INVESTA INSIGHTS

Canadian Power and Utilities

The Future Is Bright

The Canadian power and utilities industry is an essential part of the Canadian economy, fueling and allowing the rest of the economy to operate without hindrance. Largely reliant on electricity, without its growth it would be very difficult be very difficult for the rest of the economy to continue to grow. In recent times, the Canadian system has been subject to significant transformation as it turns to renewable technologies like wind energy, solar energy, as well as converging and complementary technologies like energy storage to build a sustainable future. Largely unaffected by COVID-19, it is a sector that can be expected to outperform many other Canadian industries into foreseeable quarters.

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July 2020

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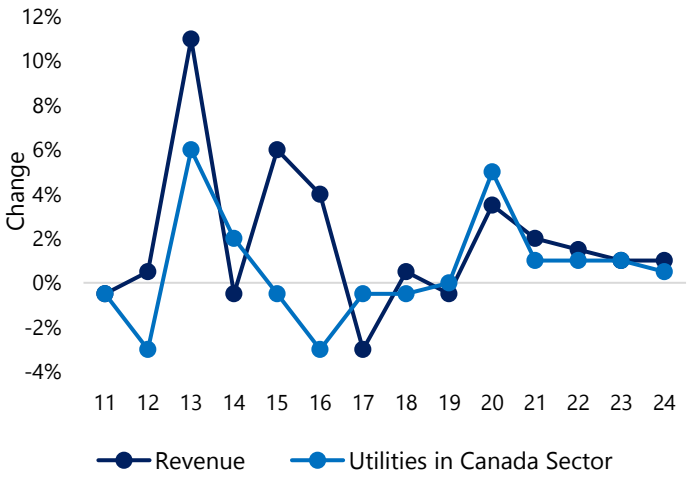
Introduction

Industry Overview

The Canadian power and utilities industry is an essential part of the Canadian economy. The industry is involved in three core activities, including electricity generation through various renewable/non-renewable energy sources and technologies. The next step is the transmission of electricity from power plants to end-use consumers—finally, the distribution of electricity to end-users through local distribution power lines. The generation of electricity in Canada is led by either independent power producers or through integrated utilities. Independent power producers (IPP) own facilities to generate electric power for sale to utility companies and end-users. Conversely, Integrated utility companies serve all parts of the electricity value chain, from generation to distribution. These integrated utilities account for approximately 92% of the total production of electrical energy in Canada. In addition, there are around 52 Canadian public and private electric utility companies, and out of those companies, the three-main renewable energy players are Trans Alta, Innergex and AQN. The energy sector in Canada contributed 43 billion dollars to nominal GDP in 2018 or 2.5% of the total nominal GDP. Furthermore, Canada's electricity system is under transformation as it increasingly converges from using non-renewable technologies into renewable technologies such as wind energy, solar energy, and developing technologies like energy storage to build a sustainable future.

Industry Outlook 2011 - 2024

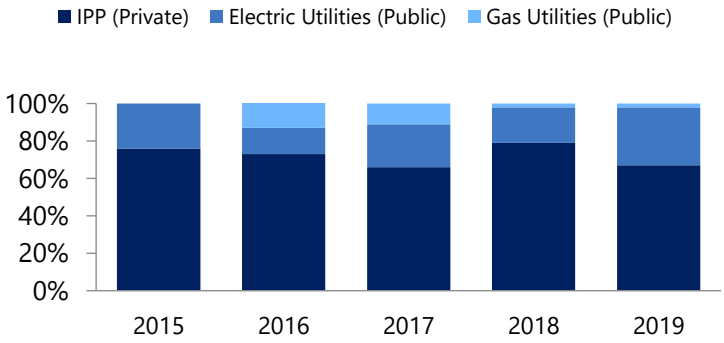


Key Metrics

Independent Power Producer Generation

Many provinces have moved towards a more competitive power generation system with the private sector playing an increasing role, giving rise to independent power producers (IPP). The power and utilities industry is represented by several associations, which focus either at a provincial or source-specific level. The majority of power transactions that have involved Canadian targets are primarily comprised of independent power producers, electric utilities, and gas utilities.

Industry Power Transactions by Type



Source: Torys Quarterly - Canadian Sector Report

Renewable Portfolio Standard

A renewable portfolio standard (RPS) is a set of regulations that aim to increase the production of energy from renewable sources. These sources may include wind, solar, biomass and other alternatives to fossil fuels for the purpose of electricity generation.

Renewable Portfolio Standard

Province	Renewable Energy (2016)	RPS Target
British Columbia	95.0%	93% (By 2010)
Quebec	99.0%	61% (By 2030)
New Brunswick	29.9%	40% (By 2020)
Nova Scotia	25.0%	40% (By 2020)
PEI	99.0%	30% (By 2013)
Alberta	12.3%	30% (By 2030)
Manitoba	99.6%	None
Newfoundland	94.3%	None
Ontario	33.4%	None

Sources: Keane Gruending, Canada Energy Regulator

1 Statistic Canada | 2 Government of Canada | 3 IBIS World | 4 Torys Quarterly | 5 Canada Energy Regulator

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Key Players: Utilities

Hydro-Québec is one of the largest power utility company with high-voltage transmission system that sells wholesale energy in Canada and the United States. It distributes electricity to approximately four million residential, commercial and industrial consumers. The utility has over 113,525 km of distribution lines and from its 89 plants including 60 hydroelectric and two thermals, it generates more than 35,900 MW.

Suncor Energy is a Canadian integrated energy company supplying to more than 1,500 Petro-Canada gas stations. Its operations include oil sand development and upgrading, onshore and offshore oil and gas production, petroleum reefing and product marketing. In addition, the company operates a renewable energy business and conducts energy trading activities focused on marketing and trading crude oil, natural gas, refined products, and power.

Enbridge Inc. is a Canadian-based multinational corporation that supplies crude oil, operates liquids and natural gas pipelines. It owns the world's most extended pipeline network that gathers, processes, transports and distributes natural gas to around 3.6 million customers in the United States. In addition, the company operates through five business segments: Liquid Pipelines, Gas Transmission and Midstream, Gas Distribution, Green Power and Transmission, and Energy Services.

Key Players: Renewables

Trans Alta is known as an electricity power generator that operates over 70 plants in the United States, Canada, and Australia. It operates through geothermal, wind, hydro, natural gas, and coal power generation facilities. Recently Trans Alta announced its Clean Energy Investment Plan and Dividend Policy, which includes altering its existing Alberta coal assets to natural gas and lastly, advancing its leadership position in renewable energy sector.

Algonquin Power & Utilities is a Canadian renewable energy Corporation that provides rate-regulated natural gas, water and electricity generation, transmission and distribution utility to more than 750,000 customers. It invests in hydroelectric, wind, solar power facilities and utility businesses such as water, natural gas, and electricity through its two operating subsidiaries; Liberty Utilities and Liberty Power. Liberty Utilities provides water, electricity, and gas utility services, while Liberty Power owns a direct and indirect equity interest in more than 35 clean energy facilities.

Innergex is a global corporation that manages a broad portfolio of assets currently consisting of 69 operating facilities, including 37 hydroelectric facilities, 26 wind farms, and six solar farms. Innergex operates through four business segments: Hydroelectric Production, Wind Power Production, Solar Power Production, and Site Development and Management. Through the segments, Innergex sells electricity to publicly owned entities, and the company develops energy production facilities to the operational stage and then manages them.

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Importance in Canadian Economy

Despite Canada being among the world's foremost producers of energy, ranking 6th according to *Enerdata's Yearly Global Energy Production Study*, the power and utilities industry only accounts for ~2.5% of Canada's annual GDP each year. Compared to other sectors, this contribution is minor however that does not downplay the underlying importance of the industry to the continued growth of the Canadian economy.

Stocks of power and utilities companies make up ~4.75% of the large cap stocks on the TSX. These stocks are usually very stable and pay reliable dividends. This has led to a rise in power and utilities stock popularity as economic outlook has become increasingly negative due to the implications of COVID-19.

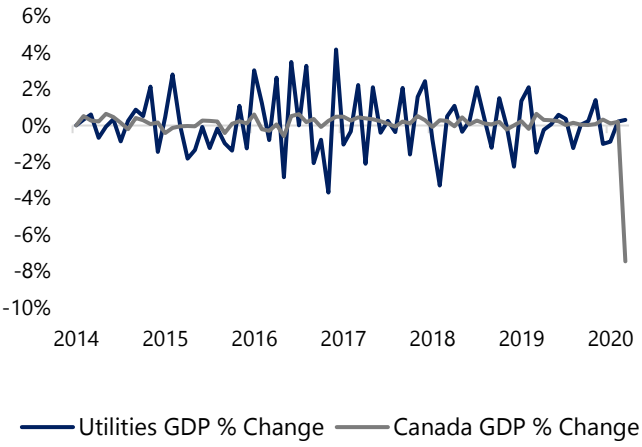
The power and utilities industry employs ~139,100 full-time employees. The industry workforce has grown at a slightly lower rate than the Canadian GDP at ~0.51% each year over the past five years.

As energy is a driving force in the growth of an economy, the power and utilities industry is intrinsically linked to the growth and prosperity of Canada's national economy. The industry's primary contribution is that it allows Canadian businesses to operate efficiently by providing them with reliable power and energy.

The industry's importance is highlighted by analyzing the growth of both the Canadian economy and the power and utilities sector over the past five years. There is a strong positive correlation between the growth in the Canadian economy and the growth of the power and utilities industry. In order for national energy needs to be satisfied, the power and utilities industry must grow alongside the Canadian economy. Without the continued growth of the power and utilities industry it will be very difficult for the rest of the Canadian economy to expand.

Utilities Representation of the Canadian GDP

Monthly GDP Growth Comparison



1 Enerdata | 2 Statistics Canada | 3 Siblis Research

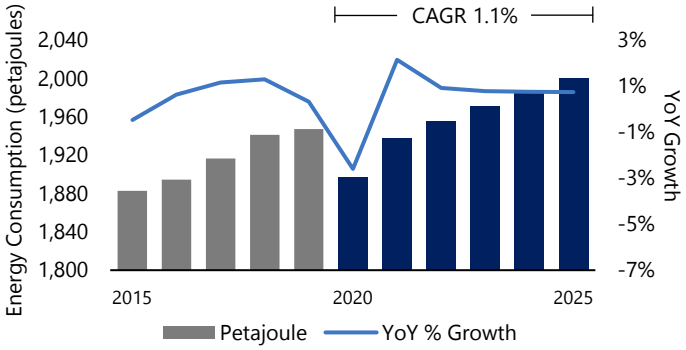
Key Industry Drivers

Revenue Drivers

Energy Consumption

Energy consumption can be split into two main modes: residential and industrial. Residential consumption accounted for 33% of total energy use in 2016. The size of the residential market is expected to grow as we anticipate growth in the short-term for housing starts, an economic indicator reflecting new residential construction projects, from 2020 to 2025. In contrast to the stable demand experienced by the residential segment, industrial use tends to fluctuate with the market. While there is a current lull in industrial activity due to COVID-19, it is expected that the growth will continue in the long term driven by an increase in oil sands production. As a result, electric power consumption is projected to grow at a five-year CAGR of 1.1% to 2025.

Energy Consumption and Growth



Source: IBIS World

Electricity Prices

Prices that Canadians pay changes drastically based on geographical location. While most provinces experience regulated prices, Alberta and Ontario leave an exception. Furthermore, due to geographical locations, challenges arise in distributing electricity to remote communities, thereby also affecting pricing. Another factor driving changes in prices is seasonality, in which prices tend to increase during peak usage times such as summer and winter for residents. Additionally, the industry also looks to export electricity in the summertime to the United States to capitalize on favorable peak prices. We expect the price of electric power to grow at an annualized rate of 0.8% for the next five years, driven by an increase in export markets.

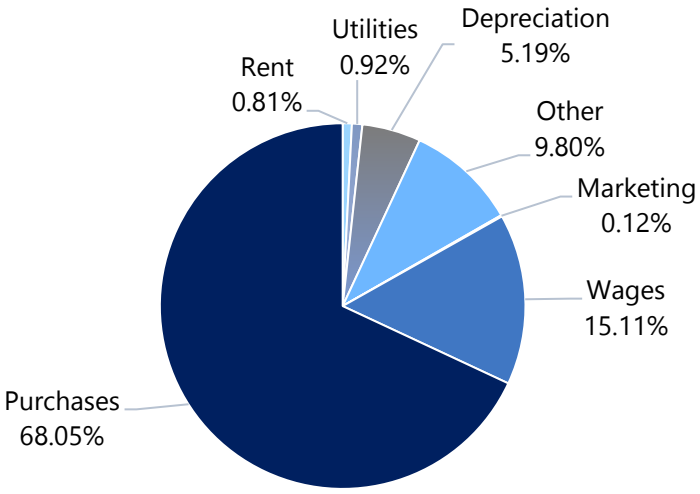
Expenses

Power and utilities companies incur expenses including rent, utilities, depreciation, marketing, storage space and wages, which make up on average 22-30% of their total revenue. Rent consists of offices, storage space, as well as facilities that a company utilities. Approximately 68% of the 2019-2020 industry costs were spent on purchases such as new infrastructure, equipment, and facilities. Companies are spending a portion of their budget on technology advancements and this is likely to increase throughout the next few years.

The Energy Cloud

The "Energy Cloud platform" is an emerging trend where companies replace old energy systems and implement intelligent network infrastructure in order to have a competitive position in the industry. In 2018, Suncor Energy spent approximately $600 million in the development of technology and infrastructure. In 2019, Suncor Energy invested 38.3% more of what they invested in 2018 for the development of technology - an outstanding $830 million. Many power and utilities companies plan to spend at least 3.1% more on technology in 2021 compared to their spending in 2020. Investing in the latest technology is also likely to generate profitable returns for companies – a worthwhile investment for key players in the utilities industry to consider.

2019-2020 Industry Costs By Proportion



1 IBIS World | 2 Government of Canada | 3 Suncor Energy | 4 Nuenergen

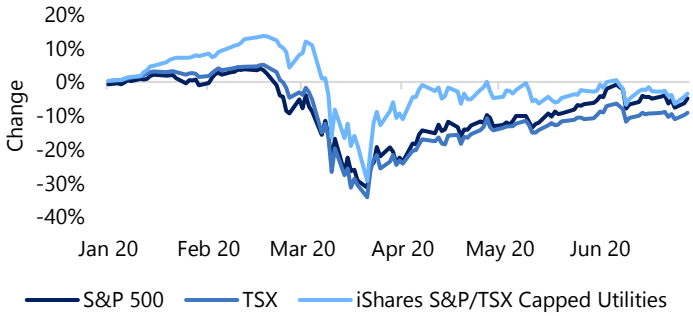
Developments and Trends

COVID-19 Developments

The current COVID-19 outbreak has had a significant impact on Q1 economic activity. The financial markets have experienced a large negative shock. The duration of this shock is expected to be relatively short. However, concerns over the spread of the outbreak have continued to weigh on the market sentiment.

The financial market in Canada has performed weakly overall compared to the previous year. The S&P 500 Utilities fell by 37% on March 23, 2020, corresponding to the start of lockdown measures in Canada. The Canadian markets will need to do more to recover from the losses of the outbreak and cannot simply draw level to the offshore equity decline. Recovery may be stronger once there are clearer signs that the coronavirus outbreak has been contained.

S&P, TSX, iShare Indexes (YTD)



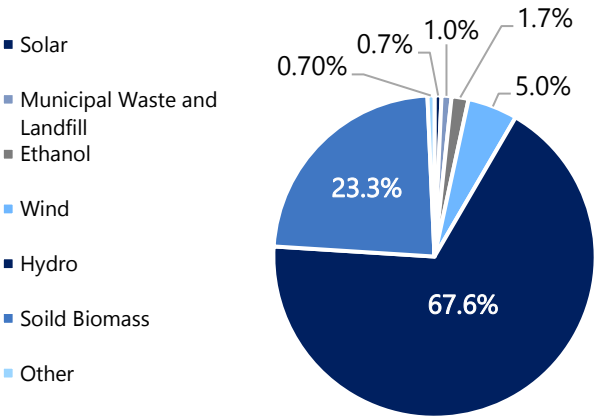
Source: Investing.com, Canada

The power and utilities industry was one of the top outperforming sectors this recent month along with healthcare. This is primarily due to defensive plays within the industry, with steady revenue streams and healthy financial positions likely to outperform the market amid outbreak fears. In contrast, the energy and materials industry have been lagging with fears of a potential demand shock.

Overall, a strong rebound is expected in future quarters when the shock of the outbreak has completely faded away. The S&P Utilities 500 has increased by 26.9% since its initial drop in March. The future prospects of a recovery for the power and utilities industry look promising.

Renewables

The renewable energy industry in Canada harnesses energy from hydro, solar, wind, geothermal, and biomass power plants, releasing far fewer pollutants than fossil fuel generators. The exact breakdown by type as of April 2020 is given below:



The renewable energy industry is forecasted to grow as the industry has far fewer barriers to entry than the oil and gas manufacturers. 17% of Canada's energy supply was derived from renewable energy sources mainly generated by wind and solar power, and attempts to shift away from coal-fired electricity and natural gas will increase supplier demand. The largest players, whose revenue is mainly derived from carbon intensive fuels, are transitioning to more renewable and sustainable options to meet consumer demand. Companies are competing for market share in Canada's evolving energy mix and with Justin Trudeau's pledge to invest $20B in the renewable industry within the next 10 years, competition between leading players will likely intensify as smaller companies with weaker demand due to COVID-19 will likely be acquired.

Industry Revenues

The renewable energy industry generated $29.9B CAD in 2019 with an annual growth of 1.4% over the last five years. It is expected to grow at a rate of 2.2% until 2024, and 2019's profit margin was 19.4%. The positive performance in the renewable energy industry is heavily attributed to hydro power being the largest source of revenue in commercial markets.

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Renewables

Strengths
- High barriers to entry
- Low competition
- High revenue per employee

Weaknesses
- High capital requirements
- Many products, yet few suppliers

Opportunities
- Strong drivers
- Price of electric power
- High forecasted growth

Threats
- Low historical revenue growth
- Price of natural gas is cheap

2014-2019 Industry Performance

With demand for electricity being highly inelastic, electricity consumption was relatively stable with prices typically set by provincial regulators to shield them from volatile market prices. The federal government's "econENERGY for Renewable Power" program allocated roughly $1.4B over 14 years in funding across 100 projects, which has stimulated growth in the wind and solar energy sectors during the 2014-2019 period. Due to the increased funding, wind power generation has grown at an annualized rate of 10.9%, and by 2019, it became the second largest source of renewable power produced in Canada. Similarly, generation of solar power rose at an annual rate of 21.6% over the last five years, but only accounted for 1.1% of total renewable power produced in 2019, which is still fairly low.

2019-2024 Industry Outlook

Electricity prices are expected to rise as regulatory bodies tend to increase rates to finance renewable investments. It's also estimated that the low natural gas prices and increase of renewable power generation in the US will dampen exports from Canada and decrease exports by 1.9% to $2.7B. Furthermore, the high forecasted profits and increased consumer demand for renewable energy will likely result in more companies generating renewable power. However, the benefits of economies of scale will incentivize enterprises to merge and consolidate. Additionally, industry value added is forecasted to increase an annual rate of 1.8% and Canada's GDP is expected to grow at 1.7% annually, highlighting the mature state of the renewables industry in Canada.

Technology and Machine Learning

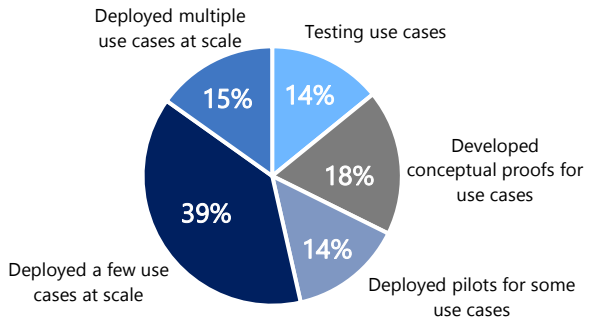
The Impact of Digitalization

The main role of machine learning technology in the power and utilities industry is to increase production and extraction efficiency, reduce energy waste and ease the transition to renewable energy. By analyzing large aggregates of historical data, machine learning software in both renewable and non-renewable energy spaces, will be able to more accurately predict energy consumption levels, improve resource discovery and extraction methods, and limit power outages. Increasing technology usage will help combat the core issues facing the power and utilities industry. These issues include an aging workforce, outdated grid infrastructure systems and social demand for the use of more sustainable energy sources. Machine learning solutions will help ease the transition to clean energy, support highly efficient grid systems and reduce the reliance on human capital going forward.

Usage in the Power and Utilities Industry

As the presence of machine learning and digitalization continues to grow in the power and utilities industry, there is an increased focus on designing implementable software that will have an immediate impact on a company operations. As illustrated below, the industry is not at the level where a lot of companies are actively implementing ready to use software on a wide-scale basis. However, many companies have been rapidly progressing towards producing more effective and implementable machine learning software.

Global Level of AI Deployment in the Power and Utilities Industry



1 Capgemini Research Institute

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Microgrids

With advances to technology, companies in the industry are being threatened by non-traditional competitors taking away market share through microgrids. Microgrids are small-scale power grids that can work independently from a main grid but are also simultaneously synched to it. Consumers benefit because it can potentially provide disadvantaged communities access to electricity. Furthermore, these new technologies have become increasingly more affordable for the average household. While many traditional players aren't yet in the market, we predict that six gigawatts of business can be taken away from the disruption.

To maintain market share, current industry players need to strategize on how to invest in this market, evaluate their business model, and engage regulators. It is important for companies to tap into this opportunity sooner than later as microgrids are expected to account for 23.5% of global electricity access by 2030. The industry must look at market conditions as well as consider working with or acquiring other companies that have already developed technology in this industry. The business model used when approaching consumers will also be changed, as instead of just being a supplier of electricity, power and utilities companies will have to partner with and engage with their customers. Businesses will have to think more about customer service than ever before and consider where to expand their products and services next. While this is relatively new technology, there aren't very many regulations set out. As the industry has historically been very important to the economy, they should engage regulators on creating these regulations potentially in their advantage.

The industry can expect to gain numerous advantages by investing in this emerging market in the long-term. They will have less investment in their transmission and distribution infrastructure, be more flexible during grid disruptions, and be able to better manage electricity storage during on and off-peak times.

While microgrids aren't as prevalent yet, there is a strong outlook for them as they are currently being tested in different parts of Canada. Ontario alone has over nine million dollars funded by the Smart Grid Fund. Areas in British Columbia have also been implementing these microgrids as they've proved their worth, supplying energy to a community during a hurricane in 2017. Overall the future looks bright for microgrids and companies that invest in them.

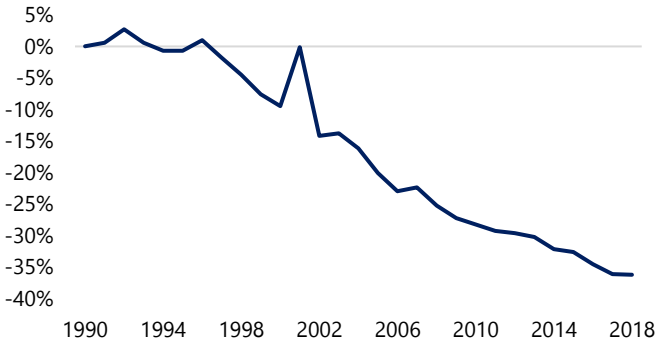
Government Regulation

Each province and territory in Canada controls their own electricity generation, transmission, distribution, and market structure within its borders. Provincial regulators are responsible for setting out policies for all power and utilities companies to follow to ensure fair and ethical practice. At a federal platform, the Canadian federal government and the Canada Energy Regulator (CER) are involved with reviewing and approving major projects such as oil pipeline expansions; they have the authority over utility exports as well as inter-provincial transmission. As of today, the CER regulates 99 companies that own or operate inter-provincial pipelines. The U.S. government regulation is similar to Canada's in that companies are regulated at the state and municipal levels to ensure fair and ethical behaviour.

Carbon Tax Program

Having an effective tax on non-renewable sources such as fossil fuel gas, coal, and oil helps to incorporate climate risks into the costs and expenses of a business as it drives down emissions. Under a "cap-and-trade program" there are regulations that cap carbon emissions from specific sectors in Canada and provide permits to emit carbon. For example, a cap of 15,000 tons of carbon would initiate 15,000 one-ton permits; this method has been effective in retiring coal plants as a declining emissions cap results in a reduction in emissions throughout the next few years. Renewables are now a preferable alternative as they are readily available, cost-efficient, and aren't held back by regulations such as Canada's Carbon tax program. The government of Canada aims to cap emissions at 511 megatons by 2030, however the government anticipates Canada will not reach the target by approximately 70 megatons.

Indexed greenhouse gas emissions per unit of gross domestic product (change from 1990)



1 EY | 2 The Government of Canada Energy | 3 CBC

Energy Storage

Overview

Energy storage is the ability to store energy for use at a later time. The reason fossil fuels have been used for years is because they can reliably produce and store energy on demand and the inability to store power using renewable power plants on an industrial scale has been the major setback to attaining clean energy. There have been a few attempts across the globe at tackling the energy storage issue using various technologies and techniques. Molten salt appears to be a possibility as it is able to release sustained energy release over a lengthy period of time. This technique provides a means by which renewable energy can be used on demand rather than when conditions allow. Lithium-ion battery arrays are also now entering commercial viability, placing the technology ahead of molten salt on the development curve.

Impact on Energy Curtailment

Curtailment is the restriction or reduction of energy delivery from a generator to an electric grid.

System-wide oversupply is a type of curtailment that occurs when, on a large scale, there is simply not enough demand for all the renewable electricity that is available. This often occurs during the spring months when there's a lot of sun, wind and rain, but people usually don't use electricity as much to power their houses, resulting in more electricity available than required.

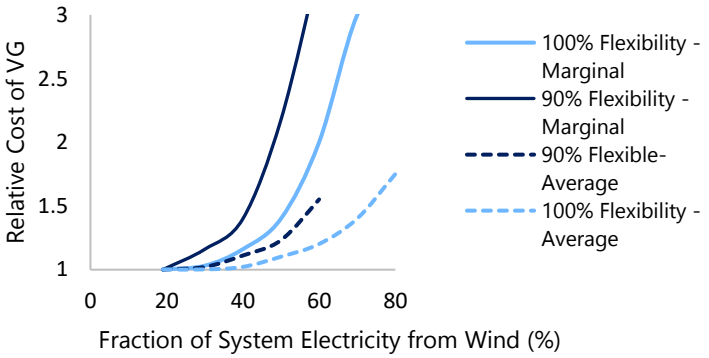
Local transmission constraints are another reason for renewable curtailment, which occurs when there is so much renewable electricity in a local area that there is insufficient transmission infrastructure to deliver that electricity to a place where it could be used. In Texas for example, wind energy curtailment fell from 17% in 2009 to 0.5% in 2014 when additional transmission lines were installed to move wind energy out of local pockets to places where it could be used.

Curtailment of Wind Energy

Having high quality wind resources often requires new transmission which may be costly and time-consuming to construct. Developing new transmission for wind resources is challenging due to the constant changes in supply and relatively low capacity factor.

Curtailment of wind has significant economic consequences as curtailment reduces the effective capacity factor of the plant, which increases the cost of energy. For a renewable power plant such as wind, the cost of producing energy is inversely proportional to its capacity factor. The cost graph seen below represents the non-linear curtailment rate compared to the relative costs:

Impact of Curtailment on Relative Levelized Cost of Energy



Source: IEEE Explore

Energy storage can be used to reduce curtailment of renewable energy in two ways: by moving energy from periods of excess renewable production to lower production, and by reducing the generation constraints enabled by energy storage through added grid flexibility. Although energy storage is a great idea, it comes with its own set of challenges, making it not so easy to implement.

To integrate renewable energy, there needs to be additional operating reserves and mitigation for higher ramp rates of renewable energy throughout the plant. There are other technologies on the market that are cheaper and could provide improved integration, but they are often limited in scale and scope. Energy storage is attractive over a larger scale but is more costly at lower penetration. Furthermore, only a few systems have been successful in shifting large amounts of energy over several hours, which are unlikely to be successful when integrated on a large scale.

1 IEEE Explore | 2 Invest in Canada

Mergers & Acquisitions Overview

M&A Activity in the power and utilities industry is characterized by asset acquisitions rather than business or stock purchases. In doing an asset sale, the seller remains as the legal owner of the entity, while the buyer purchases individual assets of the company i.e. a specific portfolio of assets within a geographic location. On the other hand, in a business or stock purchase, the acquirer purchases an equity interest in the target company and has legal rights over the target company. Asset deals accounted for 64% of deal value and 75% of deal volume in 2019. While strategic transactions by accounting for 91% of deal value and 81% of deal volume, continue to dominate M&A activity, a rise in investments by financial sponsors has been observed. Many private equity and investment funds including BlackRock, KKR & Co. Inc, Canada Pension Plan Investment Board have committed to and are actively engaged within the renewables sector.

Ontario Power Generation Acquisition of Natural Gas Plants in Ontario from TransCanada Energy Ltd.

On 30th July 2019, Ontario Power Generation announced the acquisition of TransCanada Energy's natural gas fired plants in Ontario for a CAD $2.87 Billion transaction. The deal included the sale of 900-Megawatt Napanee generating station, the 683-Megawatt Halton Hills plant and half of the 550-Megawatt Portlands Energy Centre in Toronto. The objective behind the acquisition was for Ontario Power Generation to gain a larger market share of natural gas fired plants within the province and the sale was a part of TransCanada Energy's asset recycling program. The transaction formed the largest asset-based acquisition of 2019 within the power and utilities industry in Canada.

ONTARIO POWER GENERATION

TC Energy

PSP Investments and ATRF Acquisition of AltaGas Canada Inc.

On 21st October 2019, the Public Sector Pension Investment Board (PSP Investments) and the Alberta Teachers' Retirement Fund (ATRF) announced the acquisition of AltaGas Canada Inc. (TSX: ACI) in an all-cash transaction at $33.50 per share or a CAD $1.7 Billion deal. The transaction aligned with both investment board's long-term strategy as AltaGas owned a diverse portfolio of natural-gas, wind and solar assets. The deal involving private equity and pension funds highlights the increase in industry activity, particularly in renewables and showcases an on-going trend of increased investments from financial sponsors. The transaction also formed the largest corporate acquisition of 2019 within the power and utilities industry in Canada.

PSP

ATRF Alberta Teachers' Retirement Fund Board

AltaGas Canada

Industry Outlook

Short Term

COVID-19 Recovery

In the short-run, the COVID-19 outbreak has had a relatively large impact on the power and utilities industry. However, it is forecasted that the industry will rebound, and the financial markets will rise from their current position. Once the shock of the pandemic fades away and the coronavirus has been contained, a significant recovery is expected.

It is noted that if the pandemic extends into future quarters, additional policy responses will be needed to counter any negative shock. These measures may include fiscal support, such as subsidy or tax cuts for unpaid work and small to medium enterprises. Furthermore, the central bank may look into monetary easing by lowering interest rates and deposit ratios to make credit more easily available.

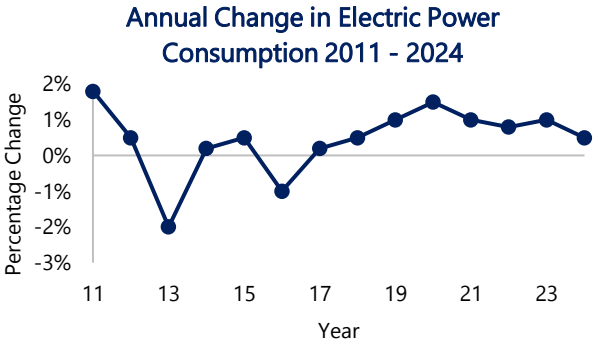
Although a recovery is expected, the power and utilities industry will still face challenges. Some companies may face disruptions in their planned operations, such as failing to meet targets within the year to qualify for tax credits. Utilities may also encounter shortages due to the constrained production of supplies produced in countries highly affected by COVID-19. Independent power producers could also experience continued supply-chain disruptions surrounding parts for grid-wide maintenance and repairs. This may lead to unexpected or forced outages. As such, companies within the industry will need to improve flexibility and take additional measures to augment their already robust business-continuity strategies.

Electric Vehicles

As the U.S. expects an annualized growth rate of 13% for electric vehicle (EV) sales over the next five years, we can expect to see a similar trend in Canada. The success of the market will lead to an expected 20% for electricity. The major concern is that transformers may not be able to handle the load increase. As a result, companies will have to increase their capital expenditures upwards to approximately $10,000/transformer for replacements. Alternatively, industry members are encouraging off-peak charging through scheduled charging at night however, this may only signal as a short-term solution as the industry prepares to increase their electricity capacity capabilities.

Long Term

The life of every Canadian is significantly impacted by the power and utilities industry. Fossil fuels that are used for power are widespread in Canada because they are inexpensive and reliable. However, the burning of fossil fuels emits greenhouse gases. There have been investments in the world's first Carbon Capture and Storage (CCS) facility in Saskatchewan, a process that extracts and collects CO2 emissions. For the next four years until 2024, electric power consumption is projected to rise due to population growth, improvements in business activities and industrial output. Therefore, the demand for renewable power is likely to grow in the upcoming years. The industry revenue is forecasted to increase at an annualized rate of 2.2% to 33.3 billion over the four years. The rise is due to the increase in electricity prices, which is escalating slowly as government regulatory agencies set higher rates to fund infrastructure investments within the power and utilities industry. From 2018 to 2035, energy use increases by around 5%. At the same time, Canada's population grows approximately by 20% and the size of the economy, which is measured in GDP increase over 40%. Overall this means that energy use per person and dollar of economic activity falls.



Furthermore, the development of renewable energy projects has already begun in North America, and provincial levels by several organizations through the Trottier Energy Future Project, Low-Carbon Energy Futures, and many more. Canada gets 67% of its electricity and 17.3% of its energy from renewable sources. More than 150 countries have established policies that support renewable energy sources, and over 170 countries are committing to their energy targets to limit reliance on fossil fuels. Overall, the power and utilities industry commit to limits its carbon footprint and operates in an environmentally friendly way.

1 PwC | 2 The Globe and Mail | 3 Wood Mackenzie | 4 Government of Canada | 4 Natural Resources Canada | 5 KPMG

Company Comparable Analysis

Trading Comparables

Company Name	Mkt Cap CAD$m	EV CAD$m	EV / EBITDA LTM	EV / EBITDA 2020E	EV / EBITDA 2021E	P/E LTM	P/E 2020E	P/E 2021E	P/B LTM	P/B 2020E	P/B 2021E	ROE(%) LTM	ROE(%) 2020E	ROE(%) 2021E
Major P&U Companies														
Enbridge Inc.	$84,872	$123,272	13.4x	12.2x	11.6x	42.8x	16.7x	15.1x	1.4x	1.3x	1.3x	3.3%	7.4%	9.0%
Suncor Energy Inc.	$35,139	$41,190	7.0x	11.3x	6.8x	NM	NM	33.0x	1.0x	1.0x	1.0x	-13.3%	-7.6%	1.3%
Innergex Renewable Energy Inc	$3,890	$6,009	14.6x	16.1x	14.6x	NM	142.5x	69.8x	3.7x	3.9x	4.1x	-9.1%	3.3%	11.2%
Algonquin Power & Utilities Cor	$10,541	$13,197	19.4x	14.9x	12.0x	17.6x	20.6x	17.4x	1.9x	1.7x	1.6x	7.7%	8.9%	9.7%
TransAlta Corporation	$2,394	$5,680	8.1x	8.3x	8.3x	16.9x	NM	NM	1.2x	1.3x	1.3x	6.2%	2.4%	-0.1%
Capital Power Corporation	$2,887	$5,541	6.7x	7.8x	7.8x	21.1x	16.4x	14.4x	1.4x	0.9x	1.1x	1.9%	8.3%	8.3%
Boralex Inc.	$3,348	$4,881	15.2x	12.8x	13.1x	NM	72.1x	78.9x	4.0x	NM	4.3x	-3.5%	5.2%	5.5%
Northland Power Inc.	$7,273	$12,094	11.7x	13.6x	13.2x	18.6x	18.4x	18.9x	6.2x	5.4x	4.6x	30.3%	34.2%	29.4%
Mean			**12.0x**	**12.1x**	**10.9x**	**23.4x**	**47.8x**	**35.3x**	**2.6x**	**2.2x**	**2.4x**	**2.9%**	**7.8%**	**9.3%**
Median			**12.5x**	**12.5x**	**11.8x**	**18.6x**	**19.5x**	**18.9x**	**1.6x**	**1.3x**	**1.5x**	**2.6%**	**6.3%**	**8.6%**

Trading data in CAD as at Jul-23-20

Source: CapitalIQ

Operating Comparables

Company Name	Net Leverage[1]	Net Debt CAD$m	Debt Total	Revenue Growth (%) 2017-18A	2018-19A	2019-20E	2020-21E	EBITDA Margins (%) 2018A	2019A	2020E	2021E	EBIT Margins (%) 2018A	2019A	2020E	2020E
Major P&U Companies															
Enbridge Inc.	8.8x	$69,054	56.7%	-4.0%	13.6%	-7.5%	5.2%	22%	24%	28%	30%	15%	18%	21%	22%
Suncor Energy Inc.	3.6x	$20,034	53.1%	10.9%	4.7%	-35.8%	14.1%	33%	33%	19%	32%	17%	5%	-12%	9%
Innergex Renewable Energy Inc.	10.8x	$4,008	71.2%	10.5%	21.7%	10.9%	9.6%	72%	91%	78%	87%	41%	56%	39%	50%
Algonquin Power & Utilities Corp.	8.9x	$5,693	45.3%	8.6%	-1.6%	13.3%	14.8%	39%	40%	49%	61%	23%	22%	22%	33%
TransAlta Corporation	4.9x	$3,168	61.7%	-10.4%	9.8%	-13.0%	-6.3%	34%	37%	44%	43%	3%	9%	16%	16%
Capital Power Corporation	4.6x	$3,547	66.5%	11.8%	41.7%	0.2%	-4.3%	49%	65%	54%	54%	22%	38%	26%	32%
Boralex Inc.	11.3x	$3,178	70.9%	4.6%	26.0%	7.3%	-2.0%	62%	66%	82%	80%	17%	25%	25%	22%
Northland Power Inc.	8.4x	$8,176	72.8%	3.9%	12.2%	23.0%	2.7%	73%	75%	57%	58%	45%	47%	45%	44%
Mean				**4.5%**	**16.0%**	**-0.2%**	**4.2%**	**48.0%**	**53.8%**	**51.3%**	**55.5%**	**23.0%**	**27.4%**	**22.7%**	**28.5%**
Median				**6.6%**	**12.9%**	**3.8%**	**3.9%**	**43.9%**	**52.5%**	**51.2%**	**55.9%**	**19.8%**	**23.6%**	**23.4%**	**27.0%**

Trading data in CAD as at Jul-23-20

Calenderised to December

Source: CapitalIQ

1 Capital IQ