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## Hot Times in the Frozen North A VALUATION OF QULLIQ ENERGY CORPORATION OF CANADA

BY IAN MADSEN



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## EXECUTIVE SUMMARY

Qulliq Energy Corporation, 'QE', is the electric power utility for Nunavut Territory in northeastern Arctic Canada. It could be worth as much as \$255M were it divested; or, it could be worth less if its expensive diesel-fuelled power generation business experiences adversity. As a business, making the very optimistic assumption that it can convert its stated 'comprehensive income' into free cash flow (not recently, but it did so in 2008-12), its value, on a fully taxed basis (as a Crown corporation, it pays no tax, now), is estimated between \$143M to \$1,001M; more likely closer to the lower figure. Using comparable Canadian non-renewable electric utility firms, the range is \$166M to \$397M. It could approach the highest figure if it shows clearer signs that it is evolving towards free cash flow generation and away from heavy reinvestment in costly diesel generators.

## INTRODUCTION

Qulliq Energy Corporation, 'QE', a territorial or Crown corporation owned entirely by the government of the Nunavut Territory of Canada, supplies electric power to twenty-five towns and hamlets in Nunavut Territory, a vast region in Canada's eastern Arctic. Clients number 15,000 and are mainly homes, businesses, and government facilities. Its power production comes from wholly-owned diesel generators, of which it has twenty-five across its service territory. While the corporate website indicates that QE is interested in investing in viable sustainable alternative energy sources, it does not have any such projects connected to its grid, as yet.<sup>1</sup>

## Qulliq Energy Corporation of Canada, A History

QE was established as the Nunavut Power Corporation under the *Nunavut Power Utilities Act* in 2001 and renamed Qulliq Energy in 2003. It has three main regional operational centres, in Rankin Inlet, Cambridge Bay, and Iqaluit. Its headquarters are in Baker Lake and its corporate office in Iqaluit. It has steadily expanded since its inception. Most recently, since 2016, QE has built new generation facilities in two communities, and replaced one destroyed by fire in another. It plans to build new generation facilities in three more communities over the next few years.<sup>2</sup> All these require heavy capital investment, which is evident in its financial statements.

## Valuation Factors

For the purpose of this study, the very optimistic assumption was made that QE can fully convert net income into free cash flow, which is normally a key factor in corporate survival and growth. Consequently, the Intrinsic, Discounted Free Cash Flow valuation may not be reliable.

1. See [http://www.qec.nu.ca/sites/default/files/qec\\_corporate\\_plan\\_2017-2021\\_eng\\_final.pdf](http://www.qec.nu.ca/sites/default/files/qec_corporate_plan_2017-2021_eng_final.pdf) page 3.

2. See [http://www.qec.nu.ca/sites/default/files/qec\\_corporate\\_plan\\_2017-2021\\_eng\\_final.pdf](http://www.qec.nu.ca/sites/default/files/qec_corporate_plan_2017-2021_eng_final.pdf) page 10.

## INTRINSIC VALUE: VALUATION OF QE AS A BUSINESS, USING DISCOUNTED FREE CASH FLOW

An intrinsic value is the value a firm (or an operation such as an agency or department or division which can be characterized or delineated as a firm) has by virtue of generating cash, specifically free cash flow, which is actual cash in the bank after getting cash payment for sales of goods or services and paying for everything in cash, including capital equipment and other long term assets (such as software, intellectual property, structures, vehicles, instruments, devices, real estate, trademarks). As noted above, QE is unable to generate free cash flow (even though its operating cash flow is abundant). It has been substantially negative for years, and may continue that way, as it is planning to add more generating capacity in more communities. Therefore, any intrinsic value would be negative, also.

Another approach was taken. Using an optimistic assumption that QE or new management may be able to convert net income entirely into free cash flow, the corporation's fully taxed value could range from \$143M to \$1,001M, with a median value of \$250M and a mean value of \$352M. For reasons enumerated below, the lowest value is most realistic and conservative.

It needs to be re-iterated that this treatment of QE's future financial results is very optimistic. If it is not able to convert its reported 'comprehensive income' into actual cash, its value as a cash-generating business would be that much less. For example, if it is only able to convert one half of its comprehensive income into cash, its intrinsic value would be half the estimated value above. It is advisable to use the lowest, most conservative value above as the maximum that could be realized for QE until its cash conversion capability is radically improved.

Table 1								
Intrinsic Value, Using Present Value of Discounted Future Cash Flows								
Present Value of Discounted Free Cash Flow = Estimated Next Year Free Cash Flow (Required Rate of Return ['r'] = Growth Rate ['g'])								
Projected Fully Taxed Free Cash Flow Estimate for FY2018 (\$M): \$ 10.01								
Matrix Values (\$M) g==v; r==>	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%	
0.00%	\$ 250.24	\$ 200.19	\$ 166.83	\$ 142.99	\$ 125.12	\$ 111.22	\$ 100.10	
1.00%	\$ 333.65	\$ 250.24	\$ 200.19	\$ 166.83	\$ 142.99	\$ 125.12	\$ 111.22	
2.00%	\$ 500.48	<b>\$ 333.65</b>	<b>\$ 250.24</b>	<b>\$ 200.19</b>	<b>\$ 166.83</b>	<b>\$ 142.99</b>	\$ 125.12	
3.00%	\$ 1,000.96	<b>\$ 500.48</b>	<b>\$ 333.65</b>	<b>\$ 250.24</b>	<b>\$ 200.19</b>	<b>\$ 166.83</b>	\$ 142.99	
4.00%	--	<b>\$ 1,000.96</b>	<b>\$ 500.48</b>	<b>\$ 333.65</b>	<b>\$ 250.24</b>	<b>\$ 200.19</b>	\$ 166.83	
5.00%	-\$ 1,000.96	--	\$ 1,000.96	\$ 500.48	\$ 333.65	\$ 250.24	\$ 200.19	
6.00%	-\$ 76.51	-\$ 1,000.96	\$ --	\$ 1,000.96	\$ 500.48	\$ 333.65	\$ 250.24	
7.00%	-\$ 51.01	-\$ 76.51	-\$ 1,000.96	\$ --	\$ 1,000.96	\$ 500.48	\$ 333.65	
		Minimum	Maximum	Median	Mean (Average)			
Total Market Value (\$M)		\$ 142.99	\$ 1,000.96	\$ 250.24	\$ 322.05			

Source: Author's calculations based on a model using summary versions in annual reports from the company.

## MARKET-BASED VALUE: VALUATION OF QE USING STOCK MARKET AND FINANCIAL METRICS

There are six independent Canadian publicly listed electric utilities with generation capacity not dominated by renewable energy in Canada. There are also forty-one US-listed ones used here.

Several standard market valuation metrics were initially used, including Trailing Price to Earnings ratio and Forward Price to Earnings ratios (P/E); Price to Sales (P/S) ratio; Price to Book Value (P/BV); Enterprise Value to Revenue (EV/Rev), Enterprise Value to Earnings Before Interest, Depreciation and Amortization (EV/EBITDA), and Price to Operating and Free Cash Flow (P/CF, P/FCF) (Please consult the accompanying valuation spreadsheet file in Excel for details). The corporation's estimated fully taxed value could range from \$166M to \$397M, with a mean value of \$250M and a median value of \$255M.

That the mean and median are very close does not mean that these estimates or calculations are highly accurate; it is only coincidence.

Some metrics had to be discarded due to insufficient information on either the comparator companies or QE, or the inapplicability of the ratio to either the comparators or QE, or negative or otherwise anomalous results. Six ratios were ultimately used: trailing P/E (price-to-earnings [earnings are net income or 'profits']), forward P/E, P/S (Price to Sales), P/BV (Price to Book Value [book value is total assets minus all debt and other liabilities]), Enterprise Value to Revenue (EV/Rev), Enterprise Value to Earnings Before Interest, Depreciation and Amortization (EV/EBITDA), and Price to Operating Cash Flow (P/CF). The results are in Table 2.

Table 2							
Market Valuation Using Financial Metrics from Comparable Companies							
Valuation metrics applied to Qulliq Energy; Figures in \$M.	Trailing P/E (Market Value to Net Income)	Forward P/E (Market Value to Estimated Net Income)	Price to Sales	Price to Book	Enterprise Value/Revenue (subtracting net debt)	Enterprise Value/EBITDA (subtracting net debt)	Price to Operating Cash Flow
Average Six Canadian-listed Non-renewable Light Utilities	\$ 274.34	\$ 351.82	\$ 259.64	\$ 147.87	\$ 441.71	\$ 157.39	\$ 157.89
Average Forty-one U.S.-listed Renewable Light Utilities	\$ 235.77	\$ 175.62	\$ 299.57	\$ 237.55	\$ 351.79	\$ 174.94	\$ 234.95
Average of All Above	\$ 255.06	\$ 263.72	\$ 279.60	\$ 192.71	\$ 396.75	\$ 166.17	\$ 196.42
	Minimum	Maximum	Median	Mean (Average)			
Total Market Value (\$M)	\$ 166.17	\$ 396.75	\$ 255.06	\$ 250.06			

Source: Source: Capital IQ via Yahoo!Finance; additional material from BMO Investorline; valuation model formulas.

## CONCLUSION AND RECOMMENDATIONS

The decision on whether or not to keep or sell off all, most, or part of a Crown corporation is up to the citizens and taxpayers of the province, or territory. Given Nunavut's expanding priorities for spending, proceeds for such a sale could come in handy at present, and in the near future.

QE fills a crucial role, but it is by no means clear that other institutions or companies would not be able to satisfy clients' power needs by other cheaper and more innovative methods. It is cause for concern that it perpetually commits capital expenditures exceeding its operating cash flow, and it appears to be covering this deficiency by effectively increasing its debt. While many other utilities do the same, that does not mean that this is sustainable indefinitely.

Power generation using diesel fuel and generators is the most expensive form of energy. While the small scale of QE's operating facilities may make using other fuels (liquefied natural gas, 'LNG' come to mind) or methods of power generation (wave or tidal power) not commercially viable, a monopoly firm such as QE, with guaranteed rate-base profitability, has little incentive to innovate and reduce costs for its clientele.

It could be that few other companies, or potential investors in a divested QE would do things much differently. However, if Nunavut never entertains the possibility of letting go of this endless debt-accumulating entity, it will not only never gain the proceeds of monetizing it, but also never find out if there is, indeed, a better (or maybe more than one) way.

## APPENDIX I:

### RATIONALE FOR DIVESTITURE OR PRIVATIZATION

While it is up to the people through their elected representatives to decide if a Crown corporation or other government agency or entity should be sold or otherwise privatized and the proceeds used for the benefit of all citizens and taxpayers, there are some established reasons to embark on such a path, some or all of which are cited for divestiture of such enterprises but may not be applicable in any single case.

1. The government has no mandate to own or run a commercial enterprise. Libertarians, 'Classical Liberals' and free-market conservatives believe that the provision of citizens' safety, security and justice is the government's primary role, and its involvement in the economy should generally not extend beyond this.
2. Regulation can usually accomplish any public policy reason for direct involvement in an industry. If regulation is not easily feasible, then a direct contract or subsidy to any affected individuals, entity or entities may be more efficient or effective and less economically disruptive or costly.
3. If a government-controlled or sponsored enterprise has a monopoly position, near-monopoly, or effective monopoly in a line or lines of business or businesses, then opportunities are lost in one or more commercial or potentially commercial sectors for entrepreneurs and investors to try to create and grow businesses to enrich and sustain themselves, employees, suppliers, and others.
4. A monopoly, near-monopoly, or effective monopoly market position by a government-owned or sponsored entity could result in far higher prices for customers, the general public, or a section of the public, than would be the case in a fully competitive marketplace for the industry involved.
5. A government-owned or -sponsored enterprise may compete directly against private sector firms, which are owned by or employ citizens, or against individual citizens, all of whom the government is supposed to serve, not disadvantage.
6. The government-owned or -sponsored enterprise may compete unfairly against its private sector rivals in that it had or has access to lower-cost government-sourced and -guaranteed capital (debt). It may have a much larger debt component in its capital versus that which would be tolerated in the private sector. Thus, it may not have to meet high standards for profit and cost control, allowing it to offer lower than true free market-based competitive pricing.
7. Government-owned firms may not need to pay provincial or federal income taxes. This can allow such firms to supply goods or services more cheaply than the private sector companies they are competing with.
8. Government-owned or -sponsored enterprises may not have any kind of profit orientation or target, may be used as public policy vehicles and may be given preference in their activities or even in their transgressions, such as labour or environmental abuses.
9. Government-owned or -sponsored enterprises, by virtue of being public sector vehicles overseen by bureaucrats and politicians, may be places where favoured individuals find employment, particularly at management levels.

10. Since profit is a secondary goal of a government-owned or -sponsored enterprise, it is difficult to evaluate the effectiveness, efficiency or productivity of the enterprise or its employees. Consequently, these employees and assets may not be very productive or effective.
  11. In some cases, government-owned entities are monopolies or effective monopolies, and use their market-dominating power to charge higher prices than would be the case in a fully competitive sector with several viable companies in intense rivalry to offer customers the best product or service at the best price.
  12. Government-owned or -sponsored enterprises are often creations of certain time-fixed circumstances and outlive whatever use or public policy role their creators may have conceived. Often, advances in technology; the modernization of transport, telecommunication or information technology; the evolution of the economy and available products and services and the increasing standard of living make these enterprises potentially obsolete. In the private sector, firms and individuals must adapt and evolve, or decline.
  13. Government-owned or -sponsored enterprises perpetuate their possibly obsolete existences by virtue of the constituencies that build up around them: employees, managers, directors and bureaucrats, customers, suppliers and associated advocates or consultants. They can lobby to keep the enterprise going, despite dysfunction or losses. They are far more motivated to do so than are the taxpayers, whose average cost is much less per person and may be indirect, hidden or difficult to calculate.
  14. Because they are not profit-oriented, government-owned or -sponsored enterprises are usually less efficient, and thus they lower the overall efficiency of the entire economy. This can make a whole nation less competitive than its global rivals are, whether nations or individual companies.
- The effects are worse the greater the government involvement in the economy. When taken to its most extreme, as happened in 20th-century communist nations, the countries were unable to compete against capitalist companies, despite their immense direct and indirect subsidies, government support and the lack of profit requirement.
15. Funds tied up in the capital of government-owned or -sponsored enterprises could be used to reduce government debt or lower taxes on individuals or corporations, which they could then spend or invest as they freely choose, and thus they could inject money back into the economy in more-lucrative ways.
  16. The greater the number and size of government owned or government sponsored enterprises in an economy, the greater the size and power of the government, which is usually the largest single entity in society, increasing the dangers of abuse of power, including injuring individual citizens, companies, or groups. Effective capacity of opposition or recourse against this power diminishes as the proportion of the economy the government occupies increases.

