Trumbull Board of Education
Energy Program Review

TOWN OF TRUMBULL, CT

March 4, 2020

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March 4, 2020

Mrs. Lainie McHugh, Chairperson
Board of Finance
Town of Trumbull
5866 Main Street
Trumbull, CT. 06611

Dear Mrs. McHugh:

I respectfully submit the enclosed report entitled Trumbull Board of Education Energy Program Review**.**

This audit examines the cost and progress toward energy efficiency of multiple Board of Education locations. The report provides:

- a comprehensive summary of work and cost of each project completed, by location, during the 5 1/2 years ended 12/31/19,
- detail of incentive and financing programs utilized, and scheduled repayment obligations,
- detail and summary information related to historic consumption and cost of all utilities, by year, by BOE location,
- information valuable to future efficiency project decision making.

I would like to thank Mark Deming, BOE Facilities Manager as well as Peg Brindisi, BOE Accounting Manager, for their assistance in the completion of this report.

Respectfully submitted,

Therese Keegan
Financial/Accounting Controls Analyst

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Overview

The Trumbull Board of Education operates from multiple physical sites, each of which represents a separate utility account. Considering the natural aging process of buildings and equipment, incidents of piecemeal construction and equipment repair, and the fact that energy efficient products frequently come to market, each utility account must be monitored, and locations should be audited periodically for efficiency opportunities. BOE sites included in this report are as follows:

- Agriscience HS
- Trumbull High School
- Madison MS
- Middlebrook
- Hillcrest MS
- Jane Ryan ES
- Long Hill Administration
- Tashua
- Athletic Field Lights
- Equipment Barn
- Maintenance Barn
- Vehicle Barn
- Booth Hill
- Daniels Farms
- TECEC

A comprehensive energy audit was performed by the Facilities Manager upon his hiring on 7/1/14. Mr. Deming began his employment by evaluating buildings and equipment of each BOE location. To quantify his inspections, Mr. Deming utilized the SchoolDude software package into which he ensured all BOE utility bills were entered, by month, by account, by unit of measure. He compared this data to information of similar buildings and other schools to define benchmarks.

It was noted by Mr. Deming that:

- 9 school boilers were, on average, 56 years old, while recommended life is 30 years,
- School lighting was inefficient and less effective than possible,
- BOE was not optimizing advantages of third party electrical and natural gas suppliers, and was therefore purchasing at higher than available rates,
- Trumbull's utility costs exceeded that of comparable buildings and schools.

The Energy saving recommendations were identified, analyzed and prioritized. Partnering with United Illuminating, Deming began to take advantage of savings opportunities.

Project Financing

A list of projects, cost, incentive opportunities and associated financing is available in the Appendix, page 9. All projects were completed with no out of pocket cost.

Banc of America	
Phase I - 10/15/15	925,034
Phase II - 5/27/16	4,130,000
Phase III - 5/17	1,700,000
Total BOA financing	6,755,034
UI RC loans	207,180
Total loans	6,962,214
TOT Bonding	88,000
Total loans/bonding	7,050,214
Incentives	1,286,106
Total project cost	8,336,320

Each project was accomplished utilizing one or more of the following opportunities:

1. United Illuminating programs

The Connecticut Energy Efficiency Fund was established in 1978 based on the basic premise that the efficient use of energy slows the need to build more power plants. The Fund was created to assist homeowners, renters, businesses, state and local governments to use electricity and natural gas more efficiently. The Energy Efficiency Fund is supported through collections on the monthly billing of each Connecticut rate payer. In turn, the Energy Efficiency Fund supports several programs:

- **Energy Opportunities (EO):** Via this program the customer is incentivized to replace old inefficient equipment in new energy-efficient equipment to help reduce operating costs and improve productivity and comfort. UI will work with the customer and their contractor to identify the estimated energy savings expected with the energy-efficient replacements and calculate the anticipated incentive amounts upfront. These incentives can be up to 40% of the installed project costs. After the project is completed, either by your preferred contractor or your maintenance staff, UI performs a visual inspection and processes the incentive payment.

  United Illuminating eligibility and incentive guidelines are included in the Appendix, pages 10 & 11.

- **Retro-Commissioning (RCx):** Retro-Commissioning looks at the building's control strategies and operating procedures to identify if any problems that occurred during design or construction, or address problems that have developed throughout the building's life. This program focuses primarily on existing energy-using equipment and on low-cost improvements. It is usually more cost-effective than installing new equipment.

  Trumbull BOE retro commissioning costs totaled $207,180 net of incentives of $115,481. Repayment is evenly recovered over 36 months. Payments are added to the associated monthly utility bills and the repayment is coded to the Utilities Account in the General Ledger.

- **Upstream Programs:** For smaller, more common measures, UI offers Express Rebates via their Upstream Program. Energize CT and the utility companies provide a list of qualified energy-efficient products to vendors. When customers order those products from vendors, the rebate is passed on directly to the customer and the utility then makes the vendors whole.

2. **Banc of America lease purchase opportunities**
   The Banc of America funding was made available in three phases, as identified above. Banc of America repayment schedules are available for review in the last page of the Appendix.

3. **Town of Trumbull bonding** - $88,000 was bonded over 20 years

The United Illuminating Energy Opportunities Program Process is as follows:

- Energy savings opportunity audit
- Contractor is selected – provides savings detail and quotes project cost
- Incentive application paperwork is prepared
- Work is performed
- Post-installation inspection, review/monitoring

Project Results

A summary of expenses, by year, by utility, is as follows:

	2013	2014	2015	2016	2017	2018	2019
Solar	-	-	-	-	9,413	44,234	60,649
Electric	1,358,675	1,482,245	1,618,631	1,240,282	1,170,752	1,023,465	1,204,802
Natural Gas	837,931	1,314,908	496,162	432,118	417,169	409,798	428,498
Water	100,642	108,231	118,272	117,377	127,930	121,991	127,292
All Payments	2,297,248	2,905,385	2,233,064	1,789,778	1,725,264	1,599,489	1,821,241

As shown by green highlighting, total utility cost had been decreasing each year since 2014; however, cost rose in every category during 2019. So these costs were broken down by utility, by month, by location, by unit of measure purchased. The results of this analysis are available in the Appendix, page 12.

It becomes apparent that although the cost when up by $223k in 2019 ($185k if we consider that retro commissioning loan repayments of $36K is included in electric cost) **usage also increased**. Since electricity represented 87% of the increase in costs, we go one step further to analyze those charges.

Captured below is a combination of solar and electric usage and cost data for those schools with solar arrays. These are the schools that showed the highest variance in Kw consumption.

- Hillcrest and Madison increased consumption by 91,689 KwH at an increase in cost of less than $2,000; note the percentage of solar power which lowered the blended rate for these schools.
- Frenchtown and Trumbull HS increased consumption by over 316k KwH obviously at a more significant cost, but note the percentage of solar power utilized for these schools.

Solar &	2017			2018			2019			
Electric	Kw	Rate	Cost	Kw	Rate	Cost	Kw	Rate	Cost	Solar %
FT Electric	1,102,360	15.497	170,833	759,620	18.275	138,819	836,720	23.029	192,688	
FT Solar	21,808	5.000	1,090	261,953	5.000	13,098	292,875	5.000	14,644	25.9%
	1,124,168	15.293	171,924	1,021,573	14.871	151,917	1,129,595	18.355	207,332	
HC Electric	643,078	15.515	99,775	439,417	17.795	78,194	356,500	20.455	72,922	
HC Solar				162,650	5.000	8,132	298,232	5.000	14,912	
	643,078	15.515	99,775	602,067	14.338	86,326	654,732	13.415	87,834	45.6%
MAD Electric	562,040	15.928	89,524	478,320	17.706	84,691	384,720	20.415	78,541	
MAD Solar				115,330	5.000	5,767	247,952	5.000	12,398	
	562,040	15.928	89,524	593,650	15.237	90,457	632,672	14.374	90,939	39.2%
THS Electric	2,444,589	16.975	414,960	2,036,611	18.569	378,173	2,215,602	21.064	466,689	
THS Solar	166,458	5.000	8,323	344,752	5.000	17,238	373,927	5.000	18,696	14.4%
	2,611,047	16.211	423,283	2,381,363	16.604	395,411	2,589,529	18.744	485,385	
	4,940,333	15.880	784,506	4,598,653	15.746	724,111	5,006,528	17.407	871,490	

Findings and Recommendations

Finding #1: Due to low or no out of pocket requirement and the fact that loan repayments are to be offset by savings, Energy Opportunities is a hard program to turn down. Additionally, BOE received incentives or rebates for over 15% of project cost.

Savings are estimates, and may or may not be consistently realized. Mr. Deming utilized building Business Management Systems (BMS) data to view, schedule and monitor utility efficiency and utilization. Cost is known but consumption is difficult to predict as anticipated savings can be distorted by unplanned use, changing rates, periods of unusually warm or cold weather (Appendix, page 13), snowfall, rainfall, use of space heaters, open windows.

All of the performance projects undertaken improved student space (lighting), saved cost (solar), or headed off potential malfunction disaster (boilers). The BOE received $8.4m of energy efficient product plus solar panels on the roofs of four schools with no upfront cost. Incentives totaled almost $1.3m.

The Town of Trumbull Finance Committee & Board of Finance minutes dated January 26, 2016 are available online for your review. The BOE 5 Year Capital Plan, approved by BOE on November 10, 2015, is included in the minutes in full. The Plan details, among other projects, Performance Contracting proposals and cost. Page 3 of the minutes clearly state **"Projects of performance contracting are designed to pay the Town back in 10 years or less",** but as consumption of all utility types rose in 2019, BOE may wish to implement changes in building and equipment usage, and stress all conservation opportunities with students and staff.

Recommendation: BOE may wish to investigate an increase in solar generation which costs $.05/KwH, considerably less expensive than the current $.079 generation cost of electricity and without the associated transmission, distribution, and other charges we see on our bills. The solar installed will produce at 100% when the weather is optimal for production. Deming's 5 yr capital plan included roof replacements to increase solar production and capacity but currently every roof that is capable of sustaining a solar array has one.

BOE Management Response: Interim management will make the new management aware of these recommendations for their consideration and possible action as soon as practical.

Finding #2: Perhaps at least in part due to employee turnover, Accounting documentation was difficult to locate and in some instances was requested directly from United Illuminating or Banc of America.

Ledger postings for loan transactions and the receipt of incentives were inconsistent, and in some minor instances incorrect. No record of reconciliation was located for an account utilized for multiple years and multiple projects, which included postings for:

- payment of $8.3m of vendor invoices
- receipt of $6.8m in BOA loan proceeds
- receipt of incentives of $1.3m distributed by school to 19 separate projects
- installment payments of $2m toward 3 loans

Recommendation: An account reconciliation policy should be prepared and implemented, to include the reconciliation, supervisory review of the reconciliation and the assurance of timely posting of correcting entries. The frequency of reconciliations should be measured by the dollar amount, number of, diversity and complexity of account tranactions. Also, accounts that rely on postings of estimates should be reconciled with more frequency.

BOE Management Response: Interim management will make the new management aware of these recommendations for their consideration and possible action as soon as practical.

Finding #3: From the onset there was lack of agreement between the Town and BOE in relation to loan accounting, ownership and transactional management, as well as roles related to purchasing, bidding and bid awards.

Recommendation: Similar project financing opportunities continue for BOE; processes and ownership should be addressed and assigned upfront.

BOE Management Response: Interim management will make the new management aware of these recommendations for their consideration and possible action as soon as practical.

Appendix

Schedule of Completed Projects

Description	Completion	Cost	Incentives	UI/BOA Financing	TOT Bonding	Investment
Consulting services, project management, testing, incentive prep		262,006		262,006		262,006
						-
Solar Projects - purchase, install & operate solar photovoltaic system					-	-
Hillcrest roof replacement	12/16	1,355,296		1,355,296	-	1,355,296
Solar - Hillcrest MS	2018					-
Solar - Frenchtown	2017					-
Solar - Trumbull HS	2017					-
Solar - Madison MS	2018					-
Retro Commissioning						
Agriscience Retro Commissioning	12/16	28,798	10,603	18,195	-	18,195
Frenchtown ES Retro Commissioning	12/16	150,444	48,257	102,187	-	102,187
TECEC Retro Commissioning	12/16	7,808	2,187	5,621	-	5,621
Trumbull HS Retro Commissioning	12/16	135,611	54,434	81,177	-	81,177
Boilers (9) - demolition, asbestos removal, general construction, purchase & installation of boilers, tanks, pumps water lines and BMS						-
Booth Hill ES	12/16	517,122	32,994	484,128		484,128
Daniels Farm	12/17	658,002	121,058	536,944		536,944
Hillcrest MS	10/15	788,770	203,248	585,522		585,522
Jane Ryan ES	12/16	529,704	30,456	499,248		499,248
Madison MS	12/16	1,192,732		1,192,732		1,192,732
Middlebrook ES	5/18	841,367	48,079	793,288		793,288
Tashua ES	5/18	558,693	115,679	443,014		443,014
LED retrofit & upgrade; labor & materials						-
Booth Hill ES	12/16	94,904	32,149	62,755		62,755
Daniels Farms	12/17	112,157	52,907	59,250		59,250
Frenchtown	9/17	223,294	62,425	72,869	88,000	160,869
Hillcrest MS	10/15	268,729	107,046	161,683		161,683
Jane Ryan ES	12/16	105,991	43,373	62,618		62,618
Madison MS	12/16	234,440	227,523	6,917		6,917
Middlebrook	5/18	189,136	52,862	136,274		136,274
Tashua	5/18	102,210	39,654	62,556		62,556
Bid # 6363; 1/31/19:						-
Trumbull HS		4,721	1,172	3,549		3,549
Agriscience HS						-
Trumbull Early Childhood Education Center						-
Variances		(25,615)		(25,615)		
		8,336,320	1,286,106	6,962,214	88,000	7,075,829

2020 NEW CONSTRUCTION & MAJOR RENOVATIONS

Project Caps and Incentive Levels For Eversource, United Illuminating (UI), Connecticut Natural Gas Corporation (CNG) and The Southern Connecticut Natural Gas Company (SGC) - Electric and Natural Gas Savings Projects. To be eligible to receive an incentive payment, the participant must obtain conditional approval from the Utilities prior to the purchase or installation of any energy efficiency measures.

Effective 1/1/20

Cumulative Cap per Federal Tax ID	$500,000
PATH 1: WHOLE BUILDING PERFORMANCE & ZERO ENERGY MODELING PROGRAM	
(Projects at least 30,000 square feet and in Pre-Design, Schematic Design, Design Development or Net Zero projects)	
OWNER'S INCENTIVES	
Path to Zero Energy (35% Better Than Code)	$10,000
% better than code (based on modeled source BTU savings)	Increased Savings ↑ ≥30% = $3 / sf ≥25% - <30% = $2.25 / sf ≥20% - <25% = $1.25 / sf ≥15% - <20% = $0.75 / sf ≥10% - <15% = $0.50 / sf
Enhanced Commissioning [1]	10% of total EEM incentive (capped at $15,000)
LEED Zero, LEED Silver and above (2 EAC1 credits required), Passive House, and/or IFLI Living Building Challenge Petal (Energy Petal required)	$10,000
ENERGY MODELING FIRM INCENTIVES	
Energy Modeling	$20,000 SD or earlier $15,000 at Design Development
ARCHITECT FIRM INCENTIVES	
Designed for Efficiency (15% Better Than Code)	Lesser of: $0.07 / kWh + $0.34 / ccf (annual savings), $0.20 / sqft (capped at $15,000)
Design Charrette (kick-off meeting)	$2,500
PATH 2: PRESCRIPTIVE PROGRAM	
MULTI END USE INCENTIVE (project includes a minimum of 3 end uses) [2]	$0.10 / kWh and/or $1.00 / ccf (capped at $20,000)
LIGHTING	
HIGH PERFORMANCE LIGHTING	
LED Fixtures with Networked Lighting Controls System [3]	Greater of: $0.65 / kWh OR $1,000 / summer peak kW (Capped at 65% of the incremental cost)
SUSTAINABLE OFFICE DESIGN [4,5]	$1 / sf of project floor area, (7,500-200,000 SF)
LIGHTING DESIGNER INCENTIVE [4]	20% of the project incentive (up to $15,000)
PRESCRIPTIVE LED LIGHTING	project gross lighted square foot
Lighting Power Density % better than code (Interior)	Increased Savings ↑ 40% = $0.50 / sf 35% = $0.4375 / sf 30% = $0.375 / sf 25% = $0.3125 / sf 20% = $0.25 / sf 15% = $0.1875 / sf 10% = $0.125 / sf
Fixture Caps (applicable for projects ≥30,000 sf)	$30 to $150 / fixture depending on type
EXTERIOR LIGHTING	See Data Collection Form available at: EnergizeCT.com/EnergyConsciousBlueprint

CUSTOM MEASURES	
CUSTOM - NEW CONSTRUCTION: NON-WHOLE BUILDING PERFORMANCE (the lesser of)	
Incremental Cost	95%
Measure Cap (greater of)	$0.40 / kWh OR $1,000 / summer peak kW $6 / CCF
CUSTOM - EQUIPMENT: NEW OR REPLACEMENT (the lesser of)	
Incremental Cost	75%
Measure Cap	$0.40 / kWh OR $1,000 / summer peak kW $6 / CCF
PRESCRIPTIVE MEASURES AND EQUIPMENT	
System upgrades above code: Unitary / split / heat pumps, Energy Recovery Units, Natural Gas, Controls, VRF/VRV, VFDs	See Data Collection Form available at: EnergizeCT.com/EnergyConsciousBlueprint
REBATED MEASURES AND EQUIPMENT	
EnergizeCT.com/your-business/commercial-and-industrial-online-rebates	

1. Two LEED Enhanced Commissioning points must be achieved to be eligible for this incentive or net zero certification.
2. End use is defined as Gas or Electric, impacting Heating; Cooling; Lighting; Process; Domestic Water Heating; Refrigeration; Motors and Drives.
3. 80% of project load must utilize a networked lighting control system, as defined by DLC. System must be capable of energy monitoring and demand response, as defined by DLC. Customer must also provide control narrative and must be fully commissioned with reporting and demonstrated demand response capability.
4. Lighting projects with networked lighting control systems or Sustainable Office Design projects may also take advantage of an additional Lighting Designer incentive to assist with lighting design work. The Lighting Designer bonus incentive equals 20% of the total incentive, up to $15,000. Only lighting designers who have obtained LC, CLEP, CLD certifications or are current members of IALD are eligible. The lighting designer must design, engineer, or install, and not profit solely from the sale of the lighting.
5. Five program requirements - (1) Building area between 7,500 SF - 200,000 SF; (2) Open Office Component: ≥40 percent; (3) Partition Heights: ≤48 inches; (4) Lighting Power Density: ≤ 0.6 watts/sf (5) Control Density: ≤250 sf/control point.

EnergizeCT.com/EnergyConsciousBlueprint

Incentive caps and qualification criteria are subject to change at any time. Availability of funding is not guaranteed and the Utilities are not responsible for any costs or damages incurred by the Participant if funding for this program is reduced or eliminated. Retainage may be applied to any project if final payment is contingent on delivery of performance results or information. Utilities shall have final determination of eligible incentives and energy savings. A Letter of Agreement/Authorization detailing available incentives and energy savings for each proposed measure must be signed by Utilities Management before any equipment is ordered to be eligible for incentives.

IECC 2015 is the baseline energy code.

All references to kWh and ccf savings shall refer to annual savings.

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Solar	2013		2014		2015		2016		2017		2018		2019	
	Kw	Cost	Kw	Cost	Kw	Cost	Kw	Cost	Kw	Cost	Kw	Cost	Kw	Cost
Madison											115,330	5,767	247,952	12,398
THS									166,458	8,323	344,752	17,238	373,927	18,696
Hillcrest											162,650	8,132	298,232	14,912
Frenchtown									21,808	1,090	261,953	13,098	292,875	14,644
	-	-	-	-	-	-	-	-	188,266	9,413	884,685	44,234	1,212,986	60,649

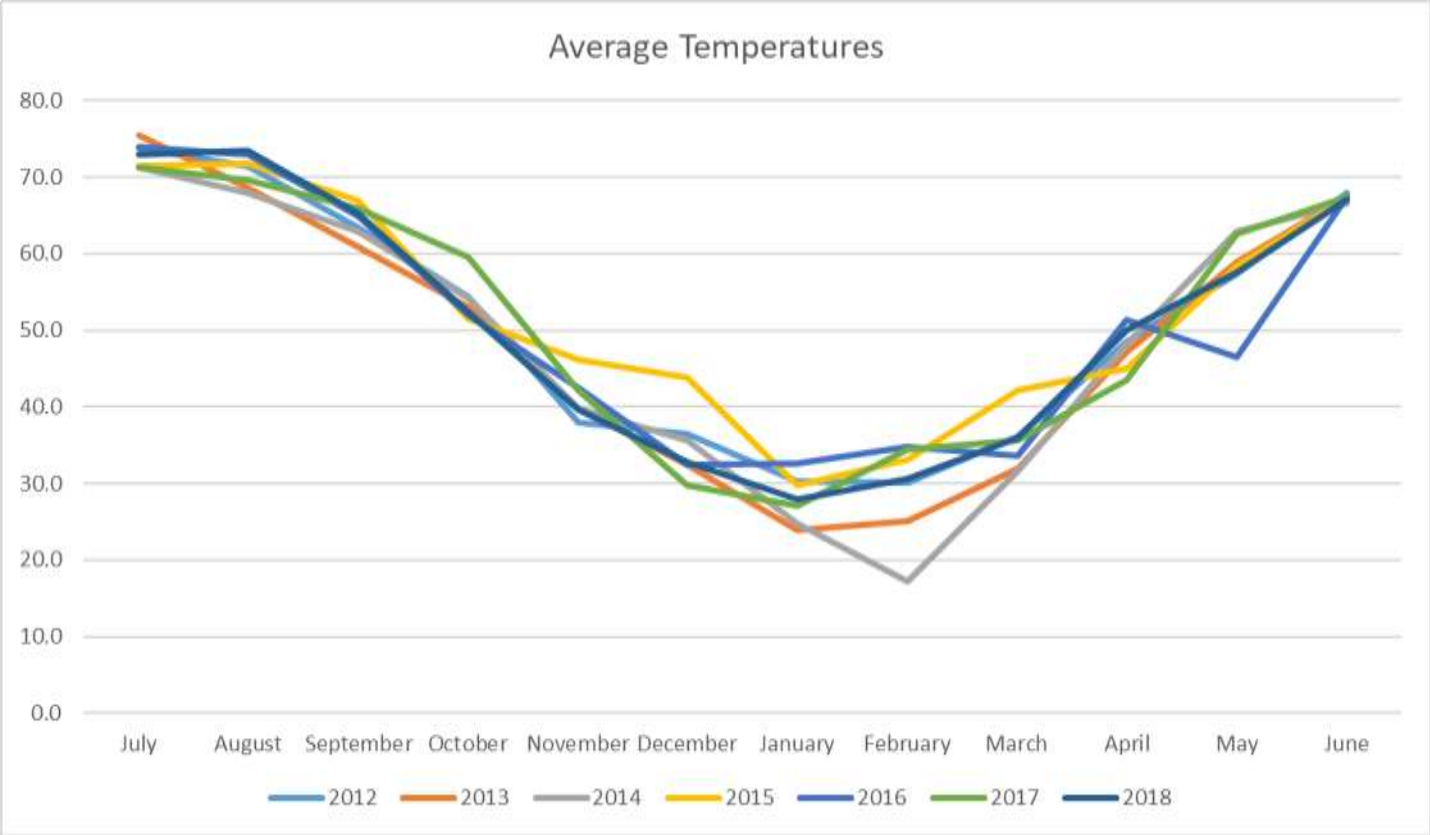
Electric - UI	2013		2014		2015		2016		2017		2018		2019	
	Kw	Cost	Kw	Cost	Kw	Cost	Kw	Cost	Kw	Cost	Kw	Cost	Kw	Cost
Agriscience HS	315,360	57,832	327,760	63,154	322,880	67,095	343,440	57,673	343,360	55,095	338,400	57,693	354,800	70,031
Booth Hill ES	378,840	66,247	362,760	66,408	317,040	64,627	308,520	47,621	248,040	40,774	210,240	38,463	203,640	40,419
Daniels Farms	449,560	78,699	446,320	81,392	326,120	65,862	566,080	80,445	339,200	48,703	233,920	17,551	229,680	42,159
Frenchtown	1,276,160	123,873	1,236,360	233,741	1,226,560	232,693	1,191,400	186,998	1,102,360	170,833	759,620	138,819	836,720	192,688
Hillcrest MS	936,865	160,073	939210	165,962	890,925	176,206	681,667	105,342	643,078	99,775	439,417	78,194	356,500	72,922
Jane Ryan ES	286,515	24,038	262,634	51,757	264,311	54,921	279,914	40,018	218,481	35,762	207,069	37,061	222,552	41,798
Madison MS	729,360	129,576	722,640	132,995	657,360	134,292	677,280	95,428	562,040	89,524	478,320	84,691	384,720	78,541
Middlebrook	421,120	73,436	409,600	74,061	428,240	83,351	421,280	57,042	436,480	66,086	310,400	53,648	318,720	57,107
Tashua	360,000	60,279	335,440	59,361	316,156	63,337	290,640	43,415	291,144	45,692	202,440	35,541	195,120	36,499
TECEC	191,120	36,535	204,080	39,664	192,560	42,293	217,120	33,193	209,680	35,046	196,880	37,297	173,760	34,864
Trumbull HS	2,551,417	469,666	2,600,464	434,302	2,915,640	548,853	2,610,961	435,045	2,444,589	414,960	2,036,611	378,173	2,215,602	466,689
* Other	460,113	78,421	444,845	79,449	437,081	85,102	414,117	58,062	444,935	68,501	421,352	66,333	410,442	71,085
	8,356,430	1,358,675	8,292,113	1,482,245	8,294,873	1,618,631	8,002,419	1,240,282	7,283,387	1,170,752	5,834,669	1,023,465	5,902,255	1,204,802
Total Solar/Electric	8,356,430	1,358,675	8,292,113	1,482,245	8,294,873	1,618,631	8,002,419	1,240,282	7,471,653	1,180,165	6,719,354	1,067,699	7,115,242	1,265,451
R-C Repayments														36,675
Pure Solar/Electric	8,356,430	1,358,675	8,292,113	1,482,245	8,294,873	1,618,631	8,002,419	1,240,282	7,471,653	1,180,165	6,719,354	1,067,699	7,115,242	1,228,776

*** Other**
Athletic Field Lights
Equipment Barn
Long Hill Admin
Maintenance Barn

Natural Gas	2013		2014		2015		2016		2017		2018		2019	
	CCF	Cost	CCF	Cost	CCF	Cost	CCF	Cost	CCF	Cost	CCF	Cost	CCF	Cost
Agriscience HS	34,667	56,583	40,502	96,019	42,298	30,895	30,337	25,757	41,028	32,348	43,812	34,567	34,912	31,286
Booth Hill ES	38,671	33,728	38,604	32,299	42,314	28,878	42,495	29,099	23,275	23,092	24,901	22,408	22,514	24,794
Daniels Farms	34,870	53,692	39,735	91,203	39,273	28,198	31,551	24,459	38,564	29,863	27,614	24,512	22,926	21,450
Frenchtown	35,773	64,904	48,990	18,428	51,448	38,329	46,042	34,206	35,508	32,045	39,812	33,365	47,509	39,057
Hillcrest MS	76,597	116,568	109,650	222,184	107,276	69,743	78,301	55,461	77,982	55,720	78,135	55,982	75,878	59,170
Jane Ryan ES	26,610	26,760	31,059	28,576	31,576	24,920	26,991	23,098	21,385	20,984	21,954	22,399	21,196	23,770
Madison MS	107,322	162,320	120,634	265,577	131,975	87,050	108,367	74,474	84,606	65,362	94,847	71,392	92,959	72,018
Middlebrook	58,117	86,195	70,837	153,422	56,326	43,307	60,561	42,114	51,803	39,493	45,232	35,499	45,751	36,248
Tashua	27,920	42,845	29,022	67,913	26,716	21,398	24,148	19,803	26,334	22,734	17,952	16,902	16,540	16,610
TECEC	7,004	10,527	10,102	22,887	10,488	9,385	8,593	8,443	9,753	9,887	9,945	9,892	10,304	10,640
Trumbull HS	99,799	163,995	128,930	285,297	118,930	101,403	99,410	84,151	88,110	73,959	95,180	70,303	97,860	78,752
** Other	10,606	19,814	11,921	31,103	12,024	12,656	8,787	11,052	9,758	11,681	10,734	12,577	12,137	14,703
	557,955	837,931	679,986	1,314,908	670,645	496,162	565,582	432,118	508,105	417,169	510,118	409,798	500,487	428,498

**** Other**
Maintenance Barn
Long Hill Admin
Vehicle Barn

Water	2013		2014		2015		2016		2017		2018		2019	
	CCF	Cost	CCF	Cost	CCF	Cost	CCF	Cost	CCF	Cost	CCF	Cost	CCF	Cost
		100,642		108,231		118,272		117,377		127,930		121,991		127,292
All Payments	8,914,385	2,297,248	8,972,099	2,905,385	8,965,518	2,233,064	8,568,001	1,789,778	7,979,759	1,725,264	7,229,472	1,599,489	7,615,728	1,821,241



https://www.wunderground.com/history

	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
2012	73.7	71.4	63.3	54.4	38.0	36.5	30.3	30.1	36.1	48.4	57.4	67.9
2013	75.5	68.6	60.9	53.1	39.8	32.4	23.8	25.1	31.9	47.2	58.8	67.4
2014	71.2	67.9	62.8	54.2	39.8	35.7	24.7	17.2	31.7	48.3	62.9	66.7
2015	71.5	71.7	66.9	51.5	46.2	43.9	29.8	33.2	42.1	45.0	58.4	67.3
2016	73.9	72.9	64.9	51.9	42.5	32.4	32.7	34.8	33.7	51.3	46.5	67.4
2017	71.3	69.6	65.9	59.5	42.2	29.7	27.0	34.4	35.6	43.5	62.5	67.4
2018	72.9	73.5	65.3	52.4	39.6	32.8	28.0	30.7	36.0	50.0	57.5	67.1

Banc of America - Loan Repayment Schedules

Due Date	Phase I	Phase II	Phase II	By FY	Annual Pmt.
4/29/16	51,700.85			2016	51,700.85
10/29/16	51,700.85				
11/27/16		202,513.93			
4/29/17	51,700.85				
5/27/17		202,513.93		2017	508,429.56
10/29/17	51,700.85				
11/27/17		202,513.93			
12/27/17			95,967.90		
4/29/18	51,700.85				
5/27/18		202,513.93			
6/27/18			95,967.90	2018	700,365.36
10/29/18	51,700.85				
11/27/18		202,513.93			
12/27/18			95,967.90		
4/29/19	51,700.85				
5/27/19		202,513.93			
6/27/19			95,967.90	2019	700,365.36
10/29/19	51,700.85				
11/27/19		202,513.93			
12/27/19			95,967.90		
4/29/20	51,700.85				
5/27/20		202,513.93			
6/27/20			95,967.90	2020	700,365.36
10/29/20	51,700.85				
11/27/20		202,513.93			
12/27/20			95,967.90		
4/29/21	51,700.85				
5/27/21		202,513.93			
6/27/21			95,967.90	2021	700,365.36
10/29/21	51,700.85				
11/27/21		202,513.93			
12/27/21			95,967.90		
4/29/22	51,700.85				
5/27/22		202,513.93			
6/27/22			95,967.90	2022	700,365.36
10/29/22	51,700.85				
11/27/22		202,513.93			
12/27/22			95,967.90		
4/29/23	51,700.85				
5/27/23		202,513.93			
6/27/23			95,967.90	2023	700,365.36
10/29/23	51,700.85				
11/27/23		202,513.93			
12/27/23			95,967.90		
4/29/24	51,700.85				
5/27/24		202,513.93			
6/27/24			95,967.90	2024	700,365.36
10/29/24	51,700.85				
11/27/24		202,513.93			
12/27/24			95,967.90		
4/29/25	51,700.85				
5/27/25		202,513.93			
6/27/25			95,967.90	2025	700,365.36
10/29/25	51,700.85				
11/27/25		202,513.93			
12/27/25			95,967.90		
5/27/26		202,513.93			
6/27/26			95,967.90	2026	648,664.51
11/27/26		63,029.03			
12/27/26			95,967.90		
5/27/27		63,029.03			
6/27/27			95,967.90	2027	317,993.86
11/27/27		63,029.03			
5/27/28		63,029.03		2028	126,058.06
11/27/28		63,029.03			
5/27/29		63,029.03		2029	126,058.06
11/27/29		63,029.03			
5/27/30		63,029.03		2030	126,058.06
11/27/30		63,029.03			
5/27/31		63,029.03		2031	126,058.06
7,633,943.90	1,034,017.00	4,680,568.90	1,919,358.00		7,633,943.90
Loan 6,755,033.91	925,033.91	4,130,000.00	1,700,000.00		
Int. Rate	2.170%	2.060%	2.3695%		