Measure Name	Measure Value	% Energy Savings	% GHG Savings	% Peak Savings	npv_total_per_m_sq	bc_step_code_tedi_kwh_per_m_sq	Envelope ($/m2)	Heating & Cooling ($/m2)	Lighting ($/m2)	SHW ($/m2)	Ventilation & Ductwork ($/m2)	Total ($/m2)
:shw_scale	0.25	26.60	15.00	4.10	697.92	49.66	0.00	0.00	0.00	4.60	0.00	4.60
:shw_scale	0.5	17.00	9.60	1.70	706.40	49.00	0.00	0.00	0.00	4.60	0.00	4.60
:dcv_type	CO2_based_DCV	15.50	7.30	0.60	727.47	21.50	0.00	0.00	0.00	0.00	-13.20	-13.20
:erv_package	Plate-All	10.20	5.80	0.50	716.98	31.44	0.00	0.00	0.00	0.00	0.00	0.00
:erv_package	Plate-Existing	10.20	5.80	0.50	716.98	31.44	0.00	0.00	0.00	0.00	0.00	0.00
:erv_package	Rotary-All	9.90	5.40	0.30	717.57	31.73	0.00	0.00	0.00	0.00	0.00	0.00
:erv_package	Rotary-Existing	9.90	5.40	0.30	717.57	31.73	0.00	0.00	0.00	0.00	0.00	0.00
:shw_scale	0.75	9.20	5.10	0.70	717.76	48.36	0.00	0.00	0.00	0.20	0.00	0.20
:electrical_loads_scale	0.5	3.60	9.80	13.00	713.12	50.79	0.00	-1.00	0.00	0.00	0.00	-1.00
:infiltration_scale	0.5	2.70	1.30	0.40	723.09	43.17	0.00	0.80	0.00	0.00	0.00	0.90
:lights_scale	0.50	1.90	5.40	12.40	719.25	49.56	0.00	-0.90	0.00	0.00	0.00	-0.90
:boiler_eff	Viessmann Vitocrossal 300 CT3-17 96.2% Efficient Condensing Gas Boiler	1.80	0.90	0.00	724.61	47.72	0.00	0.00	0.00	0.00	0.00	0.00
:dcv_type	Occupancy_based_DCV	1.70	0.80	0.00	730.89	44.97	0.00	0.00	0.00	0.00	-6.20	-6.20
:nv_type	add_nv	1.30	2.50	-1.40	746.39	47.79	0.00	0.00	0.00	0.00	-24.00	-23.90
:shw_eff	Natural Gas Power Vent with Electric Ignition	1.20	0.60	0.00	725.10	47.72	0.00	0.00	0.00	0.00	0.00	0.00
:fixed_wind_solar_trans	0.4	1.00	5.00	10.20	715.48	51.10	-2.00	4.50	0.00	0.00	1.10	3.60
:fixed_wind_solar_trans	0.3	0.90	6.80	14.80	711.85	53.13	-3.80	7.30	0.00	0.00	1.10	4.70
:ground_floor_cond	0.379	0.70	0.00	-1.20	735.34	46.34	-9.40	0.00	0.00	0.00	0.00	-9.40
:daylighting_type	add_daylighting_controls	0.60	1.40	17.70	732.23	47.91	0.00	0.00	-8.20	0.00	0.00	-8.20
:fixed_wind_solar_trans	0.5	0.60	2.60	5.10	721.89	49.30	-2.00	2.20	0.00	0.00	0.30	0.50
:fixed_wind_solar_trans	0.2	0.50	8.10	19.50	705.86	55.47	-1.70	9.60	0.00	0.00	1.10	9.00
:adv_dx_units	Lennox Model L Ultra High Efficiency	0.10	0.20	1.40	725.77	47.72	0.00	0.00	0.00	0.00	0.00	0.00
:ext_wall_cond	0.183	0.10	0.10	0.00	727.07	47.52	-1.10	0.00	0.00	0.00	0.00	-1.10
:ext_roof_cond	0.121	-0.10	-0.10	0.00	725.34	47.86	1.50	-0.60	0.00	0.00	0.00	0.80
:ext_wall_cond	0.21	-0.40	-0.20	-0.10	724.44	48.30	2.80	-0.90	0.00	0.00	0.00	2.00
:ext_roof_cond	0.138	-0.50	-0.40	-0.20	720.97	48.43	6.70	-1.00	0.00	0.00	0.00	5.70
:ext_roof_cond	0.142	-0.60	-0.50	-0.30	720.31	48.57	7.50	-1.00	0.00	0.00	0.00	6.50
:fixed_window_cond	1.6	-0.90	-0.50	-0.10	709.44	49.28	18.40	-1.00	0.00	0.00	0.00	17.40
:ext_wall_cond	0.247	-1.10	-0.60	-0.20	718.92	49.37	9.20	-1.10	0.00	0.00	0.00	8.10
:ext_roof_cond	0.162	-1.10	-0.80	-0.50	715.07	49.25	13.80	-1.00	0.00	0.00	-0.50	12.30
:ext_wall_cond	0.278	-1.60	-1.00	-0.30	714.79	50.26	13.90	-1.10	0.00	0.00	-0.10	12.80
:ext_roof_cond	0.183	-1.60	-1.20	-0.70	714.62	49.97	15.10	-1.00	0.00	0.00	-0.80	13.30
:ext_roof_cond	0.193	-1.90	-1.40	-0.80	711.06	50.31	19.00	-1.10	0.00	0.00	-0.80	17.20
:ext_wall_cond	0.314	-2.30	-1.40	-0.40	715.20	51.30	14.50	-1.20	0.00	0.00	-0.30	13.00
:ext_roof_cond	0.227	-2.70	-2.10	-1.20	709.02	51.48	22.30	-1.30	0.00	0.00	-0.80	20.20
:fixed_window_cond	2.2	-4.60	-2.50	-0.40	669.44	55.17	63.60	-2.70	0.00	0.00	-0.40	60.50
:fixed_window_cond	2.4	-5.90	-3.20	-0.60	661.35	57.12	72.90	-2.70	0.00	0.00	-0.40	69.70
:airloop_economizer_type	DifferentialEnthalpy	-18.80	-7.20	0.00	737.91	81.17	0.00	0.00	0.00	0.00	0.00	0.00
:airloop_economizer_type	DifferentialDryBulb	-18.90	-7.20	0.00	737.97	81.17	0.00	0.00	0.00	0.00	0.00	0.00
:ecm_system_name	HS14_CGSHP_FanCoils	0.00	0.00	0.00	916.15	51.43	0.00	0.00	0.00	0.00	0.00	0.00
:ecm_system_name	HS11_ASHP_PTHP	0.00	0.00	0.00	727.83	53.64	0.00	0.00	0.00	0.00	0.00	0.00
:ecm_system_name	HS13_ASHP_VRF	0.00	0.00	0.00	826.15	53.35	0.00	0.00	0.00	0.00	0.00	0.00
:ecm_system_name	HS09_CCASHP_Baseboard	0.00	0.00	0.00	741.22	47.66	0.00	0.00	0.00	0.00	0.00	0.00
:ecm_system_name	HS08_CCASHP_VRF	0.00	0.00	0.00	845.44	53.35	0.00	0.00	0.00	0.00	0.00	0.00
:ecm_system_name	HS12_ASHP_Baseboard	0.00	0.00	0.00	722.69	47.66	0.00	0.00	0.00	0.00	0.00	0.00

Sensitivity of :fixed_wind_solar_trans by EUI

Sensitivity of :fixed_wind_solar_trans by Costing

Legend:
- cost_equipment_heating_and_cooling_total_cost_per_m_sq
- cost_equipment_lighting_total_cost_per_m_sq
- cost_equipment_shw_total_cost_per_m_sq
- cost_equipment_ventilation_total_cost_per_m_sq
- cost_equipment_thermal_bridging_total_cost_per_m_sq
- cost_equipment_envelope_total_cost_per_m_sq

$/M2

:fixed_wind_solar_trans	0.2	0.3	0.4	0.5	0.6	NECB_Default
envelope	387.23	389.273	387.513	387.513	385.509	385.509
ventilation	60.029	60.029	60.086	60.877	61.161	61.161
shw	9.755	9.755	9.755	9.755	9.755	9.755
heating_and_cooling	39.764	39.764	39.764	39.764	39.764	39.764
lighting	71.324	73.55	76.404	78.662	80.888	80.888

:ecm_system_name

- HS14_CGSHP_FanCoils
- HS11_ASHP_PTHP
- HS13_ASHP_VRF
- HS09_CCASHP_Baseboard
- NECB_Default
- HS08_CCASHP_VRF
- HS12_ASHP_Baseboard

cost_equipment_total_cost_per_m_sq vs baseline_energy_percent_better

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Sensitivity of :ecm_system_name by EUI

Legend:
- energy_eui_cooling_gj_per_m_sq
- energy_eui_heating_gj_per_m_sq
- energy_eui_fans_gj_per_m_sq
- energy_eui_heat_recovery_gj_per_m_sq
- energy_eui_interior_lighting_gj_per_m_sq
- energy_eui_interior_equipment_gj_per_m_sq
- energy_eui_water_systems_gj_per_m_sq
- energy_eui_pumps_gj_per_m_sq

GJ/M2

:ecm_system_name	HS08_CCASHP_VRF	HS09_CCASHP_Baseboard	HS11_ASHP_PTHP	HS12_ASHP_Baseboard	HS13_ASHP_VRF	HS14_CGSHP_FanCoils	NECB_Default
pumps/top	0.001	0.003	0.0	0.003	0.001	0.011	
water systems	0.242	0.242	0.242	0.242	0.242	0.242	0.242
interior equipment	0.063	0.063	0.063	0.063	0.063	0.063	0.063
interior lighting	0.036	0.036	0.036	0.036	0.036	0.036	0.036
heat recovery	0.011	0.011	0.011	0.011	0.011		0.011
fans	0.022	0.055	0.022	0.055	0.027	0.022	0.056
heating	0.125	0.128	0.178	0.169	0.164	0.091	0.184
cooling	0.036	0.041	0.039	0.042	0.034	0.026	0.042

Sensitivity of :ecm_system_name by Costing

Sensitivity of :fixed_window_cond by EUI

Sensitivity of :fixed_window_cond by Costing

Sensitivity of :erv_package by EUI

Sensitivity of :erv_package by Costing

Sensitivity of :ext_wall_cond by EUI

Sensitivity of :ext_wall_cond by Costing

Sensitivity of :nv_type by EUI

Sensitivity of :nv_type by Costing

Sensitivity of :chiller_type by EUI

Sensitivity of :chiller_type by Costing

Sensitivity of :ext_roof_cond by EUI

Sensitivity of :ext_roof_cond by Costing

Sensitivity of :shw_scale by EUI

Sensitivity of :shw_scale by Costing

:adv_dx_units
- Lennox Model L Ultra High Efficiency
- NECB_Default
- Carrier WeatherExpert

Sensitivity of :adv_dx_units by EUI

Sensitivity of :adv_dx_units by Costing

$/M2

cost_equipment_heating_and_cooling_total_cost_per_m_sq
cost_equipment_lighting_total_cost_per_m_sq
cost_equipment_shw_total_cost_per_m_sq
cost_equipment_ventilation_total_cost_per_m_sq
cost_equipment_thermal_bridging_total_cost_per_m_sq
cost_equipment_envelope_total_cost_per_m_sq

385.509 — 385.509 — 385.509
61.762 — 61.143 — 61.161
9.755 — 9.755 — 9.755
39.764 — 39.764 — 39.764
80.888 — 80.888 — 80.888

Carrier WeatherExpert — Lennox Model L Ultra High Efficiency — NECB_Default
:adv_dx_units

:dcv_type
- NECB_Default
- CO2_based_DCV
- No_DCV
- Occupancy_based_DCV

cost_equipment_total_cost_per_m_sq
baseline_energy_percent_better

Sensitivity of :dcv_type by EUI

GJ/M2

energy_eui_cooling_gj_per_m_sq
energy_eui_heating_gj_per_m_sq
energy_eui_fans_gj_per_m_sq
energy_eui_heat_recovery_gj_per_m_sq
energy_eui_interior_lighting_gj_per_m_sq
energy_eui_interior_equipment_gj_per_m_sq
energy_eui_water_systems_gj_per_m_sq
energy_eui_pumps_gj_per_m_sq

0.005 — 0.008 — 0.008 — 0.008
0.242 — 0.242 — 0.242 — 0.242
0.063 — 0.063 — 0.063 — 0.063
0.036 — 0.036 — 0.036 — 0.036
0.004 — 0.011 — 0.011 — 0.011
0.056 — 0.056 — 0.056 — 0.056
0.082 — 0.184 — 0.184 — 0.174
0.055 — 0.042 — 0.042 — 0.042

CO2_based_DCV — NECB_Default — No_DCV — Occupancy_based_DCV
:dcv_type

Sensitivity of :dcv_type by Costing

Sensitivity of :daylighting_type by EUI

Sensitivity of :daylighting_type by Costing

Sensitivity of :ground_floor_cond by EUI

Sensitivity of :ground_floor_cond by Costing

Sensitivity of :airloop_economizer_type by EUI

Sensitivity of :airloop_economizer_type by Costing

:boiler_eff

Sensitivity of :boiler_eff by EUI

Sensitivity of :boiler_eff by Costing

Sensitivity of :shw_eff by EUI

Sensitivity of :shw_eff by Costing

Sensitivity of :infiltration_scale by EUI

Sensitivity of :infiltration_scale by Costing

Sensitivity of :electrical_loads_scale by EUI

Sensitivity of :electrical_loads_scale by Costing

Sensitivity of :lights_scale by EUI

Sensitivity of :lights_scale by Costing

$/M2

- cost_equipment_heating_and_cooling_total_cost_per_m_sq
- cost_equipment_lighting_total_cost_per_m_sq
- cost_equipment_shw_total_cost_per_m_sq
- cost_equipment_ventilation_total_cost_per_m_sq
- cost_equipment_thermal_bridging_total_cost_per_m_sq
- cost_equipment_envelope_total_cost_per_m_sq

:lights_scale