	House Components	Existing Home	Larsen Truss
ENVELOPE	**Ceiling with Attic Space**	*2x4 24 o/c R40 FG fill*	*2x4 24 o/c R40 FG fill*
	Cathedral / Vault / Flat	*None*	*None*
	Above Grade Walls / Garage Wall	*R12 batt*	Larsen truss - tall
	Exposed Floors	*R28 batt + 2" medium density spray foam*	*R28 batt + 2" medium density spray foam*
	Foundation Wall	*R19 batt + 1" EPS II*	*R19 batt + 1" EPS II*
	Under Basement Slab	*R12*	*R12*
	Windows & Sliding Glass Doors	*Double glazed (U-val=2.05, SHGC=0.53)*	*Double glazed (U-val=2.05, SHGC=0.53)*
	Doors	*Fibreglass Medium density spray foam core (R5.6)*	*Fibreglass Medium density spray foam core (R5.6)*
	Airtightness	*3.6 ACH*	1.5 ACH
HVAC	**Principle Ventilation**	*76.0% SRE HRV*	*76.0% SRE HRV*
	Space Heating	*96.0% AFUE furnace, ENERGY STAR® certified*	*96.0% AFUE furnace, ENERGY STAR® certified*
	Cooling & Heat Pumps	*14.50 SEER A/C, ENERGY STAR® certified*	*14.50 SEER A/C, ENERGY STAR® certified*
DHW	**Domestic Water Heater**	*0.95 EF natural gas instantaneous (condensing)*	*0.95 EF natural gas instantaneous (condensing)*
	Drain Water Heat Recovery	*48.9% DWHR (plumbed to WH only)*	*48.9% DWHR (plumbed to WH only)*
OTHER	**On-site Generation and Storage**	*None*	*None*
	Transportation	*None*	*None*
	Bathroom Faucets	*None*	*None*
	Shower Heads	*None*	*None*
	Clothes Washer	*None*	*None*
	Dishwasher	*None*	*None*
	Lighting and Appliances	*None*	*None*
	Energy Use Monitoring System	*None*	*None*

	SIMULATION RESULTS		
PERFORMANCE	**Operating Conditions**	Standard Operating Conditions	Standard Operating Conditions
	Relative Base Case	Existing Home	Existing Home
	Total Energy Consumption (GJ)	111.18	74.99
	Energy Consumption Reduction	-	32.55%
	Space Conditioning & DHW Consumption Reduction	-	42.30%
	Gross Heat Loss (GJ)	114.33	72.41
	Auxiliary Heating Energy Required (GJ)	68.09	30.88
	Gross Heat Loss Improvement vs ERS Ref. House	0.47%	36.97%
	EUI (GJ/m²)	0.63	0.43
	TEDI (kWh/m²)	108.0	49.0
	MEUI (kWh/m²)	135.7	78.3
	Est. Operational GHG Emissions (t/y)	7.99	6.19
	Operational GHG Emission Reduction	-	22.51%
	HOT2000 Design Heat Loss (BTU/h)	41,340	24,436
	HOT2000 Design Heat Gain (BTU/h)	10,603	9,946
	Est. Number of Solar Panels (350W)	71	48
	Heat Loss Comfort Assessment	22	13
	F280-12 Design Heat Loss (BTU/h)	39,052	23,197
	F280-12 Design Heat Gain (BTU/h)	15,453	14,324
	NBC 2020 Performance Tier	1	4
	Overall Energy Performance Improvement vs ERS Ref.	9.85%	47.98%
	Heat Loss Reduction vs ERS Ref.	0.47%	36.97%
	Peak Cooling Validation (Prop. / Ref., W)	Pass (3110 / 3276)	Pass (2917 / 3276)
	PCF 1869 - Energy Use Intensity Tier	0	4
	PCF 2004 - Proposed Operational Emissions (t/y)	4.48	2.58
	PCF 2004 - Operational Emissions Performance Level	E (22.35%)	C (55.33%)
ENERGY END USE	**Primary Space Heating**	69.4 GJ (63%)	31.5 GJ (42%)
	Secondary Space Heating	0.0 GJ (0%)	0.0 GJ (0%)
	Primary DHW Heating	11.2 GJ (10%)	11.2 GJ (15%)
	Secondary DHW Heating	0.0 GJ (0%)	0.0 GJ (0%)
	Lights & Appliances	25.6 GJ (23%)	25.6 GJ (35%)
	HRV and Fans	1.8 GJ (2%)	1.8 GJ (2%)
	Air Conditioner	2.7 GJ (2%)	4.1 GJ (6%)
HEAT LOSS	**Ceilings**	4.7 GJ (4%)	4.7 GJ (6%)
	Main Walls	41.9 GJ (37%)	11.9 GJ (16%)
	Doors	2.4 GJ (2%)	2.4 GJ (3%)
	Exposed Floors	0.2 GJ (0%)	0.2 GJ (0%)

	Windows	24.6 GJ (22%)	24.6 GJ (34%)
	Foundation	15.9 GJ (14%)	14.7 GJ (20%)
	Mechanical Ventilation & Air Infiltration	24.6 GJ (22%)	13.9 GJ (19%)
FUEL	**Est. Natural Gas Consumption (GJ)**	80.27	42.52
	Est. Electricity Consumption (GJ)	30.91	32.47
	Est. PV Electricity Production (GJ)	0.00	0.00
	Est. Propane Consumption (GJ)	0.00	0.00
	Est. Oil Consumption (GJ)	0.00	0.00
	Est. Wood Consumption (GJ)	0.00	0.00
	Est. Natural Gas Consumption (m³)	2,154.34	1,141.15
	Est. Electricity Consumption (kWh)	8,585.86	9,018.99
	Est. PV Electricity Production (kWh)	0.00	0.00
	Est. Propane Consumption (L)	0.00	0.00
	Est. Oil Consumption (L)	0.00	0.00
	Est. Wood Consumption (cord)	0.00	0.00
EST.	**Est. Annual Operating Expenses ($/yr)**	$3,180.26	$2,935.47
	Est. Percentage Op. Cost Savings	-	7.70%
	Est. Annual Natural Gas Cost	$1,349.09	$1,035.00
	Est. Annual Electricity Cost	$1,831.18	$1,900.48
	Est. Annual Propane Cost	$0.00	$0.00
	Est. Annual Oil Cost	$0.00	$0.00
	Est. Annual Wood Cost	$0.00	$0.00
	Est. Simple Payback (y)	-	No costs provided
	Annual Capital Loan Cost	-	$0.00
	Total Cost of Ownership	$63,605.28 (over 20 years)	$58,709.46
	Net Present Value	-	$2,084.04