

ASSUMPTIONS SUMMARY

Table 1. Microgrid Characteristics

Component	Community/Utility Distribution	Commercial & Industrial	Institutional	Residential Nanogrid
Customer Characteristics	<ul style="list-style-type: none"> Distribution feeder serving a mix of residential apartments and office space 12 MW (peak) 	<ul style="list-style-type: none"> Large C&I customer with (mostly) flat profile 6 MW (peak), Class A customer 	<ul style="list-style-type: none"> Medium-size university/college campus 13 MW (peak), Class A customer 	<ul style="list-style-type: none"> Large residential customer Annual consumption of 18,000 kWh
Microgrid Core Components	<ul style="list-style-type: none"> 7.5 MW/15 MWh battery 2.0 MW Solar 1.0 MW DR loads Microgrid Controller 	<ul style="list-style-type: none"> 5 MW/10 MWh battery Microgrid Controller 	<ul style="list-style-type: none"> 5 MW/10 MWh battery 1.5 MW Solar Microgrid Controller 	<ul style="list-style-type: none"> 3 kW/6 kWh battery 5 kW Solar Microgrid Controller
Desired Payback Period	• 10 years	• 5 years	• 7 years	• 8 years

Table 2. Microgrid Costs for Residential (2016 \$ CAD)

Component	Unit	Today	2025	2035	CAGR
Solar (excl. inverter)	/kW	\$2,450	\$1,860	\$1,370	-3.0%
Storage (excl. inverter)	/kWh	\$1,000	\$ 480	\$ 320	-5.8%
Inverter	/kW	\$ 410	\$ 180	\$ 140	-5.5%
Software, Controls, Other	/sys-kW*	\$ 300	\$150	\$ 120	-4.8%

Table 3. Microgrid Costs for Community, C&I, and Institutional (2016 \$ CAD)

Component	Unit	Today	2025	2035	CAGR
Solar (excl. inverter)	/kW	\$ 1,870	\$ 1,420	\$ 1,050	-3.0%
Storage (excl. inverter)	/kWh	\$ 660	\$ 320	\$ 240	-5.2%
Inverter	/kW	\$ 250	\$ 110	\$ 80	-5.9%
Software, Controls, Other	/sys-kW*	\$ 240	\$ 150	\$ 130	-3.2%

The 'sys-kW' unit is the based on the kW of the inverter.

DAILY LOAD PROFILES







