

ATCO and Boost Apparent Assumptions

Boost Energy Ventures developed an economic model for the City of St. Albert in conjunction with ATCO that represents a preliminary feasibility assessment for the solar farm project.

All statements, other than statements of historical facts, involve known and unknown risks, uncertainties, assumptions and other factors that may cause actual outcomes to be materially different. Some of the following assumptions contain forward-looking statements that involve risks and uncertainties.

City of St. Albert Administration has identified the following key assumptions from ATCO's Technical Memorandum #2 dated August 16, 2021. These assumptions are revised from what was presented to Council from the draft report dated June 18, 2021. As the project advances and matures it is expected that these assumptions will continue to be refined.

Array Total Size	15.1 MWDC = 14.4 MWAC
# Modules	28,450
Module Size	530W
Inter Row Spacing	9.144m(30 ft)
Tilt Angle	35 degrees (fixed)
Monofacial kWh/kWp Ratio	1259
Bifacial kWh/kWp Ratio	1352
Capital Cost (both Monofacial and Bifacial)	\$21,910,600
Interconnection Cost	\$800,000
Replacement Costs	Year 15 Inverter Replacement = \$1.3M (includes 2% escalation)
Decommissioning Costs	5% of original capital costs with 2% escalation
Cost of Equity (30%)	8.50%
Cost of Debt (70%)	3.00%
Construction Start	2023
Construction Completion	2024
Decommissioning	2058
Grant funding	None assumed
Generating Unit Owner Contribution	\$432,000 (reimbursed over 10 years)
O&M Costs	\$90,474/year (\$6/kWAC)
Energy market trading charge	\$0.382/MWh annually escalated at 2%
STS/line loss charges	None assumed
Income Taxes	23% on taxable income (15% federal and 8% provincial)
Monofacial first year capacity factor	16.20%
Bifacial first year capacity factor	15.00%
Capacity degradation	2% after first year and 0.4% per year after that
Initial 12 Year PPA (Case 1 and Case 3)	\$50/MWh with 2% escalation
Initial 12 Year PPA (Case 2 and Case 4)	\$60/MWh with 2% escalation
Solar Pool Price (years 13 to 36)	Assumed to average \$57/MWh with 2% escalation
Environmental Attributes	\$40 per tonne in 2022, \$50 per tonne in 2023, increases of \$15 per tonne until 2030, increasing by 2% thereafter and ending in 2033(discounted by 30%)
Distribution Connected Generation Revenue	60% in 2023, 40% in 2024, 20% in 2025 and after 2025

Please note that an update has been made to one of the assumptions identified in this report. The additional text, "17.4MW_{DC} under standard testing conditions" in parentheses beside the values given for the Array Total Size, was included in error and not used for any calculations, but was initially published in the publicly shared document. As such, City of St. Albert Administration wishes to acknowledge and highlight this edit to assuage any concerns or alleviate any confusion that might result from the change in content.