, Robert Bohn, Allen Adriani

Also Present – Director of Public Works Fred Hurley, BOE Director of Facilities Bob Gerbert, Rodney Shotwell, Mary Ellen Leder and Jack Bullock from Cenergistic, Chuck Litty

Communications – None

Public Comments - None

Acceptance of Minutes – Tabled due to lack of quorum.

BUSINESS

Presentation by Cenergistic – Mary Ellen Leder, Jack Bullock and Rodney Shotwell presented attachment A. They do not put in new equipment, they take the equipment that exists today and optimize it. It is a no cost way to save money and they guarantee we won't pay more than the savings. The board discuss the program and saw benefits from the program. The next step is for the BOE to go out for an RFP.

10K Grant decision – No update

Sub-Committees:

EV Charging Stations – D. Stout did a site visit to Edmond Town Hall, the Library, and the Community Center. The Community Center has a straight line for conduit and easy installation. Edmond Town Hall did have some spare breakers and if you put them in the units near the building, it is also a viable install. The library will be a difficult install. The electric room is in the upper part of the building and then charging stations would be in the back.

Energy Storage – They are looking at it at the Police Department and Waste Water Treatment Plant for resiliency through the use of energy storage.

Portfolio Manager – M. Oristaglio and K. Quinn had another meeting with Amy from UCONN. They are making good progress.

VNM solar project – New project waiting state approval – No update

Solar Canopy at Police Department – The application will be resubmitted in February as well as expansion of the solar system at the WWTP and anticipated solar project as part of the reroofing project at the Municipal center.

Other Solar Opportunities – Waiting on remediation

School Updates:

High School (5) RTUs and parking lot lights – They are waiting on equipment.

Hawley – The project is going well. They are at the end of the demo phase. They are also dealing with long lead time for equipment.

Town Building Strategic Plan Committee update – No update

Municipal Energy Plan – No update

Social Media – No update

ADDITIONAL ITEMS TO BE ADDRESSED

Changes to recycling/composting efforts – C. Litty from Sustainable Southbury, explained that through a grant from New England Grass Roots Fund, they funded a four month food scrap trial with four restaurants. It worked well but most of the restaurants are in strip malls and there is no incentive to reducing garbage. B. Gerbert said that Chartwell is interested in food scrap recycling in the schools.

Next meeting is November 17, 2022

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

Respectfully Submitted,
Arlene Miles, Clerk

Cenergistic®



A Partnership in Sustainability

NEWTOWN PUBLIC SCHOOLS

Town Energy Commission

October 20, 2022

OUR EVOLUTION

36 years of World Class Innovation.

Cenergistic®



ACHIEVEMENTS

\$6.4 Billion Client Savings

Serving:
K12,
Higher Education,
Large Churches,
Healthcare,
Municipal,
Museums



TOOLS

**Cenergistic Optimize™
Energy Management
Software Platform**

**Cenergistic GreenX™
Cenergistic Executive™
Cenergistic Simulate™
Cenergistic Measure™**



STAFF

**2,600+ Energy
Specialists Hired**

40 Energy Experts

**8 Professional
Engineers**

**110 Professional
Certifications**



PROCESS

**PR, Communications,
Media Support Team**

**Advanced Training
Program**

**Highly Systemized
Implementation Process**

Infrastructure Analysis

Organization Behavior



ENERGY STAR CERTIFICATIONS

13,000+ ENERGY STAR Certifications
– more than 52% of K12
Certifications are in Cenergistic
client organizations.

**36 Partner of the Year Awards
for Cenergistic and Clients**

**First recipient of new ENERGY STAR
Social Star award**

PEOPLE - TECHNOLOGY - PROCESS

The system that powers the savings



**Cenergistic Energy
Specialists**

**Cenergistic Optimize™
Technology**

**Cenergistic
Management Process**

Cenergistic Technology Patents

Adjustment Simulation Method for Energy Consumption

- US 20140129197
- Issued June 2016
- Inventor: Bullock
- Whole building simulation
- Models building operation

Interval Analysis Tool for Energy Consumption

- US 9524529
- Issued December 2016
- Inventor: Bullock
- Identifies energy waste using profile analysis

Building Automation and Control System Modeling and Reporting

- US 10670287
- Issued June 2020
- Inventor: Bullock
- Model mechanical system efficiency

Adjustment Simulation Method for Energy Consumption

- US 10460049
- Issued October 2019
- Inventor: Bullock
- New method for whole building simulation model calibration

System and Method for Analyzing Energy Consumption

- US Patent Pending (30901.0168)
- Submitted December 2021
- Inventor: Bullock / Monroe
- Simplified way of accounting for energy conservation savings

Building Automation and Control System Modeling and Reporting

- US 11371733
- Approved June 2022
- Inventor: Bullock
- Adds efficiency grades and corrective feedback

Transparent Savings. Complete Control. 24/7 Monitoring.



Cenergistic®

Cenergistic®
Optimize™

ENERGY MANAGEMENT SOFTWARE

Cenergistic®
GreenX®



Cenergistic®

Simulate®



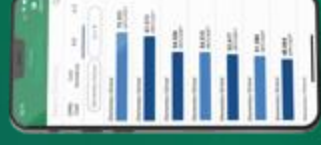
Cenergistic®

Measure™



Cenergistic®

Executive®



Cenergistic® GreenX®

GreenX® Alerts Example

GreenX® patented analytics detects “Not Normal”

- The building started earlier than normal
- The building didn’t shut down at its normal time

GreenX® alerts were sent to the on-site Energy Specialists

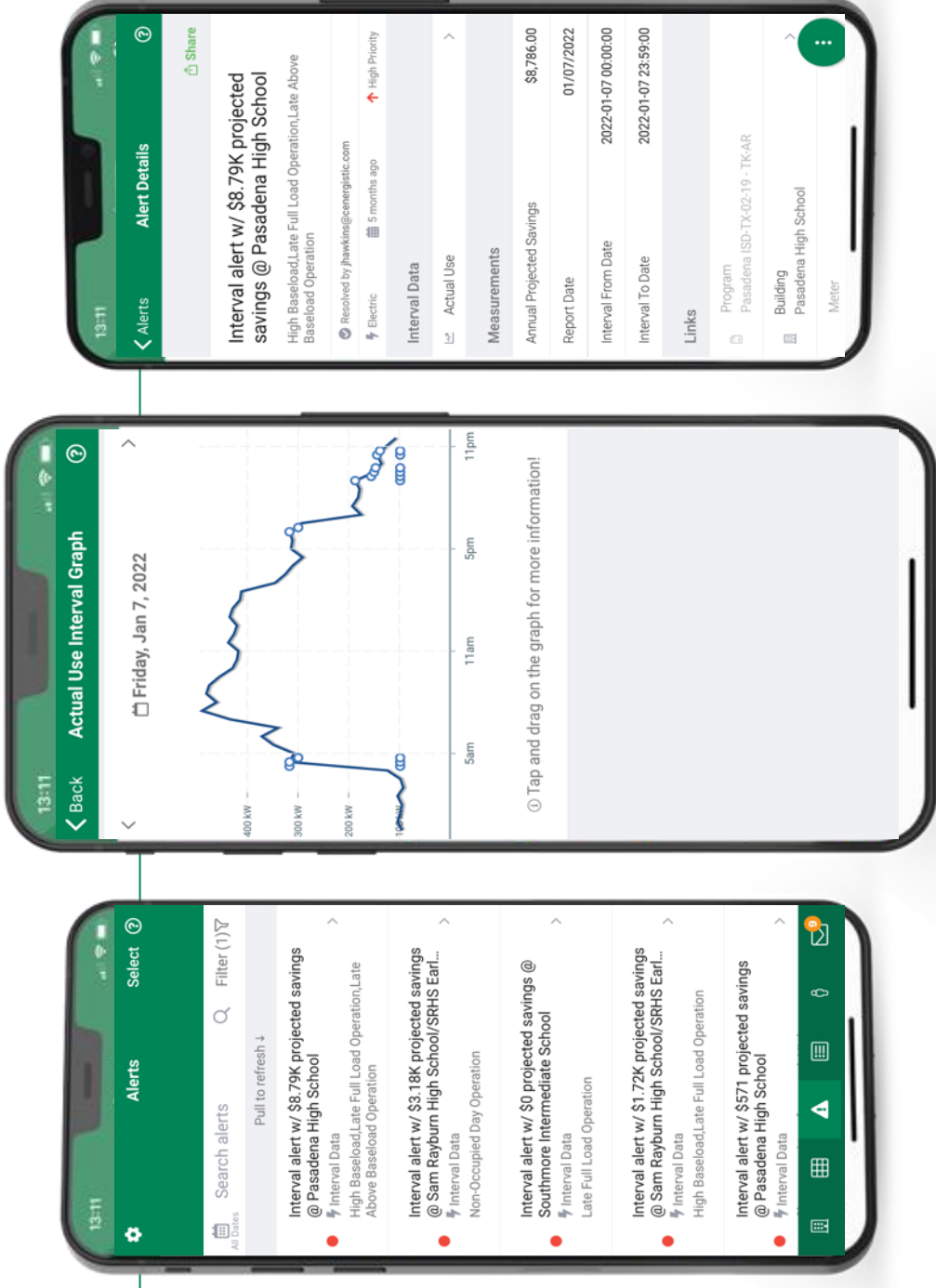
- Alert tells the Energy Specialists what is not normal
- Provides a link to the data profile from the alert
- Values the cost of the “Not Normal Event” at \$8.79K

GreenX® starts a workflow to manage the opportunity

- On-site energy specialists can escalate the alert for engineering support
- Clients can review and comment on all active alerts

Cenergistic performance monitoring

- Alerts, workflows and completion of opportunities are monitored and managed by consulting support staff



Cenergistic® GreenX®

Cenergistic Software Typical Month Infographic

Data Acquisition and Modeling

- Meter readings uploaded to GreenX each night
- Monthly data meters uploaded to GreenX each month
- Buildings simulated (to date)

370,080
40,472
14,418

Data Analytics

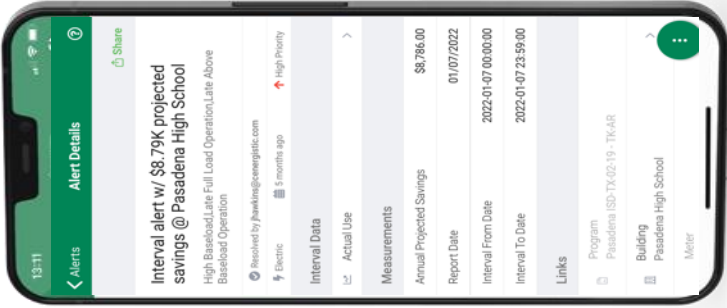
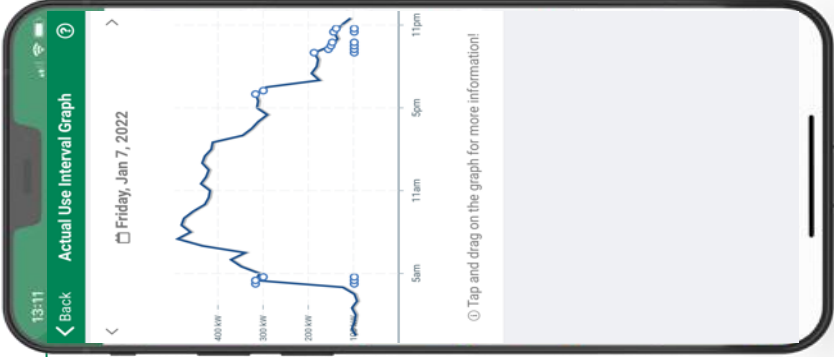
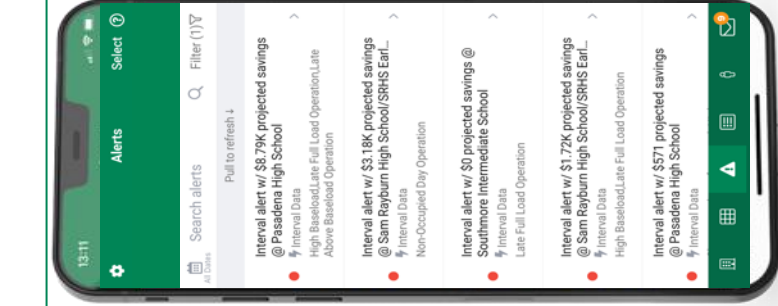
- Data generated alerts of savings opportunities
- Savings value of generated alerts
- **Alert to savings percentage**
- Realized savings value of resolved alerts

50,236
\$24,570,953
66%
\$16,216,829

Building Audits

- On-site staff audits completed
- Unoccupied building audits completed
- Average audit time

343,532
130,164
31 minutes



Simulate®

Whole Building Energy Simulation Created by Engineers for Non- engineers

Simulate “What-If” Whole Building Simulations

- Methods covered by two patents
- Any building / any location / any time period
- Constructed using building data / local weather
- Calibration tool validates model

Simulate Adjustment Tool

- Validates adjustments are reasonable
- Allows for adjustment application

Simulate Client Interface

- Cenergistic engineers create models for every building
- Clients can use calibrated models to model change
- Simulates equipment upgrade / operational scenarios
- Intuitive easy to use interface with no manuals



Cenergistic® Measure™

Easy to use energy program performance monitoring

Simple Savings Calculation

- Consumption units saved valued at the rolling annual average unit cost of energy

Intuitive User Interface

- Data tree display
- Savings trend display
- Cost and consumption trend display
- Energy program savings detail display
- Energy use index display

Transparent and auditable

- Savings calculation displayed with hot links to supporting data
- Savings data provided for external validation
- Baseline adjustments detailed with backup documentation



Cenergistic®

Executive®

Your performance dashboard for energy use and savings

Executive Intuitive Interface

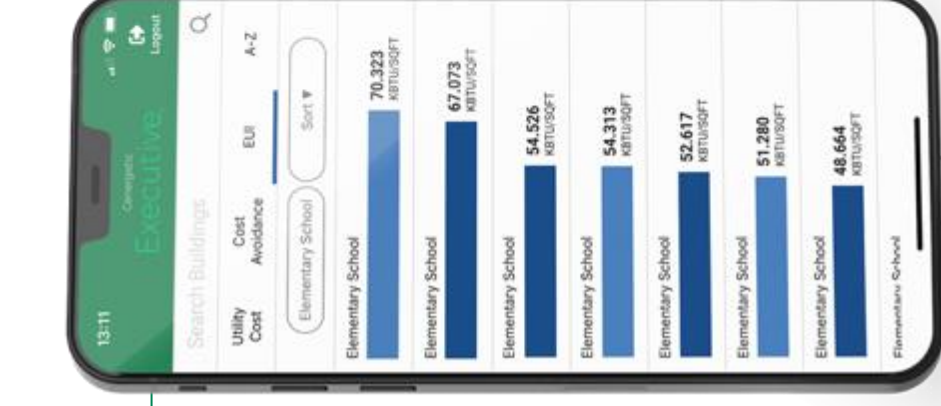
- Five swipe interface
- Easy to understand dashboards
- Energy / financial / environmental impacts
- Designed for busy executives

Executive Benchmarking

- Cost / cost avoidance / EUI benchmarking
- Benchmark by building type or classification
- Review individual buildings' performance
- Building pandemic filtration and ventilation rating

Executive Audit and Alert Summary

- Displays audit activity with analytics
- Displays quantity of alerts being worked



Regional comparison: Cost per Square Foot

Newtown
Public Schools

\$1.80

Tri-State
Average

\$1.34

The Bottom Line:

5 Years = \$1,498,000 Net Savings



Cenergistic®

	YEAR ONE	YEAR TWO	YEAR THREE	YEAR FOUR	YEAR FIVE
Energy Program Projected Gross Savings	\$347,000	\$453,000	\$498,000	\$537,000	\$570,000
Energy Specialist Stipend (Part-time, Client-employed)	\$37,000	\$37,000	\$37,000	\$37,000	\$37,000
Cenergistic Energy Management Program	\$91,000	\$133,000	\$151,000	\$167,000	\$180,000
Cenergistic Program Investment	\$128,000	\$170,000	\$188,000	\$204,000	\$217,000
Projected Net Savings to NEWTOWN PUBLIC SCHOOLS	\$219,000	\$283,000	\$310,000	\$333,000	\$353,000
					\$1,498,000

Energy Management is a Team Sport. Meet Your Cenergistic Team and Tools.

We're with you every step of the way.

- Dedicated Energy Specialist
- Healthier Buildings
- Patented Energy Optimization Software
- Professional Engineers / Technicians
- Comfort Issues Managed
- 5-Year term
- 100% Guaranteed Self-Funding
- Net savings in 90 days
- Cenergistic Community™ Education and Engagement
- Energy Star Building Certifications

District Employed, Part-time Position

Recurring source of revenue



THIS BUILDING IS CERTIFIED
Cenergistic®