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PUBLIC CHOICE ALTERNATIVES

A Valuation of Toronto Hydro

BY IAN MADSEN

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EXECUTIVE SUMMARY

Keeping Toronto Hydro or having an additional 15,000 teachers, nurses, or paramedics? This is a choice Toronto citizens may welcome if the asset were sold.

There are two generally accepted methods for valuing a company: its intrinsic value as a cash-generating enterprise, and its standard market value in comparison with similar companies. This study used both methods to value Toronto Hydro Corporation (THC).

Using an **intrinsic value method,** and discounting to the present, the City of Toronto's interest in THC's projected future free cash flows, as the company is today (not taxed at statutory rates) could range from a median of $2,117M to a mean of $2,611M. It would range between a median of $1,966M and a mean of $2,425M if the company was to become taxed in the usual, statutory way. This had the effect of decreasing the estimate for free cash flow, upon which the intrinsic value is based. This is abnormal. Generally, a public sector firm usually pays a higher rate of tax once it is no longer owned by a government. In the case of THC, it would pay a higher rate (in most years; its 'payment in lieu of taxes' rate of payment was inconsistent in the past several years), and thus has a lower valuation than its current 'as is' valuation. Another wrinkle is that the firm only just became free cash flow-positive, at a relatively low value compared to its net income and it is unclear how or whether it will stay positive or either grow strongly or decline once more. Hence, it may not be a reliable approach. Indeed, for the first nine months of 2017, free cash flow was barely positive, perhaps why the company received proceeds of a $250M share offering the City took up (i.e., paid for) to maintain its liquidity and, presumably, to ensure it could fund its impending capital expenditures.

Under the **market-based valuation system,** the current, 'as is' (not statutorily taxed) value ranges from $2,099M to $8,043M, with a median value of $4,980M, and a mean (average) value of $5,051M. Once it becomes taxable at statutory rates, the range could be between $2,103M and $8,060M, with a median value of $5,429M. As noted above, taxes using the current 'payment in lieu of taxes' scheme in the past, present, and future, differ from the statutory tax rate calculated to estimate taxes should the company become owned by private investors. In the case of the market-based approach, that gave a slightly higher valuation to the statutorily-taxed model of the company.

As THC serves the largest city in Canada, which is growing strongly, it seems likely that the company would be valued in line with the market-value approach, rather than the unusual and unreliable intrinsic value, in this particular case. A further oddity versus other power utilities is that it does not produce its own power, but buys it from others, principally Ontario Power Generation or Hydro One. So, despite its heavy capital expenditures to renew or expand capacity, it has no generation facilities of its own.

INTRODUCTION

Toronto Hydro and Its World

Toronto Hydro was created in 1908 and began operations in 1911. It merged with all the remaining private power companies in the City in the 1920's. The company nearly tripled in size when six regional boroughs or municipalities in Metro Toronto merged into the new City of Toronto in 1998. The main business of the firm, 'THC', and its subsidiaries is the distribution of electricity by LDC, Toronto Hydro-Electric System Limited. LDC owns and operates an electricity distribution system, delivering electricity to approximately 761,000 customers located in the City. The City became the sole shareholder of the Corporation in 1999. The City of Toronto has approximately three million people.

LDC distributes approximately 19 percent of the electricity consumed in Ontario. The business of LDC is regulated by the Ontario Energy Board, 'OEB', which has broad powers relating to licensing, standards of conduct and service, and the regulation of electricity distribution rates charged by LDC and other electricity distributors in Ontario. [Source: p.6, Toronto Hydro 2016 Annual Financial Statements]

Capital expenditure in 2016 included the replacement of underground and overhead infrastructures, delivery of customer connections; a facilities consolidation program, construction of Copeland Station, a transformer and substation, in response to the growing need for distribution options in the downtown core of the City; and a project for intra-company digital radio voice communication. In recent years it has introduced smart meters, time-of-use pricing, and energy storage to better balance supply and demand. Continuing capital demands caused it to issue $250M in shares to the City in 2017.

Toronto Hydro is a regulated monopoly. It does not generate any electricity itself. It purchases it from either Ontario Power Generation or Hydro One; the latter is a publicly listed company. THC could also conceivably purchase power from other, neighbouring municipalities' systems. It is not precluded from other purchase arrangements, or building its own generation facilities should it decide to do so, although its capital budget already consumes its operating cash flow, or close to it, until recently.

The company has been having trouble keeping up with high growth in the city. It can take several months to get a new connection to under-construction buildings, depending on their location. Revenues, gross income and operating cash flow continue to rise, but capital spending requirements eat up nearly all available cash. Conservation programs, which are now a staple of most power utilities, have no application and little effect, because it does not generate its own power. Maintaining connections, reliability and customer service are the main factors driving its capital budget.

Potential buyers for a divested Toronto Hydro would have a number of issues to consider: Its heavy capital expenditure demands; its lack of generating capacity; whether or not to add such capacity, and of what kind; countering that, being a non-generator, it is impervious to the coal versus gas versus nuclear versus renewables controversy; and who and what kind of other company would be a good match to merge with it. Also, once it is even partly sold off, it would lose its non-taxable status, although its heavy capital expenditure needs and potential for further tax-favoured debt in its capital structure could lower its potential tax burden.

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 that 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, market 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. 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.

12. 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.

13. 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 region or even 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 economies, despite their immense direct and indirect subsidies, protection from imports or other competition, government support and the lack of profit requirement.

14. A regulatory, legal, or institutional structure can be created around one or more Crown corporations that can make it difficult for the sector or sectors it or they are in to evolve and become competitive regionally or globally, and for other companies, Crown or privately-owned, connected to or doing business with it or them to adjust or evolve to remain competitive. This is the case with some Crown gas or electric utilities, or liquor boards. This harms customers as well.

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 and productive 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.

INTRINSIC VALUE: VALUATION OF THC AS A BUSINESS

For the intrinsic value, projecting future cash flow growth, and bringing it to a net present value, a relatively conservative approach was taken which could undervalue the company (see Table 1). The company's free cash flow growth rate range was a restrained 2 to 4 percent, and the required rate of return or cost of capital range was from 5 to 8 percent. The firm has experienced higher growth rates in recent times, so higher growth in the future could be reasonable. Its cost of capital, given low expectations and high current valuations in the stock market, could well be lower than the range used (and thus raise its estimated value), although there is also a chance that interest rates and the rate of return investors demand on equity (share) investment could increase. The statutory tax rate used in calculations may be lower in the future, as there is continued global pressure to lower corporate tax rates, exemplified by the recent drop in US corporation income tax rates. Until recently, capital expenditure exceeded operating cash flow. The assumption was made that it would stay restrained in growth.

Table 1

Intrinsic Value, Discounted Free Cash Flow Valuations

1. As is; i.e., NOT Statutorily Taxed

Net Income stands in for Free Cash Flow, 'FCF', Estimate for 'Next' Year (from above): $73.0M

Valuation Matrix, NOT Fully Taxed; Values in $M.

Value = FCF/(r-g) (r = required or expected rate of return; g = estimated or potential growth rate)

r == > / g == v

Reason for ranges chosen:
Toronto growth rate is expected to exceed the nation's. The rate of return is at a premium to bonds, but future return not expected to exceed historical ones.

	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%
0.00%	$ 1,814.3	$ 1,451.4	$ 1,209.5	$ 1,036.7	$ 907.2	$ 806.4	$ 725.7
1.00%	$ 2,419.1	$ 1,814.3	$ 1,451.4	$ 1,209.5	$ 1,036.7	$ 907.2	$ 806.4
2.00%	$ 3,628.6	**$ 2,419.1**	**$ 1,814.3**	**$ 1,451.4**	**$ 1,209.5**	$ 1,036.7	$ 907.2
3.00%	$ 7,257.2	**$ 3,628.6**	**$ 2,419.1**	**$ 1,814.3**	**$ 1,451.4**	$ 1,209.5	$ 1,036.7
4.00%	$ --	**$ 7,257.2**	**$ 3,628.6**	**$ 2,419.1**	**$ 1,814.3**	$ 1,451.4	$ 1,209.5
5.00%	$ 7,257.2	$ --	$ 7,257.2	$ 3,628.6	$ 2,419.1	$ 1,814.3	$ 1,451.4
6.00%	$ 1,159.3	$ 7,257.2	$ --	$ 7,257.2	$ 3,628.6	$ 2,419.1	$ 1,814.3
7.00%	$ 772.8	$ 1,159.3	$ 7,257.2	$ --	$ 7,257.2	$ 3,628.6	$ 2,419.1

Low Value of Range	$ 1,209.5
High Value of Range	$ 7,257.2
Mean (average) of Range	$ 2,610.6
Median (1/2 above; 1/2 below) of Range	$ 2,116.6
Mid-point of Mean and Median (above)	$ 2,363.6

2. Adjusted; i.e., Statutorily Taxed

Net Income stands in for Free Cash Flow, 'FCF', Estimate for 'Next' Year (from above): $67.0M

Valuation Matrix, NOT Fully Taxed; Values in $M.

Value = FCF/(r-g) (r = required or expected rate of return; g = estimated or potential growth rate)

r == > / g == v

Reason for ranges chosen:
Toronto growth rate is expected to exceed the nation's. The rate of return is at a premium to bonds, but future return not expected to exceed historical ones.

	4.00%	**5.00%**	**6.00%**	**7.00%**	**8.00%**	**9.00%**	**10.00%**
0.00%	$ 1,685.4	$ 1,348.3	$ 1,123.6	$ 963.1	$ 842.7	$ 749.1	$ 674.1
1.00%	$ 2.247.1	$ 1,685.4	$ 1,348.3	$ 1,123.6	$ 963.1	$ 842.7	$ 749.1
2.00%	$ 3,370.7	**$ 2.247.1**	**$ 1,685.4**	**$ 1,348.3**	**$ 1,123.6**	$ 963.1	$ 842.7
3.00%	$ 6,741.4	**$ 3,370.7**	**$ 2.247.1**	**$ 1,685.4**	**$ 1,348.3**	$ 1,123.6	$ 963.1
4.00%	$ --	**$ 6,741.4**	**$ 3,370.7**	**$ 2.247.1**	**$ 1,685.4**	$ 1,348.3	$ 1,123.6
5.00%	$ 6,741.4	$ --	$ 6,741.4	$ 3,370.7	$ 2.247.1	$ 1,685.4	$ 1,348.3
6.00%	$ 852.1	$ 6,741.4	$ --	$ 6,741.4	$ 3,370.7	$ 2.247.1	$ 1,685.4
7.00%	$ 568.0	$ 852.1	$ 6,741.4	$ --	$ 6,741.4	$ 3,370.7	$ 2.247.1

Low Value of Range	$ 1,123.6
High Value of Range	$ 6,741.4
Mean (average) of Range	$ 2,425.0
Median (1/2 above; 1/2 below) of Range	$ 1,966.3
Mid-point of Mean and Median (above)	$ 2,195.7

Source: Author's calculations based on annual reports made available by the company.

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

With respect to the market-peer comparison valuation, there are a few complications. The Canadian electric utility sector includes a number of companies with depressed net income and depressed cash flow, at least at this time (see Table 2). They also all produce their own power, which THC does not. With U.S. peers, the most similar companies have substantially negative free cash flow, meaning they require further financial inflow. Their recent net income is also depressed. They, too, produce their own power.

A progressive series of removal of valuation metrics from the wide array originally employed had the effect of successively raising the potential market value of the company. That was not the intention of removing those metrics. They were not useful, either because of missing values, or because of inflated or negative final results. The final estimates of market value, shown in Table 2, seem to have some resemblance to the market value of the small-region U.S. power utilities, so that gives some confidence in the final estimates of market value for this large municipal utility, despite its lack of generating facilities, which makes comparisons to other utilities imperfect.

As noted in the Executive Summary, the 'as is' current value of the company (making 'payments in lieu of taxes') ranges from $2,099M to $8,043M, with a median of $4,980M and a mean (average) of $5,051M. Were it to be taxed at statutory federal and provincial rates, the estimated value ranges from $2,103M to $8,060M, with a median of $5,429M and a mean of $5,204M. Please see the details of the models' results in Table 2.

Table 2

Market Comparison Valuation

Value of equity using valuation metrics as applied to Toronto Hydro		Trailing P/E Market Value to Net Icome	Forward P/E (Market Value to Est. Net Icome)	Price to Sales	Price to Book	Enterprise Value/ EBITDA (minus debt)	Price to Operating Cash Flow
Average Canadian Electric Utilities	**As Is (Not Statutorily Taxed)**	$ 10,493.4	$ 7,862.3	$ 6,582.3	$ 1,462.2	$ 1,810.9	$ 3,592.1
	Statutorily Taxed	$ 10,516.6	$ 9,083.0	$ 6,582.3	$ 1,462.2	$ 1,814.8	$ 3,594.6
Average US Electric Power Dominated Utilities	**As Is (Not Statutorily Taxed)**	$ 5,592.1	$ 3,669.0	$ 9,361.5	$ 3,000.7	$ 2,385.7	$ 4,796.3
	Statutorily Taxed	$ 5,504.2	$ 4,238.7	$ 9,361.5	$ 3,000.7	$ 2,391.0	$ 4,799.5
Average of the Two Averages	**As Is (Not Statutorily Taxed)**	$ 8,043.0	$ 5,765.7	$ 7,971.9	$ 2,231.5	$ 2,098.8	$ 4,194.2
	Statutorily Taxed	$ 8,050.4	$ 6,660.8	$ 7,971.9	$ 2,231.5	$ 2.102.9	$ 4,197.1

Market Value Using ALL Comparable Companies and ALL valuation ratios.	Mean	Median	Midpoint	Minimum	Maximum
As Is (NOT Statutorily Taxed)	$ 5,051.0	$ 4,980.0	$ 5,015.0	$ 2,099.0	$ 8,043.0
Statutorily Taxed	$ 5,204.0	$ 5,429.0	$ 5,317.0	$ 2,103.0	$ 8,060.0

Note: The small sample size for Canadian companies make the average of all companies more reasonable and preferable to use.
Note: 'As Is' firm value is slightly lower than statutorily taxed version due to recent 'payment in lieu of taxes' rate exceeding the current combined Ontario/Federal statutory rate.

CONCLUSION

This study used detailed financial statements, but the trends in net income, the imputed 'tax rate' used in the 'payment in lieu of taxes, and the high rate of capital expenditure's effect on free cash flow made some estimates of future net income and free cash flow not fully reliable. A more thorough appraisal prior to a proposed floating of THC shares on a stock market or before the company would be sold to private investors could determine a different value for the company.

As far as is known or at least obvious, the proceeds of such a sale would go to the City of Toronto. If some of the proceeds were retained within the company, they could be used to further help THC expand and improve its connection and maintenance services. A recent World Bank's Easy of Doing Business ranking gave a low rank to Canada for, of all things, electrical service, with an average time to connect a newly constructed building taking an average of 137 days, in the example city of Toronto (105th in the world) .

PUBLIC CHOICE ALTERNATIVES

Perhaps the proceeds of a sale of Toronto Hydro could be deposited into a provincial fund. The Canada Pension Plan Investment Board, for example, has had a five year 'net normal' rate of return of 11.8 percent annually, on average, and 6.7 percent over the past ten years, which included the severe financial market downturn between 2007 and 2009. If about $5B were realized from the sale of THC, it could result in up to about $600M per year in income, which could be used for the benefit of Toronto Hydro consumers or all citizens. If, on the outside chance, $8B were realized, up to roughly $960M in annual income could be used for various purposes.

That money would go a long way for, say, two million Toronto households in restraining looming escalation in power bills. Moreover, $600M could pay for about 75,000 teachers, nurses, or paramedics, and $960M would pay for about 120,000. If not that many are needed, each household's property taxes could fall by $300 (THC proceeds of $5B) to $480 (proceeds of $8B). Toronto taxpayers should have the ultimate say, directly, or indirectly.

Toronto has a major asset which could be better managed in the private sector, especially were competition allowed to sharpen its efficiency. Proceeds of selling off the firm could make citizens of the great city better off in a lot of ways. All that is lacking is some recognition of the opportunity by city council, and acting on it.

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