



Appendix L

Description

Estimated Annual Electricity and Natural Gas Consumption and Greenhouse Gas (GHG) Emissions

Woodmere Country Club SEQRA
Estimated Annual Electricity and Natural Gas Consumption and GHG Emissions
(Proposed Action)

Source Model	
SF_NewYork_New.York-J.F.Kennedy.Intl.AP.744860_gasfurnace_unheatedbsmt_IECC_2012.table	

Type	Size (Sf)	Electricity (Kbtu)	Natural Gas (Kbtu)	Electricity EUI (Kbtu/sf)	Natural Gas EUI (Kbtu/sf)	Total EUI (Kbtu/sf)
Prototype Model	4,802	38,451	67,859	8.0	14.1	22.1

Source: US DOE Residential Prototype Models, NY JFK, Single Family, IECC 2012 (https://www.energycodes.gov/development/residential/iecc_models)

Type	Size (Sf)	Electricity EUI (Kbtu/sf)	Natural Gas EUI (Kbtu/sf)	Total EUI (Kbtu/sf)	Electricity (Kbtu)	Natural Gas (Kbtu)	Total Energy (Kbtu)
Project	1,320,480	8.0	14.1	22.1	10,573,038	18,659,313	29,232,350

Type	Source	Usage (MWh/MMBtu)	CO ₂ Emissions metric tons/yr	CH ₄ Emissions metric tons/yr	N ₂ O Emissions metric tons/yr	CO ₂ e Emissions metric tons/yr
Project	Electricity (MWh)	3,099	1,656.13	0.18	0.02	1,667.05
	Natural Gas (MMBtu)	18,659	990.06	0.02	0.00	995.01
Total						2,662.1

	Compound	AR5
GWP	CH ₄	28
	N ₂ O	265

Source: IPCC Fifth Assessment (AR5) GWP Values

	Fuel	CO ₂	CH ₄	N ₂ O	Source
Emission Rates	Natural Gas	53.06	1	0.1	EPA Emissions Factors for GHG
		kg/MMBtu	g/MMBtu	g/MMBtu	
	Electricity	1,178.30	0.126	0.016	eGrid 2016, NYLI
		lb/MWh	lb/MWh	lb/MWh	

Source: Natural Gas from EPA Emission Factors for Greenhouse Gas Inventories, March 9 2018

Electricity from EPA eGrid 2016 for NYLI

Woodmere Country Club SEQRA

Estimated Annual Electricity and Natural Gas Consumption and GHG Emissions (All Electric - Electric Resistance Heating)

Source Model	
SF_NewYork_New.York-J.F.Kennedy.Intl.AP.744860_elecres_unheatedbsmt_IECC_2012.table	

Type	Size (Sf)	Electricity (Kbtu)	Natural Gas (Kbtu)	Electricity EUI (Kbtu/sf)	Natural Gas EUI (Kbtu/sf)	Total EUI (Kbtu/sf)
Prototype Model	4,802	90,568	0	18.9	0.0	18.9

Source: US DOE Residential Prototype Models, NY JFK, Single Family, IECC 2012 (https://www.energycodes.gov/development/residential/iecc_models)

Type	Size (Sf)	Electricity EUI (Kbtu/sf)	Natural Gas EUI (Kbtu/sf)	Total EUI (Kbtu/sf)	Electricity (Kbtu)	Natural Gas (Kbtu)	Total Energy (Kbtu)
Project	1,320,480	18.9	0.0	18.9	24,903,912	0	24,903,912

Type	Source	Usage (MWh/MMBtu)	CO ₂ Emissions metric tons/yr	CH ₄ Emissions metric tons/yr	N ₂ O Emissions metric tons/yr	CO ₂ e Emissions metric tons/yr
Project	Electricity (MWh)	7,299	3,900.9	0.42	0.05	3,926.59
	Natural Gas (MMBtu)	0	0.0	0.00	0.00	0.00
Total					3,926.6	3,926.6

	Compound	AR5
GWP	CH ₄	28
	N ₂ O	265

Source: IPCC Fifth Assessment (AR5) GWP Values

	Fuel	CO ₂	CH ₄	N ₂ O	Source
Emission Rates	Natural Gas	53.06	1	0.1	EPA Emissions Factors for GHG
		kg/MMBtu	g/MMBtu	g/MMBtu	
	Electricity	1,178.30	0.126	0.016	eGrid 2016, NYLI
		lb/MWh	lb/MWh	lb/MWh	

Source: Natural Gas from EPA Emission Factors for Greenhouse Gas Inventories, March 9 2018

Electricity from EPA eGrid 2016 for NYLI

Woodmere Country Club SEQRA
Estimated Annual Electricity Consumption and GHG Emissions
(All Electric - Heat Pump)

Source Model	
SF_NewYork_New.York-J.F.Kennedy.Intl.AP.744860_hp_unheatedbsmt_IECC_2012.table	

Type	Size (Sf)	Electricity (Kbtu)	Oil (Kbtu)	Electricity EUI (Kbtu/sf)	Natural Gas EUI (Kbtu/sf)	Total EUI (Kbtu/sf)
Prototype Model	4,802	71,008	0	14.8	0.0	14.8

Source: US DOE Residential Prototype Models, NY JFK, Single Family, IECC 2012 (https://www.energycodes.gov/development/residential/iecc_models)

Type	Size (Sf)	Electricity EUI (Kbtu/sf)	Oil EUI (Kbtu/sf)	Total EUI (Kbtu/sf)	Electricity (Kbtu)	Oil (Kbtu)	Total Energy (Kbtu)
Project	1,320,480	14.8	0.0	14.8	19,525,374	0	19,525,374

Type	Source	Usage (MWh/MMBtu)	CO ₂ Emissions (metric tons/yr)	CH ₄ Emissions (metric tons/yr)	N ₂ O Emissions (metric tons/yr)	CO ₂ e Emissions (metric tons/yr)
Project	Electricity (MWh)	5,722	3,058.4	0.33	0.04	3,078.56
					Total	3,078.6

	Compound	AR5
GWP	CH ₄	28
	N ₂ O	265

Source: IPCC Fifth Assessment (AR5) GWP Values

Emission Rates	Fuel	CO ₂	CH ₄	N ₂ O	Source
	Electricity	1,178.30	0.126	0.016	eGrid 2016, NYLI
		lb/MWh	lb/MWh	lb/MWh	

Source: Electricity from EPA eGrid 2016 for NYLI

Woodmere Country Club SEQRA
Estimated Annual Electricity and Oil Consumption and GHG Emissions
(Fuel Oil)

Source Model	
SF_NewYork_New.York-J.F.Kennedy.Intl.AP.744860_oilfurnace_unheatedbsmt_IECC_2012.table	

Type	Size (Sf)	Electricity (Kbtu)	Oil (Kbtu)	Electricity EUI (Kbtu/sf)	Natural Gas EUI (Kbtu/sf)	Total EUI (Kbtu/sf)
Prototype Model	4,802	38,451	67,859	8.0	14.1	22.1

Source: US DOE Residential Prototype Models, NY JFK, Single Family, IECC 2012 (https://www.energycodes.gov/development/residential/iecc_models)

Type	Size (Sf)	Electricity EUI (Kbtu/sf)	Oil EUI (Kbtu/sf)	Total EUI (Kbtu/sf)	Electricity (Kbtu)	Oil (Kbtu)	Total Energy (Kbtu)
Project	1,320,480	8.0	14.1	22.1	10,573,038	18,659,313	29,232,350

Type	Source	Usage (MWh/MMBtu)	CO ₂ Emissions (metric tons/yr)	CH ₄ Emissions (metric tons/yr)	N ₂ O Emissions (metric tons/yr)	CO ₂ e Emissions (metric tons/yr)
Project	Electricity (MWh)	3,099	1,656.1	0.18	0.02	1,667.05
	Oil (MMBtu)	18,659	1,380.0	0.06	0.01	1,394.88
Total						3,061.9

	Compound	AR5
GWP	CH ₄	28
	N ₂ O	265

Source: IPCC Fifth Assessment (AR5) GWP Values

	Fuel	CO ₂	CH ₄	N ₂ O	Source
Emission Rates	Fuel Oil #2	73.96	3	0.6	EPA Emissions Factors for GHG
		kg/MMBtu	g/MMBtu	g/MMBtu	
	Electricity	1,178.30	0.126	0.016	eGrid 2016, NYLI
		lb/MWh	lb/MWh	lb/MWh	

Source: Oil from EPA Emission Factors for Greenhouse Gas Inventories, March 9 2018

Electricity from EPA eGrid 2016 for NYLI