

DWA Debt Digest

EXCEEDING EXPECTATIONS, EVERY TIME.

October, 2024

The Power Play: AI Data Centers Taking Over the Power Grid

Green is Good But the World Needs Reliable Power Generation for AI; Enter Natural Gas

Other than the US election, AI and data centers have been dominating the news with global giants such as Google, Amazon, and Microsoft proposing agreements with nuclear reactors to power their data center aspirations. Canada has potential to become a key player in the global data center market given our ample, low-cost land base, robust and economical power generation capacity, and reliable fiber networks. The catch? How to generate enough reliable power to keep the computer chips humming. Renewables such as wind and solar lack reliability and nuclear has long lead times, meaning natural gas demand (particularly in the western provinces and in the U.S.) could be in for a rebound as the growing data center market's natural power supply solution in the medium term.

Key Takeaways this Month:

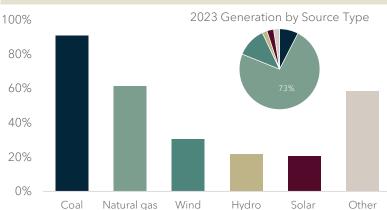
- Alberta's Advantages Make it an Attractive Destination for Development: With an open power market, inexpensive land, a vast fiber network, and cheap power feedstock (natural gas), Alberta has numerous advantages for AI data center developers.
- Power Demand Rising... But is it Reliable?: Although Canadian regulators have indicated targets of up to 75% of power generation from renewables by 2040, these power sources are inherently less reliable and with long nuclear lead times, natural gas is an obvious solution.
- Huge Business to be Done Across the Value Chain: Data center development requires a diverse suite of value-added services, ranging from power feedstock, power generation, construction, hardware, electronics, software, and operations. The development of these centers will contribute to Canada's GDP benefiting all Canadians.

Alberta Energy Demand, 2024 vs. 2021 Outlook



Power demand estimates across the globe are rising thanks to the increasing demand of AI computing

Alberta Generation % Maximum Capacity

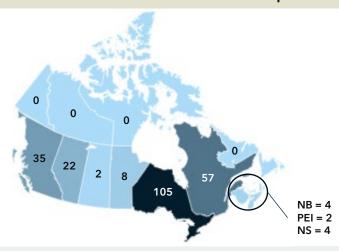


Data centers require a highly stable power source making renewables an unlikely solution

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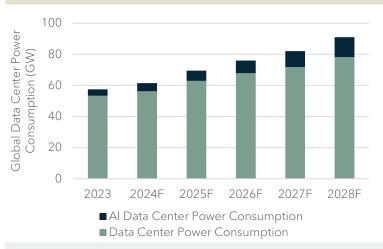
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Canada's Current Data Center Landscape



Canada currently has 239 operating data centers, but that figure is expected to increase exponentially

Expected Global Data Center Power Growth



Data center growth is expected but AI will be the growth driver at an estimated 25% 5-year CAGR

The Data Center Revolution: Canada currently houses 239 operational data centers which consume an estimated 1% of Canada's total power output (or, equivalently, approximately 735 MW). However, agencies such as the IEA are projecting that data center demand could increase by 150% by 2028 due to the rapid growth in artificial intelligence and demand for computing - and Canada is expected to follow the trend. For example, the Alberta Electricity System Operator has recently announced that six proposed data center applications are in queue to connect to the electric grid (adding an estimated 5,500 MW of power demand or ~40% of current consumption).

Canadian Energy Prices versus Other Countries

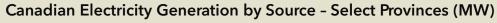


Alberta Fiber Optic Map



Canada is particularly attractive for data center investment given low electricity costs, abundance of land and readily available fiber optic network

Why Canada, Why Now?: Canada is a particularly attractive investment for data center providers given: (1) low electricity costs, (2) abundance of land and (3) readily available fiber optic network. Compared to the top 10 data center locations in the world, Canada's electricity prices are, on average, 27% cheaper. But the question data centers will look to answer - is that power reliable?

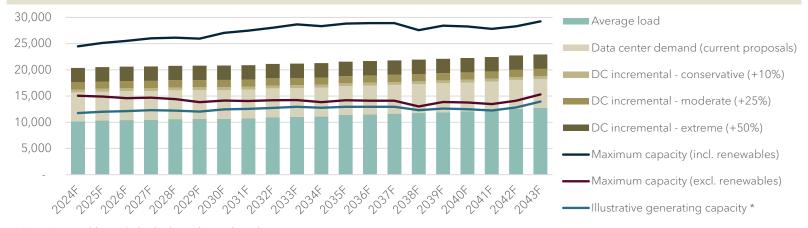




Wind and solar have been the largest growing sources of power over the last 10 years

Canada Power Supply is Going Green(er): Wind and Solar have gained the most market share over the last ten years but given the demand for consistent and reliable power generation, we are skeptical this is a long-term solution to the planet's growing power needs. Canadian provinces' use what resources they have available, with the quickest to market being natural gas driven by Alberta and NE BC. Nuclear could be the next biggest non-carbon growth engine but the lead times are long, and AI is growing rapidly so we expect natural gas to dominate in the next 5 - 10 years.

Case Study: Alberta's Projected Incremental Data Center Power Usage (MW, 2024F-2043F)



Note: Renewables includes hydro, solar, and wind.

Current data center proposals could add an additional 5,500 MW of demand to the Alberta power market - this alone would represent ~40% of Alberta's current natural gas generating capacity - the upside is potentially much higher

Alberta Capacity for Data Centers Exists: Alberta's open market uniquely positions the province as a top contender for data center expansion in Canada, however the question remains as to how these data centers will be powered. Data centers require uninterrupted and high-quality power, making nuclear an ideal fit longer term and natural gas a logical medium-term solution. Although this new demand would be phased in gradually, an additional 5,500 MW of power demand would still account for nearly 40% of Alberta's current natural gas generating capacity. It appears that Alberta may follow the US trend of "bring" your own power" in order to avoid potential grid shortages. Regardless, natural gas demand fundamentals could be in for a strong rebound in the coming years.

^{*} Illustrative generating capacity is based on maximum capacity by source forecast multiplied by historical capacity factors (total generation / maximum capacity).

DWA is a premier financial advisory firm specializing in securing debt capital for businesses

Typical DWA Client Profile



Company size: \$8+ million in revenue



Financing size: \$2+ million in debt



Situation: growth, acquisition, turnarounds, optimization, niche industries and more



Profitable or clear path to profitability



Any sector and with a Canadian presence



Exclusions: DWA does not broker equity/securities and does not directly source mortgage-related debt instruments

Types of Loans Across All Industries

We secure debt financing for corporate borrowers and ensure our clients' businesses are positioned to obtain the most attractive debt capital available both now and in the future.

Our experience allows us to solve the most complex financial situations and committed to upholding the highest ethical standards in the industry.

- ✓ Term loans
- ✓ Acquisition financing
- ✓ Operating lines
- ✓ Refinancing
- ✓ Bridge financing
- ✓ Asset-based lending
- ✓ PO financing/WIP financing

- ✓ Trade financing
- ✓ Factoring receivables
- ✓ Equipment loans/leasing
- ✓ Revolving acquisition lines
- ✓ Working capital/lines of credit

DWA Value Proposition



Network



Accelerated Timeline



Expertise & Execution



Resource Allocation



Aligned Structure

- ✓ Vast lender network (~450)
- ✓ Network of trusted ancillary service providers
- ✓ Expedite timeline via professional process and deep lender relationships
- ✓ Create competitive tension and never get a "maybe"
- ✓ Customized process and lender-focused materials (financial model, CIM, etc.)
- ✓ 65+ years combined experience in capital markets
- ✓ Allow business owners to focus on operations while delegating capital raising efforts
- ✓ Heavily weighted success fee creates strong alignment with the borrower
- ✓ Preference for clients with similar values of integrity, accountability, communication and execution