

Building Dashboard

Building Name: 53rd Street
Borough: Manhattan
Owned By: Leased
Year Constructed: unknown
Gross Area: 30,000 ft²
OECD ID: 100594

FY17 – FY19 Average Annual Occupants: 206,360
Building Levels Above / Below Grade: 1/2
Heat Vulnerability Index: 2 out of 5
Landmark Status: Landmarked
Envelope Summary: 5% window to wall ratio; windows are not operable and are single paned; exterior walls are masonry; the base building is above this branch; roof could not be observed as it is leased building.



Weather Normalized Site Energy (Average)¹: 962 MMBTU/yr. **Weather Normalized Carbon Emissions:** 81.6 MtCO₂e/yr.

Energy Use Performance

EUI = 32.1 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	✓
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- Auditors observed that one of the ventilation fans was not operational while on site.
- Humidity issues caused by the pool located in base building has caused warping and peeling of ceiling panels.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#4 out of 93 for EUI
#35 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,000.1
Electricity Use (kWh): 293,120
Peak Electricity Demand (kW): 115.2
Gas Use (Therms): 0
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 84.7

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	24	7,098	1.8	0	2.1	32,900	62.1	15,666
LT2 – Lighting Retrofit	121	35,385	2	0	10.2	99,224	102.7	9,727
CL1 – Controls Retro-commissioning	7	2,074	0	0.00	0.60	70,200	2.6	117,195
P2 – Windows, Air Sealing, HVAC	185	54,213	121.2		15	10,450,000	1.5	666,879
P4 – Exterior façade, HVAC	186	54,538	121.4		15	14,730,000	1.1	934,644

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: 58th Street
Borough: Manhattan
Owned By: Leased
Year Constructed: 1969
Gross Area: 8,036 ft²
OECD ID: 100614




FY17 – FY19 Average Annual Occupants: 164,980
Building Levels Above / Below Grade: 2/0
Heat Vulnerability Index: 2 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 75% window to wall ratio on storefront facade; windows are not operable and double paned; exterior walls are metal framed; the base building is above this branch; roof could not be observed as it is leased building.



Weather Normalized Site Energy (Average)¹: 488 MMBTU/yr. **Weather Normalized Carbon Emissions:** 41.4 MtCO₂e/yr.

Energy Use Performance

EUI = 60.8 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	✓
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- HVAC equipment is owned and maintained by base building owner.
- Electricity use trends indicate that heat is provided by building owner. Normalized EUI considers internal loads and seasonal cooling loads.
- This branch is a tenant of 111 E 58th Street. The building received an Energy Star score of 70 in 2019, or a 'B' using Local Law 33 metrics. A score of 75 or higher indicates your building is a top performer – and may be eligible for ENERGY STAR certification according to energystar.gov.*

CY 2019 Energy Use Profile

Total Energy (MMBTU): 490.8
Electricity Use (kWh): 143,856
Peak Electricity Demand (kW): 56.2
Gas Use (Therms): 0
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 41.6

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	48	13,977	11.4	0	4	8,900	452.2	2,225
LT2 – Lighting Retrofit	109	32,067	14	0	9.3	26,371	350.1	2,835
CL2 – Controls Integration	1	317	0	0.00	0.09	117,078	0.3	1,286,579
P2 – Windows, Air Sealing, HVAC	125	36,876	110.2		10	2,850,000	3.9	267,354
P4 – Exterior façade, HVAC	126	36,929	110.5		10	3,990,000	2.8	373,945

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: 67th Street
Borough: Manhattan
Owned By: City
Year Constructed: 1905
Gross Area: 13,778 ft²
OECD ID: 100593

FY17 – FY19 Average Annual Occupants: 142,600
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 27% window to wall ratio; older windows are not operable and are single-paned; newer construction windows are operable and are double paned; exterior walls are made of masonry and brick; roof finish is white in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,289 MMBTU/yr. **Weather Normalized Carbon Emissions:** 84 MtCO₂e/yr.

Energy Use Performance

EUI = 93.6 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- There was a capital project for roof and HVAC replacement for the duration of 2019.
- There was a capital project for roof and HVAC replacement for the duration of 2019.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#22 out of 93 for EUI
#38 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,215.5

Electricity Use (kWh): 118,080

Peak Electricity Demand (kW): 65.6

Gas Use (Therms): 8,128

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 77.3

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	102	29,932	6.4	-121	8.7	15,200	555.9	1,747
LT2 – Lighting Retrofit	135	39,608	6	-121	11.4	46,250	242.9	4,057
CL2 – Controls Integration	3	2,907	0	-66.00	0.49	191,773	0.9	391,374
P6 – Windows, Air Sealing, Roof, HVAC	889	25,840	137.6	8,011	50	5,760,000	2.9	115,061
P8 – Exterior façade, Roof, HVAC	960	46,724	142.3	8,011	56	7,400,000	3.1	131,907

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: 96th Street
Borough: Manhattan
Owned By: City
Year Constructed: 1905
Gross Area: 13,615 ft²
OECD ID: 100595

FY17 – FY19 Average Annual Occupants: 158,260
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 40% window to wall ratio; windows are operable, single paned, and have deteriorating wooden frames; a second layer of operable single paned windows are installed from the interior; exterior walls are made of concrete and brick; roof finish is gray in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,209 MMBTU/yr. **Weather Normalized Carbon Emissions:** 81.8 MtCO₂e/yr.

Energy Use Performance

EUI = 88.8 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- 2019-2020 service tickets indicate inadequate control of the heating system with interior space temperatures reading between 64°F and 81°F
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
 #17 out of 93 for EUI
 #36 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,138.8
Electricity Use (kWh): 170,080
Peak Electricity Demand (kW): 82.4
Gas Use (Therms): 5,586
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 78.8

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	90	26,344	6.2	-494	7.6	15,000	459.8	1,973
LT2 – Lighting Retrofit	119	34,960	6	-494	10.1	45,786	204.8	4,533
CL1 – Controls Retro-commissioning	27	1,524	0	226.20	1.64	33,900	0.2	20,632
P6 – Windows, Air Sealing, Roof, HVAC	757	30,176	127.3	6,544	43	5,600,000	2.3	128,676
P8 – Exterior façade, Roof, HVAC	794	40,988	132.9	6,544	46	7,200,000	2.2	154,340

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: 115th Street
Borough: Manhattan
Owned By: City
Year Constructed: 1908
Gross Area: 14,080 ft²
OECD ID: 100603




FY17 – FY19 Average Annual Occupants: (Not available)
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 5 out of 5
Landmark Status: Landmarked
Envelope Summary: 40% window to wall ratio; windows are operable and single paned; exterior walls are concrete and brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,370 MMBTU/yr. **Weather Normalized Carbon Emissions:** 97.4 MtCO₂e/yr.

Energy Use Performance

EUI = 97.4 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- 70% of this branch's energy use is dedicated to heating.
- There is currently a capital project for the removal and replacement of the basement floor, which includes the installation of new HVAC equipment, in the construction phase for this branch.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#27 out of 93 for EUI
#47 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,103.8

Electricity Use (kWh): 238,480

Peak Electricity Demand (kW): 112

Gas Use (Therms): 2,902

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 84.4

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	143	41,881	10.3	-1,058	12.1	15,500	682.8	1,280
LT2 – Lighting Retrofit	199	58,303	11	-1,070	16.8	47,177	324.2	2,808
CL1 – Controls Retro-commissioning	19	4,883	0	31.70	1.58	38,200	12.2	24,177
P7 – Interior façade, Windows, Roof, HVAC	783	55,898	203.2	5,932	47	7,900,000	1	165,618
P8 – Exterior façade, Roof, HVAC	802	61,318	205.1	5,932	49	7,400,000	1.3	150,223

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: 125th Street
Borough: Manhattan
Owned By: City
Year Constructed: 1904
Gross Area: 13,657 ft²
OECD ID: 100597

FY17 – FY19 Average Annual Occupants: 95,900
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 5 out of 5
Landmark Status: Landmarked
Envelope Summary: 40% window to wall ratio; windows are operable and single paned with deteriorating wooden frames; a second layer of operable single paned windows are installed from the interior; exterior walls are masonry concrete and brick; roof finish is gray in color; roof type is sloped.



Weather Normalized Site Energy (Average)¹: 893 MMBTU/yr. **Weather Normalized Carbon Emissions:** 57.4 MtCO₂e/yr.

Energy Use Performance

EUI = 65.4 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	✓
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- Upper level abandoned apartment and auditorium are unoccupiable and are in significant disrepair.
- There is currently a project for a major capital renovation in the design phase for this branch.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#6 out of 93 for EUI
#19 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 887

Electricity Use (kWh): 98,440

Peak Electricity Demand (kW): 38.8

Gas Use (Therms): 5,513

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 57.8

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	41	11,922	2.9	-255	3.4	15,000	205.1	4,411
LT2 – Lighting Retrofit	50	14,639	2	-221	4.2	46,018	84.9	10,956
CL1 – Controls Retro-commissioning	65	1,685	0	599.40	3.67	33,900	27.7	9,227
P7 – Interior façade, Windows, Roof, HVAC	586	2,026	47.7	5,792	31	9,900,000	0.6	315,487
P8 – Exterior façade, Roof, HVAC	625	13,686	51.1	5,792	34	9,500,000	1	273,381

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Aguilar

Borough: Manhattan

Owned By: City

Year Constructed: 1905

Gross Area: 13,126 ft²

OEC ID: 100596

FY17 – FY19 Average Annual Occupants: 164,590

Building Levels Above / Below Grade: 3/1

Heat Vulnerability Index: 4 out of 5

Landmark Status: Landmarked

Envelope Summary: 40% window to wall ratio; windows are operable and double paned; exterior walls are made of concrete and masonry brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,438 MMBTU/yr. **Weather Normalized Carbon Emissions:** 94.3 MtCO₂e/yr.

Energy Use Performance

EUI = 109.6 kBTU/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- 2019-2020 service tickets indicate inadequate control of the heating system with interior space temperatures reading between 61°F and 90°F
- 60% of this branch's energy use is dedicated to heating.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#41 out of 93 for EUI
#44 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,428.6

Electricity Use (kWh): 184,240

Peak Electricity Demand (kW): 44.8

Gas Use (Therms): 8,002

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 95.8

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	121	35,547	8.1	-460	10.3	14,400	666.2	1,398
LT2 – Lighting Retrofit	162	47,585	8	-460	13.8	44,627	292.6	3,233
CL1 – Controls Retro-commissioning	89	1,404	0	842.40	4.89	32,000	0.2	6,550
P7 – Interior façade, Windows, Roof, HVAC	1,022	44,086	163.3	8,717	59	7,300,000	2.9	123,540
P8 – Exterior façade, Roof, HVAC	1,043	50,335	164.5	8,717	60	6,900,000	3.4	113,300

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Allerton
Borough: Bronx
Owned By: City
Year Constructed: 1959
Gross Area: 10,984 ft²
OEI ID: 200569




FY17 – FY19 Average Annual Occupants: 100,330
Building Levels Above / Below Grade: 2/1
Heat Vulnerability Index: 4 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 20% window to wall ratio; windows are operable and double paned; exterior walls are made of masonry brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 692 MMBTU/yr. **Weather Normalized Carbon Emissions:** 56.2 MtCO₂e/yr.

Energy Use Performance

EUI = 63.1 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	✓
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- There are issues with both the heating and cooling systems in the basement due to multiple radiators, thermostats, and one cooling unit not operating.
- There is currently a project for an elevator replacement in the planning phase for this branch.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#5 out of 93 for EUI
#18 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 737.5
Electricity Use (kWh): 194,400
Peak Electricity Demand (kW): 63.2
Gas Use (Therms): 742
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 60.1

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	91	26,660	6.6	-681	7.7	12,100	556	1,571
LT2 – Lighting Retrofit	128	37,406	7	-681	10.8	35,729	274.9	3,308
CL2 – Controls Integration	6	1,480	0	16.00	0.52	151,130	1.1	293,457
P8 – Exterior façade, Roof, HVAC	202	36,268	128.6	782	14	6,400,000	1	437,158
P8g – Exterior façade, Roof, GSHP	219	41,445	128.6	782	16	7,100,000	1.2	439,900

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Battery Park City
Borough: Manhattan
Owned By: Leased
Year Constructed: 2010
Gross Area: 10,100 ft²
OECD ID: 101619




FY17 – FY19 Average Annual Occupants: 149,410
Building Levels Above / Below Grade: 2/0
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 60% window to wall ratio; windows are inoperable and double paned; exterior walls are made of concrete; the base building is above this branch; roof could not be observed as it is leased building.



Weather Normalized Site Energy (Average)¹: 491 MMBTU/yr. **Weather Normalized Carbon Emissions:** 41.6 MtCO₂e/yr.

Energy Use Performance

EUI = 48.6 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	✓
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- 2019-2020 service tickets indicate inadequate control of the heating system with interior space temperatures reading between 61°F and 81°F
- Insufficient utility data is available for analysis, resulting with no normalized utility trend.
- *This branch is a tenant of 1 River Terrace. The building received an Energy Star score of 30 in 2019, or a 'D' using Local Law 33 metrics. A score of 75 or higher indicates your building is a top performer – and may be eligible for ENERGY STAR certification according to energystar.gov.*

CY 2019 Energy Use Profile

Total Energy (MMBTU): 441.2
Electricity Use (kWh): 129,320
Peak Electricity Demand (kW): 42.4
Gas Use (Therms): 0
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 37.4

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	40	11,645	7.3	0	3.4	11,100	302.1	3,264
LT2 – Lighting Retrofit	77	22,558	7	0	6.5	34,108	190.4	5,247
CL2 – Controls Integration	4	1,377	0	0.00	0.40	123,375	1.1	309,988
P2 – Windows, Air Sealing, HVAC	151	44,422	81		12	3,550,000	3.9	276,479
P4 – Exterior façade, HVAC	155	45,431	82.4		13	4,990,000	2.9	380,045

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Baychester
Borough: Bronx
Owned By: Leased
Year Constructed: 1971
Gross Area: 10,000 ft²
OECD ID: N/A

FY17 – FY19 Average Annual Occupants: 171,790
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 2 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 20% window to wall ratio; windows are operable and double paned; exterior walls are made of masonry brick; roof finish is light gray in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: (Not Calculated) MMBTU/yr.

Weather Normalized Carbon Emissions: (Not Calculated) MtCO₂e/yr.

Energy Use Performance

EUI = 0 kBTU/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- No utility data was provided for this branch.
- 2019-2020 service tickets indicate inadequate control of the heating system with interior space temperatures reading between 59°F and 91°F
- This branch is a tenant of 2051 Bartow Avenue. The building received an Energy Star score of 58 in 2019, or a 'C' using Local Law 33 metrics. A score of 75 or higher indicates your building is a top performer – and may be eligible for ENERGY STAR certification according to energystar.gov*

CY 2019 Energy Use Profile

Total Energy (MMBTU): 0

Electricity Use (kWh): 0

Peak Electricity Demand (kW): 0

Gas Use (Therms): 0

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 0

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	11	3,235	2.4	0	0.9	11,000	84.7	12,222
LT2 – Lighting Retrofit	23	6,862	2	0	2	33,222	59.5	16,611
CL2 – Controls Integration	0	53	0	0.00	0.02	120,813	0	8,054,222
HV1 – Insulation Repair	(unknown)					199,702		

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Belmont Regional
Borough: Bronx
Owned By: City
Year Constructed: 1981
Gross Area: 20,000 ft²
OEI ID: 200722




FY17 – FY19 Average Annual Occupants: 131,690
Building Levels Above / Below Grade: 3/0
Heat Vulnerability Index: 5 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 20% window to wall ratio; windows are not operable and are double paned; majority of glazing is in the form of sky lights; exterior walls are made of concrete; roof finish is white in color; roof type is flat except for the area with skylights.



Weather Normalized Site Energy (Average)¹: 2,006 MMBTU/yr. **Weather Normalized Carbon Emissions:** 136.9 MtCO₂e/yr.

Energy Use Performance

EUI = 100.3 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- 60% of this branch's energy use is dedicated to heating.
- 2019-2020 service tickets indicate inadequate control systems with interior space temperatures reading between 63°F and 87°F
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#32 out of 93 for EUI
#68 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 2,037.3
Electricity Use (kWh): 312,400
Peak Electricity Demand (kW): 123.2
Gas Use (Therms): 9,716
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 141.9

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	181	53,054	13.4	-1,536	15.3	22,000	597	1,437
LT2 – Lighting Retrofit	252	73,785	13	-1,536	21.3	64,105	298	3,009
CL2 – Controls Integration	132	6,415	0	1,101.00	7.71	235,401	9.3	30,531
P6 – Windows, Air Sealing, Roof, HVAC	1,251	59,497	250.6	10,485	72	8,580,000	2.4	117,614
P8 – Exterior façade, Roof, HVAC	1,306	75,720	255.7	10,485	77	10,900,000	2.3	140,391

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Castle Hill

Borough: Bronx

Owned By: Leased

Year Constructed: 1981

Gross Area: 6,000 ft²

OECD ID: 200809

FY17 – FY19 Average Annual Occupants: 59,410

Building Levels Above / Below Grade: 1/0

Heat Vulnerability Index: 4 out of 5

Landmark Status: Not Landmarked

Envelope Summary: 5% window to wall ratio; windows are not operable and are double paned; exterior walls are made of masonry brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 452 MMBTU/yr.

Weather Normalized Carbon Emissions: 33.5 MtCO₂e/yr.

Energy Use Performance

EUI = 75.4 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- Branch Rooftop Units provide all cooling, heating, and ventilation for the building.
- Roof equipment is visibly aged with rusted metal housing and several damaged intake grilles.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#10 out of 93 for EUI
#5 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 598.9

Electricity Use (kWh): 99,320

Peak Electricity Demand (kW): 42.4

Gas Use (Therms): 2,601

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 42.5

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT2 – Lighting Retrofit	80	23,370	4	-276	6.8	20,402	311	3,000
CL2 – Controls Integration	4	522	0	29.00	0.30	84,270	1.1	277,206
P4 – Exterior façade, HVAC	231	23,121	81.6	1,526	14	2,940,000	1.5	198,648
P6 – Windows, Air Sealing, Roof, HVAC	214	18,193	79.1	1,526	13	2,720,000	1.1	203,440
P8 – Exterior façade, Roof, HVAC	233	23,810	82	1,526	15	3,400,000	1.4	226,666

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Cathedral (Terence Cardinal Cooke)

Borough: Manhattan

Owned By: Leased

Year Constructed: 1981

Gross Area: 2,130 ft²

OEC ID: 100902

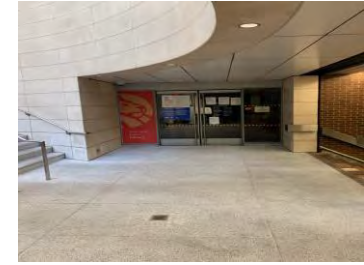
FY17 – FY19 Average Annual Occupants: 34,240

Building Levels Above / Below Grade: 0/1

Heat Vulnerability Index: 2 out of 5

Landmark Status: Not Landmarked

Envelope Summary: Majority of this branch is located in the basement of the base building with no exposed building envelope.






Weather Normalized Site Energy (Average)¹: 38 MMBTU/yr.

Weather Normalized Carbon Emissions: 3.3 MtCO₂e/yr.

Energy Use Performance

EUI = 18.1 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	✓
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- HVAC equipment is owned and maintained by base building owner.
- Ranking:** This building is not ranked due to missing utility data for heating.
- This branch is a tenant of 560 Lexington Avenue. The building received an Energy Star score of 78 in 2019, or a 'B' using Local Law 33 metrics. A score of 75 or higher indicates your building is a top performer – and may be eligible for ENERGY STAR certification according to energystar.gov.

CY 2019 Energy Use Profile

Total Energy (MMBTU): 41.4

Electricity Use (kWh): 12,132

Peak Electricity Demand (kW): 5.4

Gas Use (Therms): 0

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 3.5

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	5	1,582	1.7	0	0.5	2,400	189.8	4,800
LT2 – Lighting Retrofit	14	4,043	2	0	1.2	7,969	146.1	6,640
CL2 – Controls Integration	0	9	0	0.00	0.00	48,680	0	16,226,866

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Chatham Square
Borough: Manhattan
Owned By: City
Year Constructed: 1903
Gross Area: 12,243 ft²
OECD ID: 100586

FY17 – FY19 Average Annual Occupants: 265,050
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 4 out of 5
Landmark Status: Landmarked
Envelope Summary: 30% window to wall ratio; windows are operable and are double paned; exterior walls are made of masonry brick and concrete; roof finish is gray in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,331 MMBTU/yr. **Weather Normalized Carbon Emissions:** 90.1 MtCO₂e/yr.

Energy Use Performance

EUI = 108.8 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Over 60% of this branch's energy use is dedicated to heating.
- 2019-2020 service tickets indicate inadequate control systems with interior space temperatures reported reaching as low as 59°F
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#40 out of 93 for EUI
#42 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,345.8
Electricity Use (kWh): 179,360
Peak Electricity Demand (kW): 68.8
Gas Use (Therms): 7,340
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 90.9

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	44	12,840	3	-190	3.7	13,500	254.2	3,648
LT2 – Lighting Retrofit	86	25,325	3	-190	7.3	39,904	176.1	5,466
CL1 – Controls Retro-commissioning	10	1,990	0	32.20	0.75	28,600	0.2	38,337
P6 – Windows, Air Sealing, Roof, HVAC	778	17,505	86.2	7,190	43	4,860,000	2.9	112,266
P7 – Interior façade, Windows, Roof, HVAC	800	23,927	88.3	7,190	45	6,700,000	2.4	148,394

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: City Island
Borough: Bronx
Owned By: Leased
Year Constructed: 1970
Gross Area: 5,000 ft²
OECD ID: 200589

FY17 – FY19 Average Annual Occupants: 36,000
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 15% window to wall ratio; windows are not operable and are double paned; exterior walls are made of brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 586 MMBTU/yr. **Weather Normalized Carbon Emissions:** 36.7 MtCO₂e/yr.

Energy Use Performance

EUI = 117.4 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Over 70% of this branch's energy use is dedicated to heating.
- 2019-2020 Service tickets indicate inadequate heating with branch temperatures reading as low as 56°F during occupied hours.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#50 out of 93 for EUI
#8 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 615.6
Electricity Use (kWh): 55,600
Peak Electricity Demand (kW): 25.2
Gas Use (Therms): 4,260
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 38.7

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	41	12,043	2.9	-265	3.5	5,500	563.3	1,571
LT2 – Lighting Retrofit	57	16,853	3	-265	4.9	17,667	253.7	3,605
CL2 – Controls Integration	5	501	0	40.00	0.36	84,270	1.2	236,716
P6 – Windows, Air Sealing, Roof, HVAC	448	10,619	56.1	4,125	25	2,810,000	2.3	112,400
P8 – Exterior façade, Roof, HVAC	473	17,979	60.6	4,125	27	3,400,000	2.6	125,322

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Clason's Point
Borough: Bronx
Owned By: City
Year Constructed: 1974
Gross Area: 10,000 ft²
OEC ID: 200571




FY17 – FY19 Average Annual Occupants: 124,730
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 4 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 15% window to wall ratio; windows are operational and are double paned; exterior walls are made of brick; roof finish is white in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 789 MMBTU/yr. **Weather Normalized Carbon Emissions:** 53.3 MtCO₂e/yr.

Energy Use Performance

EUI = 78.9 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- There is currently a project for HVAC equipment replacement in the construction phase for this branch.
- 2019-2020 service tickets indicate inadequate control systems with interior space temperatures reading between 63°F and 90°F
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#14 out of 93 for EUI
#15 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 814.5
Electricity Use (kWh): 113,280
Peak Electricity Demand (kW): 45.6
Gas Use (Therms): 4,281
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 55.5

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	62	18,191	4.5	-446	5.3	11,000	419.7	2,075
LT2 – Lighting Retrofit	87	25,504	4	-446	7.4	33,222	202.3	4,489
CL1 – Controls Retro-commissioning	38	885	0	356.40	2.15	23,400	0.2	10,878
P6 – Windows, Air Sealing, Roof, HVAC	480	15,403	86.5	4,278	27	5,370,000	1.2	197,426
P8 – Exterior façade, Roof, HVAC	518	26,647	94.3	4,278	30	6,500,000	1.5	213,464

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Countee Cullen
Regional

Borough: Manhattan

Owned By: City

Year Constructed: 1941

Gross Area: 23,345 ft²

OEC ID: N/A

FY17 – FY19 Average Annual Occupants: 136,990

Building Levels Above / Below Grade: 3/1

Heat Vulnerability Index: 2 out of 5

Landmark Status: Not Landmarked

Envelope Summary: 50% window to wall ratio on front facing facade; 30% window to wall ratio on side facades; windows are operable and single paned; exterior walls are made of masonry concrete and brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: (Not Calculated) MMBTU/yr.

Weather Normalized Carbon Emissions: (Not Calculated) MtCO₂e/yr.

Energy Use Performance

EUI = 0 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- No utility data was available to complete a utility analysis.
- This branch shares utilities with the Schomburg Center for Research in Black Culture.

CY 2019 Energy Use Profile

Total Energy (MMBTU): 0

Electricity Use (kWh): 0

Peak Electricity Demand (kW): 0

Gas Use (Therms): 0

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 0

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	9	2,502	0.8	(unknown)	0.7	25,600	28.1	36,571
LT2 – Lighting Retrofit	122	35,731	3	(unknown)	10.3	76,562	134.4	7,433
CL2 – Controls Integration	0	76	0	(unknown)	0.02	277,801	0	12,627,353
P6 – Windows, Air Sealing, Roof, HVAC	(unknown)					8,860,000		
P8 – Exterior façade, Roof, HVAC						11,600,000		

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Dongan Hills
Borough: Staten Island
Owned By: City
Year Constructed: 1974
Gross Area: 7,500 ft²
OECD ID: 500248




FY17 – FY19 Average Annual Occupants: 69,720
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 15% window to wall ratio; windows are operable and single paned; exterior walls are made of masonry brick; roof finish is gray in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 672 MMBTU/yr. **Weather Normalized Carbon Emissions:** 44.6 MtCO₂e/yr.

Energy Use Performance

EUI = 89.6 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- NYPL facilities reported they have no control over the building BMS system
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#19 out of 93 for EUI
#9 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 662.7
Electricity Use (kWh): 82,880
Peak Electricity Demand (kW): 29.6
Gas Use (Therms): 3,800
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 44.2

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	97	28,363	7.2	-895	8.2	8,300	833.6	1,012
LT2 – Lighting Retrofit	148	43,461	9	-983	12.6	24,503	454.8	1,944
CL1 – Controls Retro-commissioning	33	1,292	0	286.40	1.90	18,100	0.1	9,546
P8 – Exterior façade, Roof, HVAC	539	44,111	149.4	3,893	33	5,200,000	2.3	155,455
P8g – Exterior façade, Roof, GSHP	544	45,506	149.4	3,893	33	5,700,000	2.2	168,389

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Eastchester
Borough: Bronx
Owned By: City
Year Constructed: 1982
Gross Area: 7,500 ft²
OECD ID: 200585




FY17 – FY19 Average Annual Occupants: 112,260
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 5 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 10% window to wall ratio; windows are double paned and are operable; exterior walls are made of brick; roof finish is white in color, roof type is flat.



Weather Normalized Site Energy (Average)¹: 684 MMBTU/yr. **Weather Normalized Carbon Emissions:** 47.1 MtCO₂e/yr.

Energy Use Performance

EUI = 91.3 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- There is currently a capital project for HVAC equipment replacement in the construction phase for this branch.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#20 out of 93 for EUI
#12 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 532.8
Electricity Use (kWh): 84,440
Peak Electricity Demand (kW): 32.4
Gas Use (Therms): 2,447
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 37.4

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	96	28,116	7.1	-832	8.1	8,300	835.6	1,024
LT2 – Lighting Retrofit	124	36,226	7	-832	10.5	24,503	378.3	2,333
CL1 – Controls Retro-commissioning	37	1,981	0	301.90	2.18	18,100	0.1	8,310
P8 – Exterior façade, Roof, HVAC	470	37,040	124.9	3,436	28	5,000,000	2	172,532
P8g – Exterior façade, Roof, GSHP	477	39,302	124.9	3,436	29	5,500,000	2	185,622

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Edenwald
Borough: Bronx
Owned By: City
Year Constructed: 1973
Gross Area: 7,500 ft²
OEID: 200592




FY17 – FY19 Average Annual Occupants: 113,170
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 4 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 15% window to wall ratio; windows are operable and double paned; exterior walls are made of masonry brick and pebble wall; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 589 MMBTU/yr. **Weather Normalized Carbon Emissions:** 47.4 MtCO₂e/yr.

Energy Use Performance

EUI = 78.6 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- There is currently a project for HVAC equipment replacement in the planning phase for this branch.
- 2019-2020 service tickets indicate issues maintaining building setpoints during the heating season with branch temperatures reading as low as 62°F.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#13 out of 93 for EUI
#13 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 583.1
Electricity Use (kWh): 149,800
Peak Electricity Demand (kW): 43.6
Gas Use (Therms): 720
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 47.1

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	103	30,166	7.7	-951	8.7	8,300	886.8	954
LT2 – Lighting Retrofit	165	48,529	10	-1,093	14	24,503	508.1	1,750
CL2 – Controls Integration	15	2,556	0	71.00	1.12	114,587	3	102,769
P8 – Exterior façade, Roof, HVAC	244	47,907	167.2	810	18	5,500,000	1.4	303,030
P8g – Exterior façade, Roof, GSHP	256	51,546	167.2	810	19	5,900,000	1.6	307,131

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Epiphany
Borough: Manhattan
Owned By: City
Year Constructed: 1907
Gross Area: 13,615 ft²
OEID: 100592

FY17 – FY19 Average Annual Occupants: 193,020
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 3 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 35% window to wall ratio; windows on front of building are operable and double paned; windows on rear of building are single paned in leaking frames; exterior walls are masonry concrete and brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,606 MMBTU/yr. **Weather Normalized Carbon Emissions:** 104.3 MtCO₂e/yr.

Energy Use Performance

EUI = 118 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- 2019-2020 service tickets indicate inadequate control systems with interior space temperatures reported between 56°F and 79°F
- Simultaneous heating and cooling must be addressed with centralized HVAC systems with controls.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#51 out of 93 for EUI
#53 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,446.8
Electricity Use (kWh): 163,320
Peak Electricity Demand (kW): 70.8
Gas Use (Therms): 8,898
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 94.5

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	56	16,497	3.9	-277	4.8	15,000	290.9	3,125
LT2 – Lighting Retrofit	102	29,764	4	-277	8.6	45,786	178.7	5,323
CL1 – Controls Retro-commissioning	104	3,148	0	932.90	5.87	33,900	0	5,775
P6 – Windows, Air Sealing, Roof, HVAC	1,021	4,040	98.5	10,074	54	6,560,000	1.9	119,861
P8 – Exterior façade, Roof, HVAC	1,110	30,083	105.4	10,074	62	8,100,000	2.5	130,099

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Fort Washington Reg.
Borough: Manhattan
Owned By: City
Year Constructed: 1914
Gross Area: 13,877 ft²
OECD ID: 100609

FY17 – FY19 Average Annual Occupants: 112,150
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 2 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 15% window to wall ratio; windows are single paned and are operable; exterior walls are made of cement and masonry brick; roof finish is black in color; roof type is flat with one portion at a higher elevation.



Weather Normalized Site Energy (Average)¹: 2,084 MMBTU/yr. **Weather Normalized Carbon Emissions:** 128.7 MtCO₂e/yr.

Energy Use Performance

EUI = 150.2 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- There is currently a project for major renovation in the design phase for this branch.
- Over 65% of this branch's energy use is dedicated to heating.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#70 out of 93 for EUI
#63 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,967.2
Electricity Use (kWh): 180,960
Peak Electricity Demand (kW): 63.2
Gas Use (Therms): 13,501
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 124.1

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	165	48,286	11.8	-1,172	13.9	15,300	801.9	1,100
LT2 – Lighting Retrofit	205	60,117	11	-1,123	17.4	46,482	338.7	2,671
CL2 – Controls Integration	30	1,372	0	254.00	1.75	191,773	2.6	109,836
P6 – Windows, Air Sealing, Roof, HVAC	2,020	58,727	209.4	18,200	113	5,680,000	6.3	49,934
P8 – Exterior façade, Roof, HVAC	2,064	71,479	214.9	18,200	117	7,300,000	5.4	62,164

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Francis Martin
Borough: Bronx
Owned By: City
Year Constructed: 1957
Gross Area: 16,486 ft²
OECD ID: 200575

FY17 – FY19 Average Annual Occupants: 84,050
Building Levels Above / Below Grade: 2/1
Heat Vulnerability Index: 5 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 40% window to wall ratio; windows are operable and are double paned; exterior walls are made of masonry brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,572 MMBTU/yr. **Weather Normalized Carbon Emissions:** 101 MtCO₂e/yr.

Energy Use Performance

EUI = 95.4 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- 2019-2020 service tickets indicate inadequate control systems with interior space temperatures reading between 61°F and 92°F
- A Testing and Balancing contractor is recommended to address unbalanced air distribution.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#23 out of 93 for EUI
#50 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,600.2
Electricity Use (kWh): 170,240
Peak Electricity Demand (kW): 61.6
Gas Use (Therms): 10,196
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 103.4

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	101	29,615	7.5	-849	8.6	18,100	405.7	2,104
LT2 – Lighting Retrofit	142	41,685	7	-849	12	52,651	205.5	4,387
CL1 – Controls Retro-commissioning	35	2,468	0	269.40	2.15	36,400	0.1	16,961
P6 – Windows, Air Sealing, Roof, HVAC	1,119	29,002	144.5	10,204	62	8,810,000	1.7	140,644
P8 – Exterior façade, Roof, HVAC	1,178	46,195	147.1	10,204	67	10,700,000	1.9	158,260

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: George Bruce
Borough: Manhattan
Owned By: NYPL
Year Constructed: 1915
Gross Area: 16,364 ft²
OECD ID: 100605

FY17 – FY19 Average Annual Occupants: 74,920
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 2 out of 5
Landmark Status: Landmarked
Envelope Summary: 40% window to wall ratio; windows are operable and single paned; exterior walls are brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,733 MMBTU/yr. **Weather Normalized Carbon Emissions:** 109.2 MtCO₂e/yr.

Energy Use Performance

EUI = 105.9 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- Over 65% of this branch's energy use is dedicated to heating.
- There are currently capital projects planned for HVAC and fire alarm replacement, partial interior and exterior rehabilitation, and roof replacement. It is currently on hold in design.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#39 out of 93 for EUI
#56 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,593.4

Electricity Use (kWh): 162,880

Peak Electricity Demand (kW):
66.4

Gas Use (Therms): 10,379

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.):
102.2

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	78	22,900	5.1	-203	6.6	18,000	350.6	2,727
LT2 – Lighting Retrofit	126	36,962	5	-203	10.7	53,437	193.9	4,994
CL2 – Controls Integration	14	2,353	0	66.00	1.03	191,773	1.7	185,647
P6 – Windows, Air Sealing, Roof, HVAC	1,324	38,345	132	11,938	74	6,140,000	4.2	82,349
P7 – Interior façade, Windows, Roof, HVAC	1,366	50,558	137.1	11,938	78	8,600,000	3.4	110,129

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Grand Central
Borough: Manhattan
Owned By: Leased
Year Constructed: 2009
Gross Area: 13,000 ft²
OECD ID: N/A

FY17 – FY19 Average Annual Occupants: 208,560
Building Levels Above / Below Grade: 2/0
Heat Vulnerability Index: 2 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 50% window to wall ratio on the front facade; windows metal frames with double paned with insulated glazing; the base building is above this branch; roof could not be observed as it is a leased building.



Weather Normalized Site Energy (Average)¹: (Not Calculated) MMBTU/yr. **Weather Normalized Carbon Emissions:** (Not Calculated) MtCO₂e/yr.

Energy Use Performance

EUI = 0 kBTU/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- No utility data was available to complete a utility analysis.
- 2019-2020 service tickets indicate inadequate control of the heating system with interior space temperatures reading between 62°F and 83°F
- This branch is a tenant of 485 Lexington Avenue. The building received an Energy Star score of 76 in 2019, or a 'B' using Local Law 33 metrics. A score of 75 or higher indicates your building is a top performer – and may be eligible for ENERGY STAR certification according to energystar.gov*

CY 2019 Energy Use Profile

Total Energy (MMBTU): 0
Electricity Use (kWh): 0
Peak Electricity Demand (kW): 0
Gas Use (Therms): 0
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 0

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	110	32,245	13.7	0	9.3	14,300	649.3	1,537
LT2 – Lighting Retrofit	188	55,165	17	0	15.9	44,163	359.7	2,777
CL1 – Controls Retro-commissioning	0	181	0	0.00	0.05	31,800	0.5	611,538

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Grand Concourse
Borough: Bronx
Owned By: City
Year Constructed: 1959
Gross Area: 16,874 ft²
OECD ID: 200564

FY17 – FY19 Average Annual Occupants: 92,690
Building Levels Above / Below Grade: 2/1
Heat Vulnerability Index: 5 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 20% window to wall ratio; windows are double paned and are operable; exterior walls are made of masonry brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,609 MMBTU/yr. **Weather Normalized Carbon Emissions:** 104.2 MtCO₂e/yr.

Energy Use Performance

EUI = 95.4 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- HVAC equipment is uncontrolled. The cooling load for this branch could not be normalized to a statistically significant model due to uncontrolled operation of equipment.
- There is currently a project for ADA compliance in the construction phase for this branch.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#23 out of 93 for EUI
#52 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,551.8
Electricity Use (kWh): 145,120
Peak Electricity Demand (kW): 36
Gas Use (Therms): 10,569
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 98.1

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	87	25,473	6.5	-782	7.4	18,500	337.5	2,500
LT2 – Lighting Retrofit	121	35,460	6	-782	10.2	55,010	165.8	5,393
CL2 – Controls Integration	19	3,109	0	85.00	1.35	191,850	2.2	142,216
P6 – Windows, Air Sealing, Roof, HVAC	1,102	24,376	120.6	10,196	61	8,210,000	1.9	134,018
P7 – Interior façade, Windows, Roof, HVAC	1,128	31,934	121.2	10,196	63	13,000,000	1.3	204,918

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Great Kills
Borough: Staten Island
Owned By: City
Year Constructed: 1954
Gross Area: 4,987 ft²
OECD ID: 500246




FY17 – FY19 Average Annual Occupants: 44,890
Building Levels Above / Below Grade: 2/1
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 30% window to wall ratio; windows are operable and single paned in leaky frames; exterior walls are made of masonry stone; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 709 MMBTU/yr. **Weather Normalized Carbon Emissions:** 44.8 MtCO₂e/yr.

Energy Use Performance

EUI = 142.3 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Around 70% of this branch's energy use is dedicated to heating.
- Auditors observed several broken air dampers, missing insulation, and dust accumulation.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#65 out of 93 for EUI
#10 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 675.6
Electricity Use (kWh): 64,720
Peak Electricity Demand (kW): 30.8
Gas Use (Therms): 4,549
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 42.9

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	2	455	0.1	-3	0.1	5,500	23.1	55,000
LT2 – Lighting Retrofit	12	3,403	0.1	-3	1	17,667	55.2	17,667
CL2 – Controls Integration	13	1,389	0	90.00	0.88	84,270	3.1	95,980
P6 – Windows, Air Sealing, Roof, HVAC	494	3,228	12.9	4,836	26	2,140,000	3.7	80,300
P8 – Exterior façade, Roof, HVAC	521	11,063	15.5	4,836	28	2,700,000	3.8	93,393

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Hamilton Fish Park
Borough: Manhattan
Owned By: City
Year Constructed: 1961
Gross Area: 10,760 ft²
OECD ID: 100718




FY17 – FY19 Average Annual Occupants: 148,380
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 3 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 20% window to wall ratio; half of the windows are inoperable and double paned while the other half are glass blocks; exterior walls are made of masonry brick; the base building is above this branch; roof could not be observed as it is a leased building.



Weather Normalized Site Energy (Average)¹: 1,694 MMBTU/yr. **Weather Normalized Carbon Emissions:** 114.7 MtCO₂e/yr.

Energy Use Performance

EUI = 157.5 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Branch is currently under construction and existing HVAC equipment is decommissioned.
- Over 70% of this branch's energy use is dedicated to heating.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#72 out of 93 for EUI
#58 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,429.3

Electricity Use (kWh): 183,040

Peak Electricity Demand (kW): 62.4

Gas Use (Therms): 0

Steam Use (mlbs): 564

Carbon Emission (MtCO₂e/yr.): 79

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	62	18,307	11.6	0	5.3	11,800	446.7	2,226
LT2 – Lighting Retrofit	137	40,014	15	0	11.6	35,963	320.4	3,100
CL2 – Controls Integration	48	3,435	0	368.00	2.95	154,426	3.4	52,312
P6 – Windows, Air Sealing, Roof, HVAC	1,156	52,684	134.8	9,771	67	19,150,000	1.6	285,055
P8 – Exterior façade, Roof, HVAC	1,094	34,360	128.3	9,771	61	20,400,000	1.2	329,617

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Hamilton Grange
Borough: Manhattan
Owned By: City
Year Constructed: 1907
Gross Area: 20,403 ft²
OEID: 100607

FY17 – FY19 Average Annual Occupants: 163,430
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 3 out of 5
Landmark Status: Landmarked
Envelope Summary: 40% window to wall ratio; windows are single paned and operable; exterior walls are made of cement; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 2,029 MMBTU/yr. **Weather Normalized Carbon Emissions:** 136.9 MtCO₂e/yr.

Energy Use Performance

EUI = 99.5 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- HVAC roof equipment is deteriorating away with connections between ducts no longer existing in areas.
- 2019-2020 service tickets indicate inadequate control systems with interior space temperatures reading up to 85°F during summer and winter months.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#30 out of 93 for EUI
#69 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 2,252.9
Electricity Use (kWh): 298,320
Peak Electricity Demand (kW): 106.4
Gas Use (Therms): 12,353
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 151.9

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	204	59,832	14.4	-1,266	17.3	22,400	690.3	1,294
LT2 – Lighting Retrofit	244	71,616	12	-1,120	20.7	66,507	286.6	3,212
CL2 – Controls Integration	14	214	0	138.00	0.79	271,504	0.8	342,377
P6 – Windows, Air Sealing, Roof, HVAC	1,345	68,968	250.1	11,102	78	7,940,000	3.6	100,557
P7 – Interior façade, Windows, Roof, HVAC	1,394	83,439	254.4	11,102	83	11,000,000	3	132,291

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Harlem
Borough: Manhattan
Owned By: City
Year Constructed: 1909
Gross Area: 13,058 ft²
OECD ID: 100604

FY17 – FY19 Average Annual Occupants: 148,720
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 5 out of 5
Landmark Status: Landmarked
Envelope Summary: 40% window to wall ratio; windows are operable and double paned; exterior walls are made of cement and masonry brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,784 MMBTU/yr. **Weather Normalized Carbon Emissions:** 131.2 MtCO₂e/yr.

Energy Use Performance

EUI = 136.6 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- 2019-2020 service tickets indicate inadequate control systems with interior space temperatures reading between 61°F and 77°F
- Over 85% of this branch's energy use is dedicated to heating.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#62 out of 93 for EUI
#65 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,785.6
Electricity Use (kWh): 353,920
Peak Electricity Demand (kW): 94.4
Gas Use (Therms): 5,782
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 133

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	61	17,995	3.7	29	5.2	14,400	362.6	2,769
LT2 – Lighting Retrofit	85	24,790	4	29	7.2	44,395	161.7	6,165
CL1 – Controls Retro-commissioning	27	5,844	0	70.70	2.07	31,900	0.2	15,447
P6 – Windows, Air Sealing, Roof, HVAC	706	21,905	86.2	6,320	39	5,390,000	1.5	134,952
P8 – Exterior façade, Roof, HVAC	727	27,912	88.8	6,320	41	6,900,000	1.4	165,586

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: High Bridge
Borough: Bronx
Owned By: City
Year Constructed: 1976
Gross Area: 10,400 ft²
OECD ID: 200591

FY17 – FY19 Average Annual Occupants: 104,980
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 5 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 15% window to wall ratio; windows are not operational and are double paned with frosted glass; exterior walls are made of cement; roof finish is black in color; roof type is flat with one portion at a higher elevation.



Weather Normalized Site Energy (Average)¹: 1,027 MMBTU/yr. **Weather Normalized Carbon Emissions:** 67 MtCO₂e/yr.

Energy Use Performance

EUI = 98.8 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- Building control system requires retro commissioning.
- 2019-2020 service tickets indicate inadequate thermostatic control with interior space temperatures reading between 57°F and 86°F
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#29 out of 93 for EUI
#24 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 999.3
Electricity Use (kWh): 128,320
Peak Electricity Demand (kW): 61.6
Gas Use (Therms): 5,616
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 66.9

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	66	19,274	4.7	-457	5.6	11,500	427.2	2,053
LT2 – Lighting Retrofit	91	26,621	5	-457	7.7	34,362	204.5	4,462
CL1 – Controls Retro-commissioning	58	4,854	0	415.30	3.61	25,200	38.7	6,978
P6 – Windows, Air Sealing, Roof, HVAC	729	27,443	93.2	6,360	41	4,710,000	2.7	112,814
P8 – Exterior façade, Roof, HVAC	735	29,267	94.8	6,360	42	5,900,000	2.2	139,545

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Hudson Park
Borough: Manhattan
Owned By: City
Year Constructed: 1905
Gross Area: 15,689 ft²
OEID: 100587

FY17 – FY19 Average Annual Occupants: 137,770
Building Levels Above / Below Grade: 2/1
Heat Vulnerability Index: 1 out of 5
Landmark Status: Landmarked
Envelope Summary: 30% window to wall ratio; windows are operable and single paned on the first floor two floors; windows in the third floor apartment unit are double paned and operable; exterior walls are masonry brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 2,289 MMBTU/yr. **Weather Normalized Carbon Emissions:** 144.6 MtCO₂e/yr.

Energy Use Performance

EUI = 145.9 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Over 70% of this branch's energy use is dedicated to heating.
- There is capital project for partial branch renovation in the planning phase for this branch.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#69 out of 93 for EUI
#71 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 2,080.2

Electricity Use (kWh): 224,600

Peak Electricity Demand (kW): 72.8

Gas Use (Therms): 13,142

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 134.8

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	184	53,956	13.7	-1,642	15.6	17,300	765.7	1,108
LT2 – Lighting Retrofit	250	73,441	14	-1,655	21.2	51,583	365.2	2,433
CL1 – Controls Retro-commissioning	50	1,843	0	445.50	2.90	36,700	0	12,646
P6 – Windows, Air Sealing, Roof, HVAC	1,807	71,659	253.3	15,629	103	6,760,000	4.5	65,118
P7 – Interior façade, Windows, Roof, HVAC	1,820	75,410	254.8	15,629	104	9,100,000	3.5	86,749

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Huguenot Park
Borough: Staten Island
Owned By: Leased
Year Constructed: unknown
Gross Area: 6,600 ft²
OEID: 500317

FY17 – FY19 Average Annual Occupants: 51,140
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 40% window to wall ratio; windows are inoperable and single paned; exterior walls are made of masonry stone; roof finish is white in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 493 MMBTU/yr. **Weather Normalized Carbon Emissions:** 33.3 MtCO₂e/yr.

Energy Use Performance

EUI = 74.7 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- 60% of this branch's energy use is dedicated to heating.
- This building does not have any outside air intakes for the building or on ventilation equipment
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#9 out of 93 for EUI
#4 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 482.1
Electricity Use (kWh): 70,040
Peak Electricity Demand (kW): 26.4
Gas Use (Therms): 2,432
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 33.2

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	60	17,619	4.5	-534	5.1	7,300	592.9	1,431
LT2 – Lighting Retrofit	84	24,560	4	-534	7.1	21,996	287.6	3,098
CL2 – Controls Integration	6	592	0	49.00	0.43	84,270	1.5	195,524
P7 – Interior façade, Windows, Roof, HVAC	398	20,771	83.3	3,279	23	3,900,000	2	166,382
P7g – Interior façade, Windows, Roof, GSHP	404	22,406	83.3	3,279	23	4,400,000	1.9	184,023

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Hunt's Point Regional
Borough: Bronx
Owned By: City
Year Constructed: 1929
Gross Area: 12,283 ft²
OECD ID: 200574

FY17 – FY19 Average Annual Occupants: 110,930
Building Levels Above / Below Grade: 4/1
Heat Vulnerability Index: 5 out of 5
Landmark Status: Landmarked
Envelope Summary: 40% window to wall ratio; windows are operable; exterior walls are made of brick; roof finish is white in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,392 MMBTU/yr. **Weather Normalized Carbon Emissions:** 88.4 MtCO₂e/yr.

Energy Use Performance

EUI = 113.4 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Upper level abandoned apartments are unoccupiable and are in significant disrepair.
- There is currently a major renovation project in the design phase for this branch.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#46 out of 93 for EUI
#41 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,438.2
Electricity Use (kWh): 142,800
Peak Electricity Demand (kW): 65.6
Gas Use (Therms): 9,512
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 91.8

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	133	38,924	9.7	-1,076	11.2	13,500	719	1,205
LT2 – Lighting Retrofit	146	42,867	9	-1,033	12.4	39,374	276.9	3,175
CL1 – Controls Retro-commissioning	28	2,884	0	189.90	1.84	27,600	18.2	14,975
P6 – Windows, Air Sealing, Roof, HVAC	1,074	40,393	153	9,366	61	5,780,000	2.8	94,014
P7 – Interior façade, Windows, Roof, HVAC	1,101	48,417	157.3	9,366	63	7,600,000	2.4	119,122

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Inwood Regional
Borough: Manhattan
Owned By: City
Year Constructed: 1952
Gross Area: 17,334 ft²
OECD ID: 100610

FY17 – FY19 Average Annual Occupants: 172,410
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 3 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 5% window to wall ratio; windows are not operable and are double paned; exterior walls are made of masonry; roof could not be observed as it is a leased building.



Weather Normalized Site Energy (Average)¹: 1,470 MMBTU/yr. **Weather Normalized Carbon Emissions:** 97.8 MtCO₂e/yr.

Energy Use Performance

EUI = 84.9 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

Except where noted, this Audit reviews the utilities and potential savings associated with the former location of Inwood Regional (not pictured).

- Over 75% of this branch's energy use is dedicated to heating.
- There is currently a capital project for a new branch in the design phase for this branch.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#16 out of 93 for EUI
#48 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,527.9
Electricity Use (kWh): 196,400
Peak Electricity Demand (kW): 90
Gas Use (Therms): 8,580
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 102.4

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT2 – Lighting Retrofit	59	17,211	0	0	5	58,160	85.2	11,632
CL2 – Controls Integration	73	1,823	0	672.00	4.10	240,454	4.8	58,618
P4 – Exterior façade, HVAC	886	11,004	55.2	8,493	48	8,560,000	1.2	177,079
P6 – Windows, Air Sealing, Roof, HVAC	838	-3,222	49.6	8,493	44	9,060,000	0.7	204,838
P8 – Exterior façade, Roof, HVAC	895	13,494	56.6	8,493	49	11,100,000	1	226,253

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Jefferson Market Reg.
Borough: Manhattan
Owned By: City
Year Constructed: unknown
Gross Area: 18,643 ft²
OECD ID: 100613




FY17 – FY19 Average Annual Occupants: 290,610
Building Levels Above / Below Grade: 3/0
Heat Vulnerability Index: 1 out of 5
Landmark Status: Landmarked
Envelope Summary: 10% window to wall ratio; windows are inoperable and single paned; exterior walls are made of brick



Weather Normalized Site Energy (Average)¹: 2,287 MMBTU/yr. **Weather Normalized Carbon Emissions:** 152.8 MtCO₂e/yr.

Energy Use Performance

EUI = 122.7 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Active DDC project currently under construction with interior and exterior work
- Over 85% of this branch's energy use is dedicated to heating.
- Arup was not able to conduct a site walkthrough for this branch.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#57 out of 93 for EUI
#72 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,951
Electricity Use (kWh): 240,960
Peak Electricity Demand (kW): 104
Gas Use (Therms): 11,291
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 129.7

Recommendations²

Measure	Savings					Investment		
ECM Options	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT2 – Lighting Retrofit	(unknown)					61,638		
CL2 – Controls Integration	37	3,344	0	260.00	2.35	240,454	2.9	102,364
P5 – Air Sealing, Roof, HVAC	1,224	-21,995	-15.8	12,990	62	7,180,000	1.7	114,495
P6 – Windows, Air Sealing, Roof, HVAC	1,301	687	7.3	12,990	69	7,920,000	2.4	114,335
P7 – Interior façade, Windows, Roof, HVAC	1,314	4,391	11.8	12,990	70	10,700,000	1.8	152,118

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Jerome Park
Borough: Bronx
Owned By: City
Year Constructed: 1968
Gross Area: 7,404 ft²
OECD ID: 200588

FY17 – FY19 Average Annual Occupants: 86,890
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 3 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 20% window to wall ratio; windows are double paned and operable; exterior walls are made of masonry brick; roof finish is white in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,192 MMBTU/yr. **Weather Normalized Carbon Emissions:** 79.6 MtCO₂e/yr.

Energy Use Performance

EUI = 161 kBtu/sf

Energy Use Intensity (EUI)		Status
●	Meets or exceeds CBECS benchmarking for libraries.	
●	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
●	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- 2019-2020 service tickets indicate inadequate thermostat control during occupied hours, with interior space temperatures reading between 67°F and 84°F
- NYPL facilities reported frequent compressor failures, requiring the repair or replacement of existing systems.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#74 out of 93 for EUI
#33 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,160.5
Electricity Use (kWh): 158,240
Peak Electricity Demand (kW): 62
Gas Use (Therms): 6,207
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 78.7

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	103	30,081	7.5	-799	8.7	8,200	920.4	942
LT2 – Lighting Retrofit	167	48,925	10	-949	14.1	24,047	530.8	1,705
CL2 – Controls Integration	106	1,791	0	1,004.00	5.86	114,587	14.1	19,570
P6 – Windows, Air Sealing, Roof, HVAC	798	34,754	162.5	6,794	46	4,220,000	3.2	91,401
P8 – Exterior façade, Roof, HVAC	866	54,675	173.3	6,794	51	5,100,000	3.8	98,209

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Kingsbridge Regional
Borough: Bronx
Owned By: City
Year Constructed: unknown
Gross Area: 12,812 ft²
OECD ID: 201423

FY17 – FY19 Average Annual Occupants: 160,320
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 2 out of 5
Landmark Status: Landmarked
Envelope Summary: 50% window to wall ratio. Windows are not operable and are double paned; skylights are operable; exteriors walls are made of concrete; roof is a flat green roof on the upper level with the skylights located on a separate roof section at a lower elevation.



Weather Normalized Site Energy (Average)¹: 1,684 MMBTU/yr. **Weather Normalized Carbon Emissions:** 121.5 MtCO₂e/yr.

Energy Use Performance

EUI = 131.4 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- HVAC equipment is uncontrolled. The heating load for this branch could not be normalized to a statistically significant model due to uncontrolled operation of equipment.
- Over 55% of this branch's energy use is dedicated to heating.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#59 out of 93 for EUI
#59 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,925.9
Electricity Use (kWh): 313,520
Peak Electricity Demand (kW): 84
Gas Use (Therms): 8,564
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 136.1

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	83	24,355	5.9	-536	7	14,100	444.4	2,014
LT2 – Lighting Retrofit	116	33,997	6	-536	9.8	42,854	211	4,372
CL2 – Controls Integration	30	4,159	0	166.00	2.09	157,355	4	75,470
P6 – Windows, Air Sealing, Roof, HVAC	740	19,911	116.6	6,720	41	6,180,000	1.7	148,951
P8 – Exterior façade, Roof, HVAC	805	39,007	117.4	6,720	47	7,600,000	2.1	161,667

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Kips Bay
Borough: Manhattan
Owned By: City
Year Constructed: 1972
Gross Area: 9,400 ft²
OECD ID: 100615

FY17 – FY19 Average Annual Occupants: 137,040
Building Levels Above / Below Grade: 2/0
Heat Vulnerability Index: 2 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 15% window to wall ratio; windows are operable and single paned; exterior walls are made of masonry brick; roof finish is white in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,134 MMBTU/yr. **Weather Normalized Carbon Emissions:** 78.3 MtCO₂e/yr.

Energy Use Performance

EUI = 120.7 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- This building's cooling equipment utilizes R-22, a refrigerant phased out by the U.S. EPA as of January 1, 2020.
- Issues with the building's heating system, as the perimeter heaters are non-operable and disconnected from the header to the boiler.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#56 out of 93 for EUI
#32 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,100.7
Electricity Use (kWh): 175,840
Peak Electricity Demand (kW): 70.8
Gas Use (Therms): 5,009
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 77.4

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	67	19,509	5	-577	5.6	10,400	462.8	1,857
LT2 – Lighting Retrofit	97	28,526	5	-577	8.2	32,253	229.7	3,933
CL2 – Controls Integration	8	2,834	0	-11.00	0.76	123,375	2.1	162,122
P6 – Windows, Air Sealing, Roof, HVAC	617	15,308	96.3	5,654	34	4,650,000	1.4	134,821
P8 – Exterior façade, Roof, HVAC	668	30,197	100.4	5,654	38	5,700,000	1.9	146,945

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Lincoln Center
Borough: Manhattan
Owned By: City
Year Constructed: 1964
Gross Area: 138,000 ft²
OECD ID: 100600




FY17 – FY19 Average Annual Occupants: (Not available)
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 2 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 30% window to wall ratio, windows are single paned and not operable; exterior walls are made of a masonry stone; roof finish is black in color with a partial green roof; roof type is flat.



Weather Normalized Site Energy (Average)¹: 3,660 MMBTU/yr. **Weather Normalized Carbon Emissions:** 310 MtCO₂e/yr.

Energy Use Performance

EUI = 26.5 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	✓
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- Insufficient utility data is available for analysis, resulting with no normalized utility trend.
- This branch shares facilities with the Lincoln Center Theater.

CY 2019 Energy Use Profile

Total Energy (MMBTU): 3,613.6
Electricity Use (kWh): 0
Peak Electricity Demand (kW): 0
Gas Use (Therms): 0
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 1,044.4

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	317	92,851	64.8	0	26.8	151,300	176.7	5,645
LT2 – Lighting Retrofit	728	213,481	65	0	61.7	447,292	137.4	7,249
CL1 – Controls Retro-commissioning						313,900		
P6 – Windows, Air Sealing, Roof, HVAC						59,730,000		
P8 – Exterior façade, Roof, HVAC						75,800,000		

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Macomb's Bridge
Borough: Manhattan
Owned By: Leased
Year Constructed: 2020
Gross Area: 3,375 ft²
OECD ID: 101818




FY17 – FY19 Average Annual Occupants: 26,980
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 5 out of 5
Landmark Status: Landmarked
Envelope Summary: 50% window to wall ratio; windows are not operable and double pane; exterior walls are masonry brick; 25% of floor area is covered by roof, remaining area is underneath apartment buildings; the base building is above this branch.



Weather Normalized Site Energy (Average)¹: (Not Calculated) MMBTU/yr. **Weather Normalized Carbon Emissions:** (Not Calculated) MtCO₂e/yr.

Energy Use Performance

EUI = 0 kBTU/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- New branch construction was completed in January 2020.
- HVAC system is a fully electrified system (VRF).
- Insufficient utility data is available for analysis, resulting with no normalized utility trend.

CY 2019 Energy Use Profile

Total Energy (MMBTU): 0
Electricity Use (kWh): 0
Peak Electricity Demand (kW): 0
Gas Use (Therms): 0
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 0

Recommendations²

Measure	Savings					Investment		
ECM Options	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
EN1 – Air Sealing	(unknown)					89,365		

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Mariner's Harbor
Borough: Staten Island
Owned By: City
Year Constructed: 2013
Gross Area: 8,243 ft²
OECD ID: 500554

FY17 – FY19 Average Annual Occupants: 69,210
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 3 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 60% window to wall ratio; windows are inoperable and double paned; exterior walls are made of metal siding; roof finish is gray in color with skylights.



Weather Normalized Site Energy (Average)¹: 824 MMBTU/yr. **Weather Normalized Carbon Emissions:** 69.8 MtCO₂e/yr.

Energy Use Performance

EUI = 100 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- The HVAC system at this branch is fully electrified.
- 2019-2020 service tickets indicate inadequate thermostatic control with interior space temperatures reaching as low as 63°F
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#31 out of 93 for EUI
#27 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 861.7

Electricity Use (kWh): 252,560

Peak Electricity Demand (kW): 60

Gas Use (Therms): 0

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 73

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	70	20,388	4	0	5.9	9,100	645.1	1,542
LT2 – Lighting Retrofit	95	27,897	4	0	8.1	26,325	305.1	3,250
CL1 – Controls Retro-commissioning	7	2,250	0	0.00	0.65	19,000	0.1	29,230
P8 – Exterior façade, Roof, HVAC	184	53,967	97.3		15	5,500,000	1.4	352,564
P8g – Exterior façade, Roof, GSHP	207	60,720	97.3		17	6,100,000	1.7	347,578

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Melrose
Borough: Bronx
Owned By: City
Year Constructed: 1914
Gross Area: 9,209 ft²
OECD ID: 200563

FY17 – FY19 Average Annual Occupants: 121,660
Building Levels Above / Below Grade: 2/1
Heat Vulnerability Index: 5 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 25% window to wall ratio; windows are operable and single paned; exterior walls are made of masonry brick; roof finish is white in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,095 MMBTU/yr. **Weather Normalized Carbon Emissions:** 69.6 MtCO₂e/yr.

Energy Use Performance

EUI = 119 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- 70% of this branch's energy use is dedicated to heating.
- There is currently a project for major renovation in the design phase for this branch.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#53 out of 93 for EUI
#26 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,061.1

Electricity Use (kWh): 111,120

Peak Electricity Demand (kW): 51.2

Gas Use (Therms): 6,821

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 68.4

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	56	16,343	4.1	-456	4.7	10,100	403	2,148
LT2 – Lighting Retrofit	79	23,119	4	-456	6.7	31,172	193.2	4,652
CL2 – Controls Integration	63	2,391	0	552.00	3.63	120,813	8.5	33,318
P6 – Windows, Air Sealing, Roof, HVAC	829	27,200	87.3	7,366	47	4,340,000	3.3	92,281
P8 – Exterior façade, Roof, HVAC	839	30,074	87.5	7,366	47	5,400,000	2.8	112,829

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Morris Park
Borough: Bronx
Owned By: Leased
Year Constructed: 2006
Gross Area: 6,300 ft²
OEC ID: 201330

FY17 – FY19 Average Annual Occupants: 114,940
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 4 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 20% window to wall ratio; windows are operable; exterior is masonry brick; auditors did not have roof access.



Weather Normalized Site Energy (Average)¹: 477 MMBTU/yr. **Weather Normalized Carbon Emissions:** 35.1 MtCO₂e/yr.

Energy Use Performance

EUI = 75.8 kBTU/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- HVAC equipment is uncontrolled. The cooling load for this branch could not be normalized to a statistically significant model due to uncontrolled operation of equipment.
- There is no roof access for this branch, which makes it difficult to properly maintain and repair rooftop equipment.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#11 out of 93 for EUI
#6 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 426.2
Electricity Use (kWh): 77,630
Peak Electricity Demand (kW): 30.8
Gas Use (Therms): 1,614
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 31

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	60	17,600	4.2	-371	5.1	7,000	650	1,372
LT2 – Lighting Retrofit	84	24,587	4	-371	7.1	21,085	311.2	2,969
CL2 – Controls Integration	5	615	0	36.00	0.37	84,270	1.3	228,376
P6 – Windows, Air Sealing, Roof, HVAC	234	19,031	77.7	1,693	14	2,850,000	1.9	196,551
P8 – Exterior façade, Roof, HVAC	262	27,245	89.8	1,693	16	3,600,000	2.2	213,270

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Morrisania
Borough: Bronx
Owned By: City
Year Constructed: 1908
Gross Area: 14,209 ft²
OECD ID: 200566

FY17 – FY19 Average Annual Occupants: 135,260
Building Levels Above / Below Grade: 2/1
Heat Vulnerability Index: 5 out of 5
Landmark Status: Landmarked
Envelope Summary: 30% window to wall ratio; windows are operable and double paned; exterior walls are made of brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,835 MMBTU/yr. **Weather Normalized Carbon Emissions:** 111.7 MtCO₂e/yr.

Energy Use Performance

EUI = 129.2 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Branch is currently under construction and existing HVAC equipment is decommissioned. The following report reviews building use pre-construction.
- Over 70% of this branch's energy use was dedicated to heating.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#58 out of 93 for EUI
#57 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,747.9

Electricity Use (kWh): 143,480

Peak Electricity Demand (kW): 62

Gas Use (Therms): 12,586

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.):
108.4

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	85	25,075	6.3	-708	7.2	15,600	399.6	2,166
LT2 – Lighting Retrofit	118	34,723	6	-708	10	46,499	193.8	4,649
CL2 – Controls Integration	108	2,942	0	986.00	6.09	187,672	9.1	30,796
P6 – Windows, Air Sealing, Roof, HVAC	1,508	35,119	121.7	13,889	84	5,910,000	3.9	70,357
P7 – Interior façade, Windows, Roof, HVAC	1,520	38,413	124.9	13,889	84	8,000,000	3	94,173

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Mosholu
Borough: Bronx
Owned By: City
Year Constructed: 1955
Gross Area: 9,982 ft²
OECD ID: 200577

FY17 – FY19 Average Annual Occupants: 157,010
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 4 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 30% window to wall ratio; windows are operable and double paned; exterior walls are made of masonry brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,039 MMBTU/yr. **Weather Normalized Carbon Emissions:** 67.7 MtCO₂e/yr.

Energy Use Performance

EUI = 104.1 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- 60% of this branch's energy use is dedicated to heating.
- 2019-2020 service tickets indicate inadequate heating control systems with interior space temperatures reading between 65°F and 90°
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#37 out of 93 for EUI
#25 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,019
Electricity Use (kWh): 125,960
Peak Electricity Demand (kW): 65.6
Gas Use (Therms): 5,894
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 67.7

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	48	14,214	3.7	-461	4.1	11,000	313.6	2,682
LT2 – Lighting Retrofit	68	19,885	4	-461	5.7	33,222	153	5,828
CL2 – Controls Integration	24	2,855	0	152.00	1.63	120,813	4.1	74,027
P8 – Exterior façade, Roof, HVAC	725	23,560	74.2	6,450	41	6,100,000	2	148,382
P8g – Exterior façade, Roof, GSHP	736	26,875	74.2	6,450	42	6,800,000	2	161,635

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Mott Haven
Borough: Bronx
Owned By: City
Year Constructed: 1905
Gross Area: 18,345 ft²
OECD ID: 200562

FY17 – FY19 Average Annual Occupants: 138,710
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 5 out of 5
Landmark Status: Landmarked
Envelope Summary: 15% window to wall ratio; windows are not operable and single paned; exterior walls are made of brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,777 MMBTU/yr. **Weather Normalized Carbon Emissions:** 127.5 MtCO₂e/yr.

Energy Use Performance

EUI = 96.9 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- 2019-2020 service tickets indicate inadequate thermostatic control with interior space temperatures reading as low as 50°F and as high as 84°F
- There is currently a project for HVAC equipment replacement and window upgrades in the construction phase.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#25 out of 93 for EUI
#61 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,623.6
Electricity Use (kWh): 297,040
Peak Electricity Demand (kW): 104
Gas Use (Therms): 6,102
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 118.3

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	144	42,207	10.1	-875	12.2	20,200	541.3	1,655
LT2 – Lighting Retrofit	182	53,360	10	-875	15.4	59,776	236.6	3,881
CL2 – Controls Integration	15	2,260	0	77.00	1.07	235,401	1.4	221,034
P6 – Windows, Air Sealing, Roof, HVAC	914	54,322	188.4	7,295	54	7,820,000	2.2	143,512
P7 – Interior façade, Windows, Roof, HVAC	898	49,627	186.1	7,295	53	10,500,000	1.5	197,591

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Muhlenberg
Borough: Manhattan
Owned By: City
Year Constructed: 1906
Gross Area: 12,953 ft²
OECD ID: 100598

FY17 – FY19 Average Annual Occupants: 179,070
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 2 out of 5
Landmark Status: Landmarked
Envelope Summary: 40% window to wall ratio; windows are single paned and operable with the rear facing windows having frosted glass; exterior walls are made of masonry concrete and brick; roof finish is gray in color; roof type is flat with two levels of elevation.



Weather Normalized Site Energy (Average)¹: 1,427 MMBTU/yr. **Weather Normalized Carbon Emissions:** 96.8 MtCO₂e/yr.

Energy Use Performance

EUI = 110.2 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- 2019-2020 service tickets indicate inadequate control systems with interior space temperatures reading between 60°F and 87°F
- There is currently a project for major renovation design in the planning phase for this branch.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#43 out of 93 for EUI
#46 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,410.6
Electricity Use (kWh): 210,240
Peak Electricity Demand (kW): 86.4
Gas Use (Therms): 6,934
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 97.6

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	75	21,964	5.3	-461	6.3	14,300	397.3	2,269
LT2 – Lighting Retrofit	103	30,210	5	-461	8.7	43,932	183.4	5,049
CL2 – Controls Integration	35	6,922	0	120.00	2.64	160,723	5.2	60,903
P6 – Windows, Air Sealing, Roof, HVAC	870	30,637	105.6	7,659	49	5,270,000	2.1	106,292
P7 – Interior façade, Windows, Roof, HVAC	885	34,939	106.8	7,659	50	7,200,000	1.7	141,676

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Mulberry St.
Borough: Manhattan
Owned By: Leased
Year Constructed: 2007
Gross Area: 11,500 ft²
OEC ID: 101484




FY17 – FY19 Average Annual Occupants: 182,860
Building Levels Above / Below Grade: 1/2
Heat Vulnerability Index: 2 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 50% window to wall ratio on Level 1; windows are not operable and single pane; exterior walls are steel with glazing; the base building is above this branch.



Weather Normalized Site Energy (Average)¹: 987 MMBTU/yr. **Weather Normalized Carbon Emissions:** 83.7 MtCO₂e/yr.

Energy Use Performance

EUI = 85.9 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- New branch construction was completed in May 2020.
- **This branch is not ranked because it uses steam provided by the base building to generate heating hot water for air handlers.*
- *This branch is a tenant of 285 Lafayette St.. The building received an Energy Star score of 76 in 2019, or a 'B' using Local Law 33 metrics. A score of 75 or higher indicates your building is a top performer – and may be eligible for ENERGY STAR certification according to energystar.gov*

CY 2019 Energy Use Profile

Total Energy (MMBTU): 957.5
Electricity Use (kWh): 280,640
Peak Electricity Demand (kW): 72
Gas Use (Therms): 0
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 81.1

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	116	33,897	12.9	0	9.8	12,700	768.5	1,295
LT2 – Lighting Retrofit	175	51,181	14	0	14.8	37,817	389.7	2,555
CL2 – Controls Integration	5	1,673	0	0.00	0.48	154,426	0.6	319,062

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: New Amsterdam
Borough: Manhattan
Owned By: Leased
Year Constructed: 1989
Gross Area: 11,278 ft²
OEID: 101233

FY17 – FY19 Average Annual Occupants: 137,370
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 2 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 20% window to wall ratio; windows are not operable and single paned; exterior walls are masonry brick; roof could not be observed as it is a leased building; the base building is above this branch.



Weather Normalized Site Energy (Average)¹: (Not Calculated) MMBTU/yr.

Weather Normalized Carbon Emissions: (Not Calculated) MtCO₂e/yr.

Energy Use Performance

EUI = 0 kBTU/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- Building has recently finished construction and has not yet opened to the public.
- Insufficient utility data is available for analysis.
- *This branch is a tenant of 9 Murray Street. The building received an Energy Star score of 48 in 2019, or a 'D' using Local Law 33 metrics. A score of 75 or higher indicates your building is a top performer – and may be eligible for ENERGY STAR certification according to energystar.gov*

CY 2019 Energy Use Profile

Total Energy (MMBTU): 9.8

Electricity Use (kWh): 2,880

Peak Electricity Demand (kW): 7.2

Gas Use (Therms): 0

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.):
0.8

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
CL1 – Controls Retro-commissioning						27,300		
EN1 – Air Sealing						298,623		
P1 – Air Sealing, HVAC						3,520,000		
P2 – Windows, Air Sealing, HVAC						3,970,000		
P4 – Exterior façade, HVAC						5,580,000		

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: New Dorp Regional
Borough: Staten Island
Owned By: City
Year Constructed: 1971
Gross Area: 12,000 ft²
OECD ID: 500251

FY17 – FY19 Average Annual Occupants: 110,430

Building Levels Above / Below Grade: 1/0

Heat Vulnerability Index: 1 out of 5

Landmark Status: Not Landmarked




Envelope Summary: 20% window to wall ratio; windows are inoperable and double paned with majority of the glazing in the form of build out vertical skylights at the roof level; exterior walls are made of masonry brick; roof finish is gray in color; roof type is flat with two levels of elevation.



Weather Normalized Site Energy (Average)¹: 1,074 MMBTU/yr. **Weather Normalized Carbon Emissions:** 75.1 MtCO₂e/yr.

Energy Use Performance

EUI = 89.5 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- This branch is a strong candidate for a lighting controls project.
- This branch is a strong candidate for a lighting controls project.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
 #18 out of 93 for EUI
 #30 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 935.2

Electricity Use (kWh): 167,040

Peak Electricity Demand (kW): 88.8

Gas Use (Therms): 3,653

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 67.7

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT2 – Lighting Retrofit	147	43,124	7	-420	12.5	38,463	307.6	3,077
CL2 – Controls Integration	2	1,562	0	-25.00	0.32	151,130	0.7	473,763
P5 – Air Sealing, Roof, HVAC	611	30,969	140.9	5,053	35	6,180,000	1.4	172,529
P6 – Windows, Air Sealing, Roof, HVAC	640	39,712	152.5	5,053	38	6,650,000	1.7	173,402
P8 – Exterior façade, Roof, HVAC	667	47,422	161.1	5,053	40	8,000,000	1.7	197,141

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Ottendorfer
Borough: Manhattan
Owned By: NYPL
Year Constructed: 1884
Gross Area: 8,332 ft²
OECD ID: 100589




FY17 – FY19 Average Annual Occupants: 99,250
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 3 out of 5
Landmark Status: Landmarked
Envelope Summary: 30% window to wall ratio; windows are operable and single paned; exterior walls are masonry brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 554 MMBTU/yr. **Weather Normalized Carbon Emissions:** 35.5 MtCO₂e/yr.

Energy Use Performance

EUI = 66.5 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	✓
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- There are no centralized controls for this branch.
- This building is cooled with inefficient window ACs and Split Dx systems.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#7 out of 93 for EUI
#7 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 559

Electricity Use (kWh): 54,720

Peak Electricity Demand (kW): 29.6

Gas Use (Therms): 3,724

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 35.6

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	60	17,605	3.8	-92	5.1	9,200	537.1	1,803
LT2 – Lighting Retrofit	77	22,527	4	-92	6.5	27,066	234.9	4,164
CL2 – Controls Integration	8	495	0	73.00	0.53	117,078	1.3	220,487
P6 – Windows, Air Sealing, Roof, HVAC	431	20,346	79.4	3,621	25	3,300,000	1.4	131,317
P7 – Interior façade, Windows, Roof, HVAC	442	23,413	80.5	3,621	26	4,500,000	1.2	172,943

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Parkchester Regional
Borough: Bronx
Owned By: City
Year Constructed: 1985
Gross Area: 14,000 ft²
OECD ID: 200988

FY17 – FY19 Average Annual Occupants: 216,290
Building Levels Above / Below Grade: 2/0
Heat Vulnerability Index: 4 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 30% window to wall ratio, windows are operational and double paned; exterior walls are made of masonry brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,931 MMBTU/yr. **Weather Normalized Carbon Emissions:** 131.4 MtCO₂e/yr.

Energy Use Performance

EUI = 138 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- 2019-2020 service tickets indicate inadequate control systems with interior space temperatures reading as low as 62°F and as high as 90°F
- Level 2 thermostats are in a locked closet, causing thermostats to report incorrect space temperatures.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#64 out of 93 for EUI
#67 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,782.1
Electricity Use (kWh): 282,800
Peak Electricity Demand (kW): 110.4
Gas Use (Therms): 8,174
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 125.2

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	171	50,087	10.4	-23	14.5	15,400	934.4	1,062
LT2 – Lighting Retrofit	233	68,154	11	-45	19.7	46,043	424.8	2,337
CL2 – Controls Integration	69	-891	0	725.00	3.60	187,672	5.1	52,189
P6 – Windows, Air Sealing, Roof, HVAC	1,185	48,384	230	10,207	68	6,480,000	4.4	94,931
P8 – Exterior façade, Roof, HVAC	1,287	78,197	241.1	10,207	76	8,100,000	4.6	105,372

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Pelham Bay
Borough: Bronx
Owned By: City
Year Constructed: 1975
Gross Area: 10,000 ft²
OECD ID: 200580

FY17 – FY19 Average Annual Occupants: 94,590
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 15% window to wall ratio; windows are operable and are double paned; exterior walls are made of masonry brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,160 MMBTU/yr. **Weather Normalized Carbon Emissions:** 76.2 MtCO₂e/yr.

Energy Use Performance

EUI = 116.1 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- 60% of this branch's energy use is dedicated to heating.
- 2019-2020 service tickets indicate inadequate heating control systems with interior space temperatures reading between 63°F and 83°
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#49 out of 93 for EUI
#31 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,106.3

Electricity Use (kWh): 147,120

Peak Electricity Demand (kW): 49.6

Gas Use (Therms): 6,045

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 74.7

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	90	26,384	6.6	-745	7.6	11,000	596.2	1,447
LT2 – Lighting Retrofit	124	36,496	7	-745	10.5	33,222	285	3,164
CL1 – Controls Retro-commissioning	86	2,551	0	774.20	4.85	23,400	0.2	4,820
P8 – Exterior façade, Roof, HVAC	842	41,427	130.4	7,013	49	6,600,000	2.6	133,982
P8g – Exterior façade, Roof, GSHP	854	44,781	130.4	7,013	50	7,300,000	2.5	145,331

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Port Richmond
Borough: Staten Island
Owned By: City
Year Constructed: 1905
Gross Area: 9,429 ft²
OECD ID: 500241




FY17 – FY19 Average Annual Occupants: 67,410
Building Levels Above / Below Grade: 2/1
Heat Vulnerability Index: 4 out of 5
Landmark Status: Landmarked
Envelope Summary: 30% window to wall ratio; windows are operable and single paned; exterior walls are made of brick and cement; roof is not accessible.



Weather Normalized Site Energy (Average)¹: 1,118 MMBTU/yr. **Weather Normalized Carbon Emissions:** 72.7 MtCO₂e/yr.

Energy Use Performance

EUI = 118.6 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Upper level abandoned apartments are unoccupiable and are in significant disrepair.
- Over 90% of this branch's energy use is dedicated to heating.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#52 out of 93 for EUI
#29 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,065.1
Electricity Use (kWh): 122,880
Peak Electricity Demand (kW): 38.8
Gas Use (Therms): 6,460
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 69.9

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	84	24,642	6	-559	7.1	10,400	607.3	1,464
LT2 – Lighting Retrofit	112	32,912	6	-559	9.5	31,628	275	3,329
CL2 – Controls Integration	13	1,096	0	97.00	0.83	120,813	2	145,034
P7 – Interior façade, Windows, Roof, HVAC	819	35,678	116.3	6,973	47	5,600,000	1.9	118,168
P7g – Interior façade, Windows, Roof, GSHP	829	38,835	116.3	6,973	48	6,200,000	1.9	128,364

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Richmondtown
Borough: Staten Island
Owned By: City
Year Constructed: 1996
Gross Area: 14,447 ft²
OECD ID: 500389




FY17 – FY19 Average Annual Occupants: 70,530
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 15% window to wall ratio; windows are all operable with double paned windows located in office wing and single paned located in circulation section; exterior walls are made of brick; roof finish is white in color; roof type is flat with two levels of elevation.



Weather Normalized Site Energy (Average)¹: 1,425 MMBTU/yr. **Weather Normalized Carbon Emissions:** 98.5 MtCO₂e/yr.

Energy Use Performance

EUI = 98.6 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- There is currently a capital project for HVAC equipment replacement in the planning phase for this branch.
- Lighting power density at this branch is over 2x higher than the 2020 Energy Conservation Code allowance.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#28 out of 93 for EUI
#49 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,340.7
Electricity Use (kWh): 205,440
Peak Electricity Demand (kW): 63.2
Gas Use (Therms): 6,399
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 93.4

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	202	59,142	15	-1,755	17.1	15,900	917.1	929
LT2 – Lighting Retrofit	276	80,940	17	-1,853	23.4	47,183	439.2	2,016
CL2 – Controls Integration	21	2,884	0	115.00	1.44	187,672	2.3	130,057
P6 – Windows, Air Sealing, Roof, HVAC	972	78,583	278.6	7,044	60	6,190,000	3.9	102,875
P8 – Exterior façade, Roof, HVAC	994	85,028	281.6	7,044	62	7,800,000	3.3	125,745

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Riverdale
Borough: Bronx
Owned By: NYPL
Year Constructed: 1965
Gross Area: 7,500 ft²
OEID: 200582

FY17 – FY19 Average Annual Occupants: 90,720
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 30% window to wall ratio; windows are double pane and are operable; exterior walls are made of brick; roof finish is brown in color and is sloped; a back portion of roof is black in color and is flat.



Weather Normalized Site Energy (Average)¹: 833 MMBTU/yr. **Weather Normalized Carbon Emissions:** 53.9 MtCO₂e/yr.

Energy Use Performance

EUI = 111.1 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Over 70% of this branch's energy use is dedicated to heating.
- 2019-2020 service tickets indicate inadequate heating control systems with interior space temperatures reaching as low as 64°F
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#44 out of 93 for EUI
#16 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 853.1
Electricity Use (kWh): 92,800
Peak Electricity Demand (kW): 52
Gas Use (Therms): 5,366
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 55.3

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	43	12,558	3.1	-347	3.6	8,300	377.3	2,305
LT2 – Lighting Retrofit	52	15,227	3.1	-347	4.4	24,503	159.2	5,568
CL2 – Controls Integration	14	999	0	109.00	0.87	114,587	2.2	131,559
P8 – Exterior façade, Roof, HVAC	611	23,878	66.5	5,300	35	5,100,000	2.1	145,381
P8g – Exterior façade, Roof, GSHP	619	26,220	66.5	5,300	35	5,600,000	2.1	156,599

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Roosevelt Island
Borough: Manhattan
Owned By: Leased
Year Constructed: 1997
Gross Area: 5,200 ft²
OECD ID: 101422




FY17 – FY19 Average Annual Occupants: 83,660
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 1 out of 5
Landmark Status: Landmarked
Envelope Summary: 40% window to wall ratio; windows are operable and double pane; exterior walls are concrete; the base building is above this branch.



Weather Normalized Site Energy (Average)¹: 237 MMBTU/yr. **Weather Normalized Carbon Emissions:** 20.1 MtCO₂e/yr.

Energy Use Performance

EUI = 45.7 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	✓
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- **Gas utility data is missing for this analysis.**
- New branch construction was completed in May 2020.
- Over 65% of this branch's energy use is dedicated to heating. However natural gas data is missing for this branch.

CY 2019 Energy Use Profile

Total Energy (MMBTU): 248.6
Electricity Use (kWh): 72,864
Peak Electricity Demand (kW): 23
Gas Use (Therms): 0
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 21.1

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
CL1 – Controls Retro-commissioning	2	809	0	0.00	0.23	8,000	0	34,188
P2 – Windows, Air Sealing, HVAC	76	22,480	8.5		6	1,080,000	6.2	166,153
P3 – Interior façade, Windows, HVAC	83	24,452	8.6		7	1,500,000	4.9	212,164

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Sedgwick
Borough: Bronx
Owned By: City
Year Constructed: 1951
Gross Area: 7,500 ft²
OECD ID: 201183

FY17 – FY19 Average Annual Occupants: 75,860
Building Levels Above / Below Grade: 2/0
Heat Vulnerability Index: 5 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 30% window to wall ratio; windows are double paned and operable; exterior walls are made of masonry brick; roof finish is gray in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 790 MMBTU/yr. **Weather Normalized Carbon Emissions:** 55.6 MtCO₂e/yr.

Energy Use Performance

EUI = 105.4 kBTU/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- Over 60% of this branch's energy use is dedicated to heating.
- 2019-2020 service tickets indicate inadequate thermostatic control with interior space temperatures reading between 62°F and 90°F
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#38 out of 93 for EUI
#17 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 789.3
Electricity Use (kWh): 130,960
Peak Electricity Demand (kW): 55.2
Gas Use (Therms): 3,425
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 56.1

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	55	16,254	3.7	-217	4.7	8,300	527.5	1,765
LT2 – Lighting Retrofit	69	20,316	4	-217	5.9	24,503	226.4	4,153
CL2 – Controls Integration	7	293	0	63.00	0.42	114,587	1	272,180
P6 – Windows, Air Sealing, Roof, HVAC	428	19,811	71.7	3,607	24	3,370,000	2.4	135,287
P8 – Exterior façade, Roof, HVAC	441	23,727	77.5	3,607	26	4,200,000	2.2	161,290

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Seward Park
Borough: Manhattan
Owned By: City
Year Constructed: 1909
Gross Area: 20,238 ft²
OECD ID: 100585

FY17 – FY19 Average Annual Occupants: 296,230
Building Levels Above / Below Grade: 4/1
Heat Vulnerability Index: 3 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 30% window to wall ratio; windows are single paned and operable; exterior walls are made of cement; roof finish is black in color; roof type is flat with two levels of elevation.



Weather Normalized Site Energy (Average)¹: 2,736 MMBTU/yr. **Weather Normalized Carbon Emissions:** 185.9 MtCO₂e/yr.

Energy Use Performance

EUI = 135.2 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- 2019-2021 service tickets indicate inadequate control systems with interior space temperatures reading between 66°F and 97°F
- This branch requires a combination of a controls, insulation, and equipment upgrades.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#60 out of 93 for EUI
#73 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 2,892.5
Electricity Use (kWh): 388,640
Peak Electricity Demand (kW): 112
Gas Use (Therms): 15,668
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 195.6

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	129	37,795	8.7	-569	10.9	22,200	454.5	2,036
LT2 – Lighting Retrofit	173	50,830	9	-569	14.7	66,043	209.6	4,492
CL1 – Controls Retro-commissioning	77	6,163	0	563.40	4.78	46,700	0.2	9,776
P6 – Windows, Air Sealing, Roof, HVAC	1,618	47,598	176.9	14,557	91	7,950,000	2.5	87,209
P8 – Exterior façade, Roof, HVAC	1,713	75,559	182.8	14,557	99	10,300,000	2.7	103,788

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Soundview
Borough: Bronx
Owned By: City
Year Constructed: 1973
Gross Area: 10,000 ft²
OECD ID: 200576

FY17 – FY19 Average Annual Occupants: 72,990
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 4 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 50% window to wall ratio on one of the exposed walls; windows are not operatable and are single paned; exterior walls are made of masonry brick and granite; roof finish is white in color; roof type is sloped.



Weather Normalized Site Energy (Average)¹: 1,145 MMBTU/yr. **Weather Normalized Carbon Emissions:** 82.3 MtCO₂e/yr.

Energy Use Performance

EUI = 114.6 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- There is currently a project for boiler replacement in the planning phase for this branch.
- 2019-2020 service tickets indicate inadequate control of the heating system with interior space temperatures reading between 69°F and 84°F
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#47 out of 93 for EUI
#37 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,407.5
Electricity Use (kWh): 250,600
Peak Electricity Demand (kW): 66.8
Gas Use (Therms): 5,526
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 101.8

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	84	24,597	6.2	-722	7.1	11,000	552.3	1,549
LT2 – Lighting Retrofit	119	34,848	6	-722	10.1	33,222	271.7	3,289
CL1 – Controls Retro-commissioning	56	2,611	0	476.20	3.29	23,400	36.7	7,118
P6 – Windows, Air Sealing, Roof, HVAC	542	21,878	119.5	4,673	31	5,650,000	2.2	181,264
P8 – Exterior façade, Roof, HVAC	595	37,458	124.1	4,673	35	6,800,000	2.5	190,636

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: South Beach
Borough: Staten Island
Owned By: Leased
Year Constructed: 2000
Gross Area: 3,000 ft²
OECD ID: 500426

FY17 – FY19 Average Annual Occupants: 50,370
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 30% window to wall ratio; windows are not operable and are double paned; exterior walls are masonry concrete and brick; roof finish is grey in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 361 MMBTU/yr. **Weather Normalized Carbon Emissions:** 24.2 MtCO₂e/yr.

Energy Use Performance

EUI = 120.5 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- This branch is a strong candidate for LED replacement.
- This is a leased branch, and the smallest branch in Staten Island.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#55 out of 93 for EUI
#3 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 358.2
Electricity Use (kWh): 49,266
Peak Electricity Demand (kW): 29
Gas Use (Therms): 1,901
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 24.3

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	42	12,400	2.8	-146	3.6	3,300	1,020.4	916
LT2 – Lighting Retrofit	59	17,159	3	-166	5	10,315	456.5	2,063
CL2 – Controls Integration	20	876	0	174.00	1.18	47,728	7	40,550
EN3 – Stretch Code Roof Insulation	5	161		51	0	313,083	0.7	981,451

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Spuyten Duyvil
Borough: Bronx
Owned By: City
Year Constructed: 1971
Gross Area: 7,871 ft²
OECD ID: 200590

FY17 – FY19 Average Annual Occupants: 151,820
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 30% window to wall ratio. Windows are operable and double paned. Exterior walls are made of pebble dash. Roof is flat and is covered with stones.



Weather Normalized Site Energy (Average)¹: 1,532 MMBTU/yr. **Weather Normalized Carbon Emissions:** 95.7 MtCO₂e/yr.

Energy Use Performance

EUI = 194.7 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Over 70% of this branch's energy use is dedicated to heating.
- This branch is in need of a centralized control system.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#77 out of 93 for EUI
#45 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,617.2
Electricity Use (kWh): 139,360
Peak Electricity Demand (kW): 55.2
Gas Use (Therms): 11,420
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 101

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	67	19,759	5	-605	5.7	8,700	557	1,526
LT2 – Lighting Retrofit	94	27,558	5	-605	8	25,414	279	3,176
CL2 – Controls Integration	107	2,400	0	995.00	5.98	114,587	14.5	19,155
P8 – Exterior façade, Roof, HVAC	1,218	39,897	102.4	10,822	69	5,100,000	4.9	73,838
P8g – Exterior façade, Roof, GSHP	1,229	43,211	102.4	10,822	70	5,600,000	4.7	79,965

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: St. Agnes

Borough: Manhattan

Owned By: City

Year Constructed: unknown

Gross Area: 17,792 ft²

OECD ID: 100584

FY17 – FY19 Average Annual Occupants: 270,340

Building Levels Above / Below Grade: 3/1

Heat Vulnerability Index: 1 out of 5

Landmark Status: Landmarked

Envelope Summary: 25% window to wall ratio; windows are double paned and operable; exterior walls are made of cement; roof finish is black in color; roof type is flat



Weather Normalized Site Energy (Average)¹: 1,957 MMBTU/yr. **Weather Normalized Carbon Emissions:** 125.1 MtCO₂e/yr.

Energy Use Performance

EUI = 110 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- 2019-2021 service tickets indicate inadequate control systems with interior space temperatures reading between 57°F and 84°F
- Controls measures are required for this branch.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#42 out of 93 for EUI
#60 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,764.8

Electricity Use (kWh): 205,000

Peak Electricity Demand (kW): 94

Gas Use (Therms): 10,656

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.):
115.9

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	111	32,538	6.8	24	9.4	19,600	479.7	2,085
LT2 – Lighting Retrofit	146	42,795	7	24	12.4	59,320	208.3	4,783
CL2 – Controls Integration	32	2,239	0	244.00	1.95	240,454	2.3	123,563
P6 – Windows, Air Sealing, Roof, HVAC	1,329	11,786	163.1	12,892	71	8,660,000	1.1	120,344
P8 – Exterior façade, Roof, HVAC	1,549	76,341	191	12,892	90	10,700,000	2.6	118,088

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Stapleton
Borough: Staten Island
Owned By: City
Year Constructed: 1907
Gross Area: 10,860 ft²
OECD ID: 500244




FY17 – FY19 Average Annual Occupants: 116,690
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 2 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 80% window to wall ratio; windows are single paned and inoperable; exterior walls are made of brick and metal framing with glazing; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,840 MMBTU/yr. **Weather Normalized Carbon Emissions:** 131.3 MtCO₂e/yr.

Energy Use Performance

EUI = 169.5 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- 2019-2021 service tickets indicate inadequate control systems with interior space temperatures reading between 62°F and 85°F
- There is a Carnegie half and new half to this building. Measures should be taken to properly ventilate the basement.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#76 out of 93 for EUI
#66 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,790.6
Electricity Use (kWh): 317,280
Peak Electricity Demand (kW): 112.8
Gas Use (Therms): 7,082
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 129.3

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	7	2,063	0.4	-12	0.6	12,000	48.1	20,000
LT2 – Lighting Retrofit	36	10,429	0	-12	3	35,501	84.1	11,833
CL1 – Controls Retro-commissioning	85	5,759	0	662.80	5.19	25,800	0.2	4,972
P8 – Exterior façade, Roof, HVAC	848	19,988	36.9	7,802	47	7,500,000	2.1	158,696
P8g – Exterior façade, Roof, GSHP	884	30,458	36.9	7,802	50	8,200,000	2.3	163,054

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Stavros Niarchos
Borough: Manhattan
Owned By: City
Year Constructed: unknown
Gross Area: 180,000 ft²
OECD ID: 100582

FY17 – FY19 Average Annual Occupants: (Not available)
Building Levels Above / Below Grade: 8/0
Heat Vulnerability Index: 0 out of 5
Landmark Status: Landmarked
Envelope Summary: 50% window to wall ratio; windows are not operable and are double paned with a gas thermal barrier in the middle; exterior walls are made of masonry stone; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: (Not Calculated) MMBTU/yr. **Weather Normalized Carbon Emissions:** (Not Calculated) MtCO₂e/yr.

Energy Use Performance

EUI = 0 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- New branch construction was completed in June 2020.
- Insufficient utility data is available for analysis, resulting with no normalized utility trend.

CY 2019 Energy Use Profile

Total Energy (MMBTU): 0
Electricity Use (kWh): 0
Peak Electricity Demand (kW): 0
Gas Use (Therms): 0
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 0

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
CL1 – Controls Retro-commissioning	(unknown)					170,900	0.1	

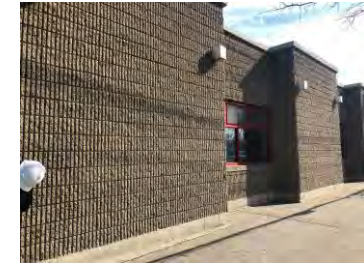
¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Throg's Neck
Borough: Bronx
Owned By: City
Year Constructed: 1974
Gross Area: 8,280 ft²
OECD ID: 200573




FY17 – FY19 Average Annual Occupants: 78,760
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 15% window to wall ratio; windows are operable and are double paned; exterior walls are made of cement blocks; roof finish is white in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,134 MMBTU/yr. **Weather Normalized Carbon Emissions:** 79.6 MtCO₂e/yr.

Energy Use Performance

EUI = 137 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Over 55% of this branch's energy use is dedicated to heating.
- There is currently a project for roof and HVAC equipment replacement in the construction phase for this branch.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#63 out of 93 for EUI
#34 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,535.9
Electricity Use (kWh): 205,120
Peak Electricity Demand (kW): 62.9
Gas Use (Therms): 8,362
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 103.7

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	63	18,559	4.5	-447	5.4	9,100	518.8	1,685
LT2 – Lighting Retrofit	87	25,506	5	-447	7.4	26,553	253.1	3,588
CL1 – Controls Retro-commissioning	53	712	0	511.10	2.92	19,100	0	6,534
P6 – Windows, Air Sealing, Roof, HVAC	573	15,288	78.2	5,214	32	4,110,000	2	127,838
P8 – Exterior façade, Roof, HVAC	613	26,874	88.9	5,214	35	5,100,000	2.3	143,702

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Todt Hill -Westerleigh
Borough: Staten Island
Owned By: Leased
Year Constructed: 1983
Gross Area: 14,366 ft²
OEC ID: 500306




FY17 – FY19 Average Annual Occupants: 144,140
Building Levels Above / Below Grade: 2/1
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 25% window to wall ratio; windows are all inoperable and double paned; exterior walls are made of cement; roof finish is white in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 4,441 MMBTU/yr. **Weather Normalized Carbon Emissions:** 257.4 MtCO₂e/yr.

Energy Use Performance

EUI = 309.2 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Lighting power density at this branch is over 2x higher than the 2020 Energy Conservation Code allowance.
- This branch is leased. Not all equipment observed is operated by the library.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#79 out of 93 for EUI
#75 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 5,006.1
Electricity Use (kWh): 73,250
Peak Electricity Demand (kW): 80.8
Gas Use (Therms): 7,380
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 286.6

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	192	56,316	14.5	-1,826	16.3	15,800	865.2	969
LT2 – Lighting Retrofit	317	92,881	19	-2,117	26.8	46,955	506.7	1,752
CL2 – Controls Integration	83	1,231	0	794.00	4.58	187,672	0	40,994
P8 – Exterior façade, Roof, HVAC	4,098	95,825	328.7	37,715	228	7,500,000	9	32,861
P8g – Exterior façade, Roof, GSHP	4,111	99,501	328.7	37,715	229	8,500,000	8.1	37,070

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Tompkins Square Reg.
Borough: Manhattan
Owned By: City
Year Constructed: 1904
Gross Area: 14,703 ft²
OECD ID: 100612

FY17 – FY19 Average Annual Occupants: 150,020
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 3 out of 5
Landmark Status: Landmarked
Envelope Summary: 35% window to wall ratio; windows are operable and double pane; exterior walls are masonry brick; roof finish is white in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,369 MMBTU/yr. **Weather Normalized Carbon Emissions:** 90.6 MtCO₂e/yr.

Energy Use Performance

EUI = 93.2 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- There is an upcoming HVAC replacement capital project currently in the planning phase.
- There is an upcoming HVAC replacement capital project currently in the planning phase.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#21 out of 93 for EUI
#43 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,330.3
Electricity Use (kWh): 149,440
Peak Electricity Demand (kW): 76.8
Gas Use (Therms): 8,206
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 86.8

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	26	7,524	1.7	-60	2.2	16,200	128.6	7,363
LT2 – Lighting Retrofit	95	27,780	3	-117	8	48,800	160.6	6,100
CL2 – Controls Integration	12	1,553	0	75.00	0.85	191,773	1.3	225,881
P6 – Windows, Air Sealing, Roof, HVAC	888	24,572	95.8	8,050	49	5,750,000	1.8	115,207
P7 – Interior façade, Windows, Roof, HVAC	903	28,705	99.2	8,050	51	7,900,000	1.5	154,598

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Tottenville
Borough: Staten Island
Owned By: City
Year Constructed: 1904
Gross Area: 4,683 ft²
OECD ID: 500249

FY17 – FY19 Average Annual Occupants: 55,980
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 1 out of 5
Landmark Status: Landmarked
Envelope Summary: 30% window to wall ratio; windows are operable and single paned in leaky frames; exterior walls are made of brick and cement; no access to roof of this building.



Weather Normalized Site Energy (Average)¹: 740 MMBTU/yr. **Weather Normalized Carbon Emissions:** 49.2 MtCO₂e/yr.

Energy Use Performance

EUI = 158.1 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- There is currently a capital project for a roof replacement in the construction phase for this branch.
- Auditors observed that thermostats for the main reading room are located above the occupied thermal zone.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#73 out of 93 for EUI
#14 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 568.1

Electricity Use (kWh): 61,280

Peak Electricity Demand (kW): 30.8

Gas Use (Therms): 3,591

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 36.8

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	37	10,743	2.4	-82	3.1	5,200	572.9	1,677
LT2 – Lighting Retrofit	49	14,290	2	-82	4.1	0		0
CL2 – Controls Integration	11	1,243	0	71.00	0.74	84,270	2.6	114,654
P7 – Interior façade, Windows, Roof, HVAC	485	16,462	52.1	4,296	27	2,500,000	4.4	90,579
P7g – Interior façade, Windows, Roof, GSHP	495	19,147	52.1	4,296	28	2,800,000	4.2	98,661

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Tremont
Borough: Bronx
Owned By: City
Year Constructed: 1905
Gross Area: 11,900 ft²
OECD ID: 200565

FY17 – FY19 Average Annual Occupants: 53,180
Building Levels Above / Below Grade: 2/0
Heat Vulnerability Index: 5 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 20% window to wall ratio windows are single paned and operable; exterior walls are made of masonry brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,954 MMBTU/yr. **Weather Normalized Carbon Emissions:** 128.1 MtCO₂e/yr.

Energy Use Performance

EUI = 164.3 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- Utility data indicates that the gas meter has not reported gas use since at least 2017, however, Arup can confirm gas is still being used.
- 2019-2020 service tickets indicate inadequate heating control systems with interior space temperatures reading between 62°F and 86°F.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#75 out of 93 for EUI
#62 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 815.2
Electricity Use (kWh): 229,840
Peak Electricity Demand (kW): 83.2
Gas Use (Therms): 310
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 68.1

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	161	47,298	9.8	25	13.7	13,100	1,042.3	956
LT2 – Lighting Retrofit	229	67,160	11	-57	19.4	38,235	503.7	1,970
CL2 – Controls Integration	127	4,478	0	1,123.00	7.26	151,130	13.5	20,808
P6 – Windows, Air Sealing, Roof, HVAC	241	61,111	232.4	324	19	6,430,000	2.9	331,614
P8 – Exterior façade, Roof, HVAC	275	71,239	237.9	324	22	7,800,000	2.7	349,462

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Van Cortlandt
Borough: Bronx
Owned By: Leased
Year Constructed: 1968
Gross Area: 2,715 ft²
OECD ID: 201529

FY17 – FY19 Average Annual Occupants: 55,520
Building Levels Above / Below Grade: 2/0
Heat Vulnerability Index: 3 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 15% window to wall ratio; windows are not operable and are double paned; exterior walls have a concrete and shingled finish; roof finish is white in color; roof finish is flat.



Weather Normalized Site Energy (Average)¹: 193 MMBTU/yr. **Weather Normalized Carbon Emissions:** 16.4 MtCO₂e/yr.

Energy Use Performance

EUI = 71.4 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	✓
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- Limited utility data is available for this branch since the electrical service was connected in July 2019.
- This building is fully electrified.
- *Insufficient utility data is available for analysis, as the building is newly renovated

CY 2019 Energy Use Profile

Total Energy (MMBTU): 98.8
Electricity Use (kWh): 28,960
Peak Electricity Demand (kW): 12
Gas Use (Therms): 0
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 8.4

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT2 – Lighting Retrofit	16	4,548	1	0	1.3	9,403	139.2	7,233
CL1 – Controls Retro-commissioning	0	46	0	0.00	0.01	7,300	0.6	561,538
P4 – Exterior façade, HVAC	16	4,877	15.6		1	1,360,000	0.4	964,539

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Van Nest
Borough: Bronx
Owned By: City
Year Constructed: 1968
Gross Area: 7,690 ft²
OECD ID: 200586

FY17 – FY19 Average Annual Occupants: 103,330
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 3 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 30% window to wall ratio; windows are operable; exterior walls are made of concrete bricks with a painted finish; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 864 MMBTU/yr. **Weather Normalized Carbon Emissions:** 62.4 MtCO₂e/yr.

Energy Use Performance

EUI = 112.3 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- There is currently a project for HVAC equipment replacement in the design phase for this branch.
- 2019-2020 service tickets indicate inadequate heating and cooling control systems with interior space temperatures reading between 65°F and 87°F
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#45 out of 93 for EUI
#21 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 887.4
Electricity Use (kWh): 175,160
Peak Electricity Demand (kW): 56.4
Gas Use (Therms): 2,898
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 66

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	95	27,763	6.8	-664	8	8,500	831.5	1,062
LT2 – Lighting Retrofit	147	43,161	8	-753	12.5	24,958	455.9	1,996
CL2 – Controls Integration	46	193	0	455.00	2.48	114,587	5.9	46,298
P6 – Windows, Air Sealing, Roof, HVAC	475	39,465	147.8	3,404	29	4,060,000	2.8	137,580
P8 – Exterior façade, Roof, HVAC	489	43,716	149.7	3,404	30	4,900,000	2.6	159,453

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Wakefield
Borough: Bronx
Owned By: City
Year Constructed: 1938
Gross Area: 10,863 ft²
OEID: 200578




FY17 – FY19 Average Annual Occupants: 101,650
Building Levels Above / Below Grade: 2/1
Heat Vulnerability Index: 5 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 30% window to wall ratio; exterior walls are made of brick; roof finish is black in color; roof type is flat with a portion at a higher elevation.



Weather Normalized Site Energy (Average)¹: 1,101 MMBTU/yr. **Weather Normalized Carbon Emissions:** 65 MtCO₂e/yr.

Energy Use Performance

EUI = 101.4 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- Over 80% of this branch's energy use is dedicated to heating.
- 2019-2020 service tickets indicate inadequate heating control systems with interior space temperatures reaching as high as 92°F.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#35 out of 93 for EUI
#22 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,050.8
Electricity Use (kWh): 58,880
Peak Electricity Demand (kW): 21.2
Gas Use (Therms): 8,501
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 62.2

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	36	10,700	2.7	-341	3.1	12,000	217.1	3,870
LT2 – Lighting Retrofit	53	15,426	3	-341	4.5	35,501	111.7	7,889
CL2 – Controls Integration	28	692	0	266.00	1.61	151,130	3	93,753
P8 – Exterior façade, Roof, HVAC	973	21,986	62.7	8,986	54	6,000,000	2.9	110,844
P8g – Exterior façade, Roof, GSHP	978	23,338	62.7	8,986	54	6,700,000	2.6	122,890

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Washington Heights
Borough: Manhattan
Owned By: City
Year Constructed: 1914
Gross Area: 17,274 ft²
OECD ID: 100608

FY17 – FY19 Average Annual Occupants: 135,920
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 2 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 30% window to wall ratio; windows are operable and double paned; exterior walls are made of brick; roof finish is gray in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 1,680 MMBTU/yr. **Weather Normalized Carbon Emissions:** 101.3 MtCO₂e/yr.

Energy Use Performance

EUI = 97.3 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- 2019-2020 service tickets indicate inadequate heating and cooling control systems with interior space temperatures reading between 66°F and 87°F
- 75% of this branch's energy use is dedicated to heating.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#26 out of 93 for EUI
#51 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,631.4

Electricity Use (kWh): 114,200

Peak Electricity Demand (kW): 45.2

Gas Use (Therms): 12,420

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 99

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	69	20,218	5	-544	5.8	19,000	266.4	3,275
LT2 – Lighting Retrofit	95	27,948	5	-544	8.1	57,928	125.8	7,151
CL2 – Controls Integration	36	425	0	353.00	2.00	240,454	2.3	120,167
P6 – Windows, Air Sealing, Roof, HVAC	1,385	24,896	100.2	13,006	76	7,030,000	2.9	92,075
P8 – Exterior façade, Roof, HVAC	1,418	34,396	106.1	13,006	79	9,000,000	2.5	113,780

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Webster
Borough: Manhattan
Owned By: City
Year Constructed: 1906
Gross Area: 11,801 ft²
OEC ID: 100591




FY17 – FY19 Average Annual Occupants: 154,130
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 40% window to wall ratio; windows are operable and single paned; exterior walls are masonry concrete; roof finish is gray; roof is flat with two levels of elevation.



Weather Normalized Site Energy (Average)¹: 1,697 MMBTU/yr. **Weather Normalized Carbon Emissions:** 107 MtCO₂e/yr.

Energy Use Performance

EUI = 143.8 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- 2019-2020 service tickets indicate inadequate heating and cooling control systems with interior space temperatures reading as low as 60°F
- Over 70% of this branch's energy use is dedicated to heating.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#67 out of 93 for EUI
#55 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,766.4
Electricity Use (kWh): 175,840
Peak Electricity Demand (kW): 57.6
Gas Use (Therms): 11,667
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 112.8

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	11	3,109	0.7	-46	0.9	13,000	63.9	14,444
LT2 – Lighting Retrofit	26	7,508	1	-46	2.2	38,745	54.1	17,611
CL2 – Controls Integration	35	3,552	0	233.00	2.26	154,426	4.4	68,209
P6 – Windows, Air Sealing, Roof, HVAC	1,183	4,580	29.2	11,673	63	4,670,000	3.4	73,670
P8 – Exterior façade, Roof, HVAC	1,213	13,401	31.9	11,673	65	6,000,000	3.1	90,991

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: West Farms
Borough: Bronx
Owned By: City
Year Constructed: 1954
Gross Area: 15,591 ft²
OECD ID: 200579

FY17 – FY19 Average Annual Occupants: 102,300
Building Levels Above / Below Grade: 2/1
Heat Vulnerability Index: 5 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 20% window to wall ratio; windows are operable. Exterior walls are made of concrete. Roof finish is black in color and is flat.



Weather Normalized Site Energy (Average)¹: 1,576 MMBTU/yr. **Weather Normalized Carbon Emissions:** 105.6 MtCO₂e/yr.

Energy Use Performance

EUI = 101.1 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- This branch is in need of centralized controls.
- 2019-2020 service tickets indicate inadequate heating and cooling control systems with interior space temperatures reading between 51°F and 98°F
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#34 out of 93 for EUI
#54 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,566.9
Electricity Use (kWh): 210,640
Peak Electricity Demand (kW): 85.6
Gas Use (Therms): 8,484
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 106

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	156	45,696	11	-975	13.2	17,100	689.9	1,295
LT2 – Lighting Retrofit	208	61,090	11	-975	17.7	50,144	323.7	2,832
CL2 – Controls Integration	76	4,144	0	627.00	4.53	187,672	6.9	41,438
P6 – Windows, Air Sealing, Roof, HVAC	1,071	53,495	204.2	8,885	62	7,100,000	3	113,219
P8 – Exterior façade, Roof, HVAC	1,111	65,389	214.8	8,885	66	8,900,000	2.8	134,563

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: West New Brighton
Borough: Staten Island
Owned By: City
Year Constructed: 1932
Gross Area: 6,645 ft²
OECD ID: 500242

FY17 – FY19 Average Annual Occupants: 68,690
Building Levels Above / Below Grade: 1/1
Heat Vulnerability Index: 1 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 30% window to wall ratio; windows are operable and single paned; exterior walls are made of masonry brick; roof finish is grey in color; roof type is pitched.



Weather Normalized Site Energy (Average)¹: 905 MMBTU/yr. **Weather Normalized Carbon Emissions:** 59.9 MtCO₂e/yr.

Energy Use Performance

EUI = 136.3 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- There was a significant decrease in gas use in 2019. This trend requires further investigation.
- There was a significant decrease in gas use in 2019. This trend requires further investigation.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#61 out of 93 for EUI
#20 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 760.8
Electricity Use (kWh): 72,200
Peak Electricity Demand (kW): 20.8
Gas Use (Therms): 5,146
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 48.2

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	50	14,720	3.7	-399	4.3	7,300	504.4	1,697
LT2 – Lighting Retrofit	61	17,814	4	-399	5.1	21,996	207.9	4,312
CL2 – Controls Integration	12	1,925	0	61.00	0.88	84,270	19.7	95,653
P6 – Windows, Air Sealing, Roof, HVAC	592	17,169	61.2	5,338	33	3,290,000	40.9	98,680
P8 – Exterior façade, Roof, HVAC	618	24,741	61.9	5,338	35	4,000,000	34.2	112,580

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Westchester Square Reg.

Borough: Bronx

Owned By: City

Year Constructed: 1955

Gross Area: 13,026 ft²

OEC ID: 200581

FY17 – FY19 Average Annual Occupants: 67,130

Building Levels Above / Below Grade: 2/1

Heat Vulnerability Index: 4 out of 5

Landmark Status: Landmarked

Envelope Summary: 30% window to wall ratio. Exterior walls are made of brick. Roof finish is black in color and is flat with two levels.



Weather Normalized Site Energy (Average)¹: 1,310 MMBTU/yr. **Weather Normalized Carbon Emissions:** 88.1 MtCO₂e/yr.

Energy Use Performance

EUI = 100.6 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- This branch is part of a shared facility owned by NYC.
- There is currently a project for site acquisition and new branch construction in the design phase for this branch.
- **Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#33 out of 93 for EUI
#40 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,334.6

Electricity Use (kWh): 189,520

Peak Electricity Demand (kW): 70.4

Gas Use (Therms): 6,881

Steam Use (mlbs): 0

Carbon Emission (MtCO₂e/yr.): 91.4

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	127	37,138	9.4	-1,071	10.7	14,300	643.4	1,336
LT2 – Lighting Retrofit	165	48,329	9	-1,071	14	43,309	286.8	3,093
CL2 – Controls Integration	11	2,116	0	47.00	0.86	157,355	1.7	183,184
P8 – Exterior façade, Roof, HVAC	938	62,009	185.5	7,267	56	8,500,000	2.4	150,282
P8g – Exterior façade, Roof, GSHP	951	65,937	185.5	7,267	57	9,300,000	2.3	161,178

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Woodlawn Heights
Borough: Bronx
Owned By: Leased
Year Constructed: 1969
Gross Area: 2,500 ft²
OECD ID: 200567

FY17 – FY19 Average Annual Occupants: 50,470
Building Levels Above / Below Grade: 1/0
Heat Vulnerability Index: 4 out of 5
Landmark Status: Not Landmarked
Envelope Summary: 15% window to wall ratio. Windows are not operable; exterior walls are made of masonry brick; roof finish is black in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 361 MMBTU/yr. **Weather Normalized Carbon Emissions:** 23.9 MtCO₂e/yr.

Energy Use Performance

EUI = 144.6 kBtu/sf

Energy Use Intensity (EUI)		Status
●	Meets or exceeds CBECS benchmarking for libraries.	
●	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
●	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	✓

Key Branch Factors

- This branch has an estimated lighting power density of 2 times the 2020 Energy Conservation Code allowance.
- There is currently a project for branch expansion and renovation in the design phase for this branch.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#68 out of 93 for EUI
#2 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 361.7
Electricity Use (kWh): 44,136
Peak Electricity Demand (kW): 16.7
Gas Use (Therms): 2,112
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 24

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	30	8,884	2.2	-260	2.6	2,800	784.3	1,076
LT2 – Lighting Retrofit	48	14,080	3	-291	4.1	8,948	407.7	2,182
CL2 – Controls Integration	5	363	0	43.00	0.33	47,728	2	142,899
P6 – Windows, Air Sealing, Roof, HVAC	251	10,701	47.2	2,146	14	1,450,000	2.9	99,931
P8 – Exterior façade, Roof, HVAC	265	14,906	50.9	2,146	15	1,700,000	3.2	108,142

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Woodstock
Borough: Bronx
Owned By: City
Year Constructed: 1914
Gross Area: 16,524 ft²
OEC ID: 200587

FY17 – FY19 Average Annual Occupants: 54,580
Building Levels Above / Below Grade: 3/1
Heat Vulnerability Index: 5 out of 5
Landmark Status: Landmarked
Envelope Summary: 35% window to wall ratio. Windows are operational; walls are made of concrete blocks; roof finish is white in color; roof type is flat.



Weather Normalized Site Energy (Average)¹: 448 MMBTU/yr. **Weather Normalized Carbon Emissions:** 37.9 MtCO₂e/yr.

Energy Use Performance

EUI = 27.1 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	✓
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- There is no gas utility trends available between 2017-2019. The reported EUI reflects cooling and base loads only.
 - 2019-2020 service tickets indicate inadequate heating and cooling control systems with interior space temperatures reading between 52°F and 87°F
- Ranking:**

CY 2019 Energy Use Profile

Total Energy (MMBTU): 462.7
Electricity Use (kWh): 135,600
Peak Electricity Demand (kW): 54.4
Gas Use (Therms): 0
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 39.2

Recommendations²

Measure	Savings					Investment		
	Site Savings				Carbon Savings (MtCO ₂ e/yr.)	Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)				
LT1 – LED Upgrade	27	7,890	6.6	0	2.3	18,200	124.8	7,913
LT2 – Lighting Retrofit	70	20,536	7	0	5.9	52,651	112.3	8,923
CL2 – Controls Integration	6	1,999	0	0.00	0.58	187,672	1	324,693
P6 – Windows, Air Sealing, Roof, HVAC	123	36,111	81		10	6,650,000	1.4	636,973
P7 – Interior façade, Windows, Roof, HVAC	125	36,757	82		10	9,000,000	1	847,457

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.

Building Dashboard

Building Name: Yorkville
Borough: Manhattan
Owned By: City
Year Constructed: 1902
Gross Area: 13,187 ft²
OECD ID: 100611

FY17 – FY19 Average Annual Occupants: 135,230
Building Levels Above / Below Grade: 2/1
Heat Vulnerability Index: 1 out of 5
Landmark Status: Landmarked
Envelope Summary: 40% window to wall ratio; windows are single paned glass in old wooden frames prone to leaking; front facing windows are French doors that open to ledge; exterior walls are made of masonry concrete and brick; roof finish is gray in color; roof type is flat with two levels of elevation.



Weather Normalized Site Energy (Average)¹: 1,001 MMBTU/yr. **Weather Normalized Carbon Emissions:** 65.6 MtCO₂e/yr.

Energy Use Performance

EUI = 75.9 kBtu/sf

Energy Use Intensity (EUI)		Status
	Meets or exceeds CBECS benchmarking for libraries.	
	Site EUI is up to 50% higher than CBECS benchmarking for libraries.	✓
	Site EUI exceeds CBECS benchmarking for libraries by over 50%.	

Key Branch Factors

- The upper level abandoned apartments are unoccupied and in significant disrepair.
- HVAC control issues include inadequate locations of temperature sensors and communication errors from the boiler BAS.
- Ranking:** In the following performance metrics, this branch ranks (#1 being the lowest EUI or lowest carbon emission):
#12 out of 93 for EUI
#23 out of 93 for Carbon Emissions

CY 2019 Energy Use Profile

Total Energy (MMBTU): 1,035.2
Electricity Use (kWh): 122,080
Peak Electricity Demand (kW): 40.8
Gas Use (Therms): 6,188
Steam Use (mlbs): 0
Carbon Emission (MtCO₂e/yr.): 68.2

Recommendations²

Measure	Savings					Investment		
	Site Savings					Capital Cost (\$)	Return on Investment (%)	Cost per GHG reduced (\$/MtCO ₂ e)
ECM Options	Total Energy (MMBTU)	Electricity Use (kWh)	Peak Electricity Demand (kW)	Gas Use (Therms)	Carbon Savings (MtCO ₂ e/yr.)			
LT1 – LED Upgrade	83	24,440	5.8	-444	7.1	14,500		2,042
LT2 – Lighting Retrofit	111	32,475	6	-444	9.4	44,627	195.7	4,747
CL2 – Controls Integration	56	-557	0	582.00	2.93	160,723	4.9	54,835
P6 – Windows, Air Sealing, Roof, HVAC	696	25,123	110.4	6,108	39	5,250,000	2.4	132,108
P7 – Interior façade, Windows, Roof, HVAC	712	29,722	111.4	6,108	41	7,200,000	2	175,310

¹ Weather-normalized energy data is based on a 3-year average of Calendar Years 2017, 2018, 2019, and applying 30-year historical average HDDs and CDDs from NOAA.

² A full description of ECM packages is provided in the following report. A more thorough investigation and design of these ECMs is required prior to implementation.