



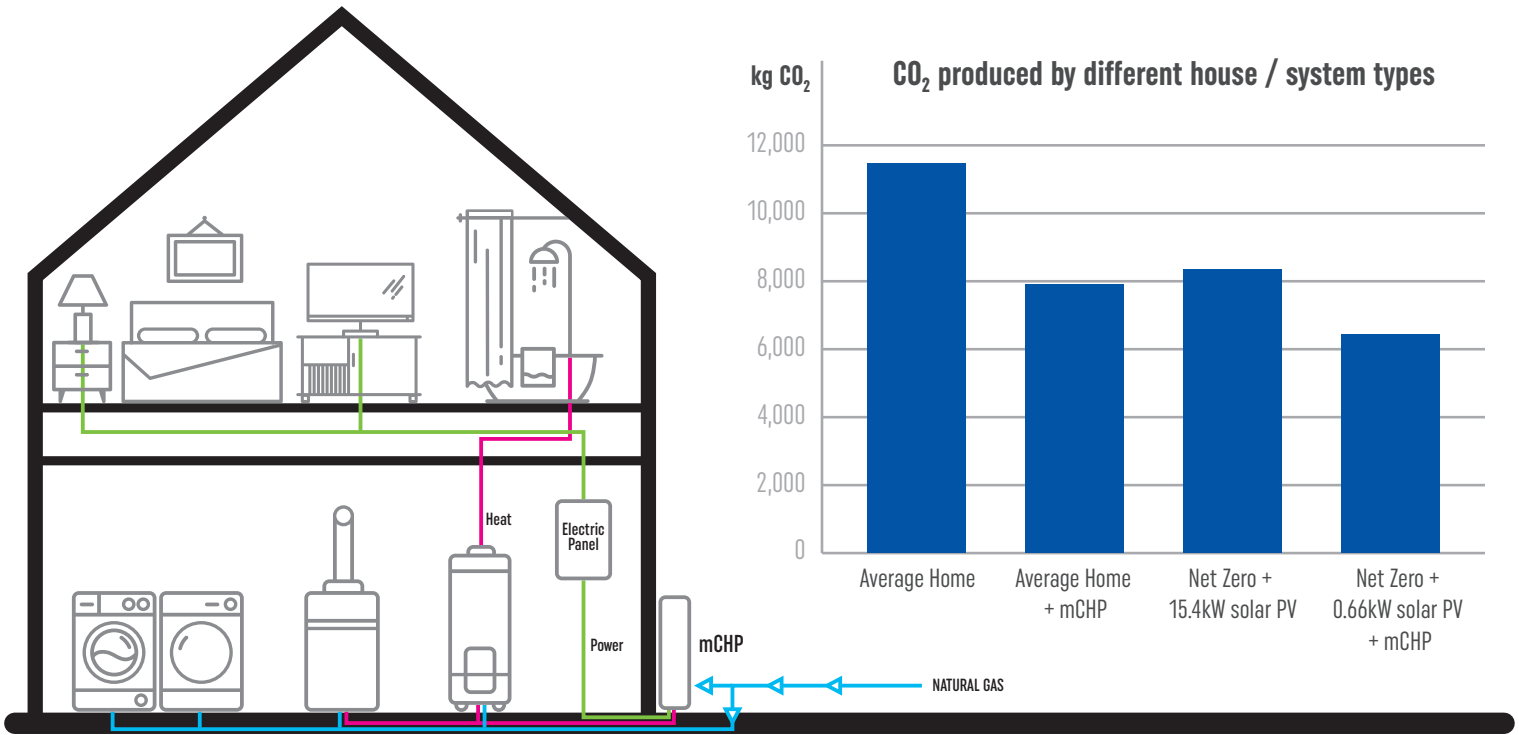
MICRO COMBINED HEAT & POWER

A key part of the energy transition and decarbonization is to use energy more efficiently. Energy efficiency reduces energy costs and our environmental footprint. ATCO is exploring options to reduce emissions through the use of innovative, high-efficiency technologies such as Micro Combined Heat and Power.

Micro Combined Heat and Power is an energy efficiency technology that uses natural gas to generate both heat and electricity for your home. mCHP captures the excess thermal energy that would normally be lost during power generation, and instead uses it to heat your home or water, creating greater efficiencies, lowering utility costs and reducing greenhouse gas emissions. Because mCHP generates electricity exactly where you need it, it provides reliable, low-emitting energy production that gives you better control of the cost and supply of power now and in the future.

BENEFITS OF INSTALLING A RESIDENTIAL mCHP UNIT

- Cost savings on utility bills
- It reduces CO2 emissions by up to 31% (3.5 tonnes) each year
- It is compatible with conventional renewables like solar, and can achieve net-zero electric and near net zero emissions
- Some units on the market can generate up to 1.5kW of electricity and 12,600 BTU/hour of heat, which can be used for forced air heating systems, domestic hot water and hydronic systems (i.e. in-floor heating)
- The noise level is low – approximately 45dB quieter than a residential fridge
- It can be retrofitted to existing residences and installed at new builds



Edmonton Residence	Tonnes CO ₂ Emitted	Tonnes CO ₂ Reduced	% Reduction
Status Quo	11.4	-	-
With mCHP	7.9	3.5	31%
With mCHP & 1.6kW solar PV	6.6	4.8	42%

Emission Reductions (Current Electrical Grid Mix)

Edmonton Residence	Tonnes CO ₂ Emitted	Tonnes CO ₂ Reduced	% Reduction
Status Quo	9.5	-	-
With mCHP	7.8	1.7	19%
With mCHP & 1.6kW solar PV	4.9	4.6	49%

Emission Reductions using Future Electrical Grid Mix (Natural Gas with 30% renewables)