



LGEA Presentation

Solomon Schechter Day School

January 28, 2022



New Jersey's
Clean Energy Program

Lighting the way to New Jersey's Clean Energy Future

INTRODUCTIONS

- *Solomon Schechter Day School*
 - Christina Barbato – Facilities Manager
 - Laurie Shapiro – Business Manager
- *NJ Clean Energy Program*
 - Sarah Walters – LGEA Project Manager
 - Moussa Traore – LGEA Lead Auditor
 - Ganiyu Hussein – LGEA Project Auditor
 - Amanda Muench – LGEA Account Manager

AGENDA

- The audit process overview
- Energy use & existing conditions
- Review of **E**nergy **C**onservation **M**easures (ECMs) identified & other recommendations
- Energy Savings Improvement Program (ESIP)
- C&I Transition of EE Programs
- Questions regarding the draft audit report
- Next steps for Solomon Schechter Day School

LGEA PROCESS

- Application Approval
- Initial Call
- Facility Interviews
- Audit
- Benchmarking & Analysis
- Draft Reports
- LGEA Presentation
- Final Reports



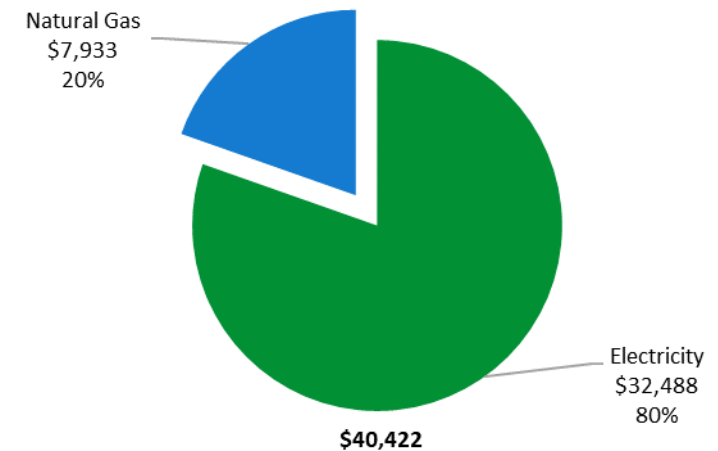
THE HEBREW ACADEMY

Overview of Systems, Baseline & Existing Conditions:


- Building Envelope
- Lighting System
- HVAC and Mechanical Systems
- Plug Load Equipment
- Kitchen & Refrigeration Equipment

Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs



BENCHMARKING

 **ENERGY STAR® Statement of Energy Performance**
LEARN MORE AT energystar.gov

41
ENERGY STAR® Score¹

Solomon Day School of GMC (The Hebrew Academy)
Primary Property Type: K-12 School
Gross Floor Area (ft²): 29,445
Built: 1920

For Year Ending: February 29, 2020
Date Generated: December 13, 2021

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

Property & Contact Information		
Property Address Solomon Day School of GMC (The Hebrew Academy) 22 School Road East Marlboro, New Jersey 07746	Property Owner The Hebrew Academy 22 School Road East Marlboro, NJ 07746 (732) 431-5525	Primary Contact Christina Barbato 22 School Road East Marlboro, NJ 07746 (732) 431-5525 christina@thanj.org
Property ID: 17957682		

Energy Consumption and Energy Use Intensity (EUI)		
Site EUI 59.1 kBtu/ft²	Annual Energy by Fuel Electric - Gen (kBtu) 808,224 (52%) Natural Gas (kBtu) 843,050 (48%)	National Median Comparison National Median Site EUI (kBtu/ft²) 54.3 National Median Source EUI (kBtu/ft²) 106.1 % Diff from National Median Source EUI 9%
Source EUI 115.5 kBtu/ft²	Annual Emissions Greenhouse Gas Emissions (Metric Tons CO2e/year) 128	

Signature & Stamp of Verifying Professional

I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

LP Signature: _____ Date: _____

Licensed Professional

() _____

Professional Engineer or Registered Architect Stamp (if applicable)

Site EUI
59.1 kBtu/ft²

Source EUI
115.5 kBtu/ft²

National Median Comparison
National Median Site EUI (kBtu/ft²) 54.3
National Median Source EUI (kBtu/ft²) 106.1
% Diff from National Median Source EUI 9%

Annual Emissions
Greenhouse Gas Emissions (Metric Tons CO2e/year) 128

Site Name	ENERGY STAR® Score
The Hebrew Academy	41

ENERGY STAR® scores are percentile ranking from 1 (least efficient) to 100 (most efficient). It compares your building's energy performance to similar buildings nationwide.

THE HEBREW ACADEMY

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated M&L Cost (\$)	Estimated Incentive (\$)*	Estimated Net M&L Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades			4,206	0.9	-1	\$513	\$2,267	\$320	\$1,947	3.8	4,132
ECM 1	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	515	0.1	0	\$63	\$239	\$30	\$209	3.3	506
ECM 2	Retrofit Fixtures with LED Lamps	Yes	3,691	0.7	-1	\$450	\$2,028	\$290	\$1,738	3.9	3,627
Lighting Control Measures			15,672	3.0	-3	\$1,912	\$11,624	\$2,880	\$8,744	4.6	15,398
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	13,400	2.6	-3	\$1,635	\$9,374	\$1,235	\$8,139	5.0	13,165
ECM 4	Install High/Low Lighting Controls	Yes	2,272	0.4	0	\$277	\$2,250	\$1,645	\$605	2.2	2,232
Variable Frequency Drive (VFD) Measures			20,790	5.1	0	\$2,577	\$13,100	\$2,100	\$11,000	4.3	20,935
ECM 5	Install VFDs on Constant Volume (CV) Fans	Yes	20,790	5.1	0	\$2,577	\$13,100	\$2,100	\$11,000	4.3	20,935
Unitary HVAC Measures			35,588	42.0	0	\$4,411	\$70,692	\$4,650	\$66,042	15.0	35,836
ECM 6	Install High Efficiency Air Conditioning Units	No	4,619	5.1	0	\$573	\$25,663	\$2,550	\$23,113	40.4	4,652
ECM 7	Install High Efficiency Heat Pumps	Yes	30,968	36.9	0	\$3,838	\$45,029	\$2,100	\$42,929	11.2	31,185
Gas Heating (HVAC/Process) Replacement			0	0.0	55	\$507	\$20,594	\$1,500	\$19,094	37.7	6,387
ECM 8	Install High Efficiency Furnaces	No	0	0.0	55	\$507	\$20,594	\$1,500	\$19,094	37.7	6,387
HVAC System Improvements			0	0.0	30	\$279	\$439	\$70	\$369	1.3	3,509
ECM 9	Install Pipe Insulation	Yes	0	0.0	30	\$279	\$439	\$70	\$369	1.3	3,509
Domestic Water Heating Upgrade			4,383	0.0	0	\$543	\$115	\$56	\$59	0.1	4,414
ECM 10	Install Low-Flow DHW Devices	Yes	4,383	0.0	0	\$543	\$115	\$56	\$59	0.1	4,414
Food Service & Refrigeration Measures			1,209	0.1	0	\$150	\$230	\$50	\$180	1.2	1,217
ECM 11	Vending Machine Control	Yes	1,209	0.1	0	\$150	\$230	\$50	\$180	1.2	1,217
TOTALS (COST EFFECTIVE MEASURES)			77,228	46.0	26	\$9,812	\$72,803	\$7,576	\$65,227	6.6	80,790
TOTALS (ALL MEASURES)			81,847	51.1	80	\$10,891	\$119,061	\$11,626	\$107,435	9.9	91,829

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

ENERGY EFFICIENT BEST PRACTICES

- Reduce Air Leakage
- Close Doors and Windows
- Develop a Lighting Maintenance Schedule
- Ensure Lighting Controls Are Operating Properly
- Use Fans to Reduce Cooling Load
- Use Window Treatments/Coverings
- Clean and/or Replace HVAC filters
- Check and Seal Duct Leakage
- Perform Proper Boiler Maintenance
- Perform Proper Water Heater Maintenance
- Plug Load Controls
- Water Conservation

See individual reports for specific EE practices by building

MEASURES FOR FUTURE CONSIDERATION

- Window Replacements
- VRF Systems



C&I TRANSITION OF ENERGY EFFICIENCY PROGRAMS

<https://www.njcleanenergy.com/transition>

LOCAL
GOVERNMENT
CUSTOMERS

COMMERCIAL &
INSTITUTIONAL
CUSTOMERS

LARGE
ENERGY
CUSTOMERS

EXISTING BUILDINGS

MEASUREMENT & AUDITS

FREE Energy Audits



RETROFITS

Prescriptive &
Custom Rebates

Direct Install

Engineered Solutions

And more from
your local utility!



Incentives up
to \$4 million
for eligible projects



NEW CONSTRUCTION

Prescriptive & Custom
Rebates for New
Construction and
Gut Rehabs

Pay for Performance
incentives for
buildings over
50,000 sq. ft.



DISTRIBUTED ENERGY RESOURCES

Combined Heat & Power
and Fuel Cell Installation
Incentives

Microgrid Development

Battery Storage

Muni EV Fleets



Key:

Programs run by investor-owned utility companies



Programs run by NJCEP



UTILITY RUN ENERGY EFFICIENCY PROGRAMS

PRESCRIPTIVE & CUSTOM REBATES:

- Individual high efficiency equipment rebates for renovation, remodeling, and equipment replacement
- Flexibility to do a little or a lot
- No size requirement

DIRECT INSTALL:

- Turn-key retrofit program to replace outdated and inefficient equipment including, lighting, HVAC, refrigeration, etc.
- The facility must have an average electric peak demand <200kW in the previous year to qualify

ENGINEERED SOLUTIONS:

- Comprehensive, whole-building approach to saving energy
- The facility must have an average electric peak demand >200kW in the previous year to qualify



FOR MORE INFORMATION

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THANK YOU

