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Power Surge: Legal Landscape of Data Centre Development in Canada

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Welcome to our *Regulatory and Legal Landscape* series, developed to provide a deeper dive into the emerging issues that matter. As always, we are here to help.

There is a surge in data centre development across Canada and the United States to support the ongoing development of artificial intelligence (AI) and other technologies such as cloud service providers and cryptocurrency mining operations. Canadian grid operators have listed data centre expansion and growth key drivers in forecasted power use in the coming years.[1] Indeed, global power demand for data centres is estimated to be the single largest driver of new electricity demand over the next five years.[2] The rapid growth in data centre development presents significant energy, real estate, and corporate legal challenges that developers (and other players in the space, including land owners, operators, and investors – including Private Equity funds) should address.

Canada has uniquely positioned itself as an attractive destination for the operation of data centres due to: (i) the low electricity prices in some regions; (ii) significant renewable electricity sources; and (iii) a relatively cool climate.[3] The low electricity prices and cool climate are attractive qualities for companies looking to build new data centre facilities, as both factors reduce the cost of constructing, operating and maintaining data centre facilities in Canada.

The key legal issues for the development of data centres in Canada include:

- **Energy** – Applying for and negotiating electrical utility agreements, transmission service agreements and permitting licenses involving transmission infrastructure to facilitate interconnection to the electricity grid, particularly as data centres consume large amounts of energy and require firm power sources to operate continuously.[4]
- **Real Estate** – Site selection is a crucial factor for data centre success, driven by latency and electrical transmission requirements, land acquisition costs and local zoning and land use regulations.[5]
- **Corporate** – Including the structuring of transactions and entities and conducting appropriate due diligence, with considerations for financing and investment in projects, tax, securities and

competition law concerns.

We address each of these issues in more detail below and provide under each topic some key legal considerations.

Energy

Data centres and their respective infrastructure and facilities consume large amounts of energy.[6] While energy efficiency has increased from advancements in technology, new advancements in the AI space have created a surge in energy consumption, which has resulted in increased workloads for data centres.[7] The regulatory structure and cost framework affect the speed and price at which utilities in various provinces in Canada are able to deliver power to data centres.[8] Data centres must typically obtain regulatory approval for interconnection to the provincial transmission grid.

For developers, the electricity interconnection process is a paramount legal and development consideration. We have summarized the key considerations for the interconnection processes in Ontario, Alberta, and British Columbia below.

- In Ontario, the connection process involves both the Ontario Independent Electricity System Operator and the local transmitter or distributor. This process can take anywhere from a few months for modifications to existing facilities to three years for new facility connections.[9] Potential customers with large loads are encouraged to engage in regional planning processes to potentially mitigate costs of connection.[10]
- Alberta has a deregulated electricity market and the interconnection process is driven by the Alberta Electric System Operator. It involves a range of private local transmission and distribution system operators. The interconnection process in the Province can take anywhere from a few months to just over one year and typically involves more public regulatory approvals depending on the nature of the connection.[11] The process for all loads greater than 5 MW is also managed in batches called clusters, with entry to the connection process only possible for defined periods, which have to date occurred approximately once a year.[12]
- In British Columbia, the Crown corporation BC Hydro generally manages the load interconnection queue to determine the order for initiating load interconnection studies and subsequent cost allocation for facilities that are necessary to accommodate accepted load interconnection requests. This process can take anywhere from a few months to approximately one year, depending on the complexity of the project, load size and location.[13]

The complexities of these interconnection processes often motivate developers to formulate unique solutions to secure a sufficient power supply within the respective electricity grid. These include contracting for power generation through virtual power purchase agreements (VPPAs) or through on-site power

generation.

As we've previously written,[14] VPPAs involve the acquisition of energy and associated renewable attributes. VPPAs are "virtual" in the sense that the physical electricity generated by the project is not transferred to the buyer and the buyer does not take legal title. Rather, the parties settle the transaction based on a contract for differences or the difference between the fixed price and spot price in the open market.

VPPAs involve reconciling a monthly settlement amount where the buyer tops up the seller to the extent the spot price is less than the strike price. Conversely, the seller pays the buyer if the spot price or pool price is greater than the strike price. The buyer still purchases physical electricity from the utility to fulfil its energy needs.

Onsite power generation (including gas and solar power plants) can be an attractive option for data centre development for economic, reliability, and/or decarbonization reasons. However, onsite power generation requires careful attention to entity structuring, location, and required regulatory approvals in every jurisdiction:

- In terms of entity structuring, distributing electricity from one entity to another is often contrary to regulatory requirements, as such requirements limit distribution only to licensed utilities. This limitation can sometimes be navigated through careful consideration of necessary regulatory approvals, as well as entity structuring, physical locations of data centres and early consultation with the local utilities.
- In terms of location, distributing electricity from one location to another is often contrary to these same limitations on distribution. It is important to consider the land parcels involved, whether it is necessary to cross public road allowances, and if it is possible to design power generation facilities to reflect these issues.
- Onsite power generation may be totally exempt from regulatory approvals or may require specific novel regulatory approvals, where such required approvals depend on the design of the project and the jurisdiction the project is located. If such novel regulatory approvals are required, they may be entirely new ground for regulators, or regulators may already have an established, but contrary view, of onsite power generation that needs to be addressed.

In addition, decarbonization is often a key metric for data centre developers and their downstream customers, leading to consideration of the overall carbon intensity of provincial grids and the possibility of onsite or offsite decarbonization through renewable energy generation, entering into VPPAs or involvement in carbon capture storage projects.[15]

Key Legal Considerations

Canadian provinces each have distinct electricity interconnection approval processes that are critical for

data centre developments to proceed. It is paramount that developers obtain interconnection approvals within their project timelines, understanding that regulatory processes can take months to years. Data centre developers should also consider whether VPPAs and/or onsite power generation is necessary to underpin the development, or meet customer demands, and enter into corresponding agreements.

Real Estate

Site selection is a crucial factor in the success of data centre development. Key considerations include power availability, climate considerations, and associated costs. Investors, developers and operators must carefully evaluate locational factors, such as regional nuances and infrastructure challenges, to ensure the site's viability and long-term sustainability.

Location and Infrastructure Readiness

- Data centres require significant and uninterrupted power. While major urban centres such as Toronto, Calgary and Vancouver serve as key data centre markets due to their population density and urban environments, these areas also offer high connectivity and access to renewable energy sources. In order to avoid redundancy, developers are encouraged to consider the site's proximity to multiple substation and backup power sources (e.g., dual feeds, generators) to ensure resilience.
- Access to robust fiber optic infrastructure is critical for low latency and data transmission. Major regional centres benefit from dense fiber networks. However, with any location it is critical to evaluate the availability of multiple fiber providers and diverse routes to ensure minimal downtime.
- Sites that are close to major population centres are ideal for low-latency applications, however, data centre developers must balance connectivity with challenges like higher land acquisition costs and property taxes.
- While data centres require minimal workforces, proximity to transportation networks such as highways and airports is still advantageous and will be relevant for construction logistics, equipment delivery, and ongoing maintenance. Remote locations may offer lower land costs but must be evaluated for accessibility during critical infrastructure deployment as well as operations.

Zoning and Land Use Regulations

- It is essential to confirm that municipal zoning bylaws support data centre development as heavy power use and industrial infrastructure may require special zoning approvals. Data centres often fall under industrial or special-use zoning categories and many municipalities designate industrial zones for data centres, ensuring access to power and utilities infastructure. Developers are encouraged to engage with local planning authorities to understand the approval timelines and potential challenges. Some regions may have expedited processes for infrastructure projects that align with municipal planning and development goals.

- Greenfield sites offer flexibility for large-scale builds, while brownfield developments may require environmental remediation but can reduce approval timelines.
- Data centres require advanced cooling solutions, which may produce significant noise. Developers must ensure compliance with municipal noise bylaws and factor in buffer zones to avoid conflicts with nearby developments.
- Large-scale developments may require environmental reviews, particularly in ecologically sensitive areas or regions relying on natural cooling solutions.
- As demand for data centres grows, sites should be selected with scalability in mind, with a view to evaluating land parcels that accommodate future expansion without requiring additional zoning approvals. Proximity to new technological hubs must also be considered. Early consultation with municipalities will be important to ensure long-term alignment with local development and economic goals and objectives as well as future infrastructure upgrades.

For data centre development in Canada, real estate decisions will depend on infrastructure readiness and zoning compliance. Developers should prioritize locations with robust power grids, strong fiber connectivity, and supportive planning/zoning approval frameworks. Meaningful early engagement with local authorities and infrastructure providers will be essential for navigating government approvals and ensuring scalability with a view toward future-proof investments.

Key Legal Considerations

Prior to engaging in land acquisition for data centre development, it is important to ensure that municipal zoning bylaws support such projects, as heavy power use and industrial infrastructure may require special approvals. Data centres often fall under industrial or special-use zoning categories, and developers should engage with local planning authorities to understand approval timelines and potential challenges. Proximity to transportation networks in large urban centres aid logistics, while remote sites may offer lower costs but necessitate careful assessment of accessibility.

Additionally, large-scale developments may require environmental reviews, particularly in ecologically sensitive areas. As demand grows, sites should be selected with scalability in mind, considering land parcels that accommodate future expansion without needing additional zoning approvals. Early consultation with municipalities is crucial to ensure long-term alignment with development goals and future infrastructure upgrades.

Corporate Considerations

Competition Law and *Investment Canada Act*

Parties should keep in mind that Canadian competition laws should be assessed on every transaction. In

particular, the parties should engage counsel to review the proposed transaction against the *Competition Act* (Canada)[16] review thresholds and timelines respecting an acquisition of a property in relation to a data centre transaction.

As in any deal, if a non-Canadian investor is seeking to acquire a stake in a Canadian data centre business, the investor should engage counsel to assess the *Investment Canada Act* (Canada)[17] for current thresholds and timelines to determine whether the investment is subject to review or notification under the *Investment Canada Act* and if any exceptions may apply.

Structuring

When structuring a transaction in respect of data centres, some tax considerations include: the implications to non-Canadians investing and participating in a data centre development, the availability of tax credits in respect of certain investments in eligible property, and determining a tax-efficient vehicle or structure in which to own and operate the assets of the data centre and their respective infrastructure and facilities.

Due Diligence

From a corporate due diligence perspective, investors and entities must undertake comprehensive assessments to mitigate risks associated with data centre acquisitions and investments. This includes due diligence on technical infrastructure. It is also important to perform diligence on real estate matters, such as ownership and leases associated with the data centre's real property, and any lands required for electricity interconnections. In our experience, data centre corporate diligence also involves consideration of project-specific financing, tax, securities and competition concerns.

In addition to the customary corporate due diligence analysis, which generally includes review of corporate structure, material agreements, banking and indebtedness, litigation, intellectual property, regulatory, insurance, tax, employment and environmental matters, the two fundamental areas for due diligence for a data centre transaction are real estate and energy. Investors (such as Private Equity funds) will typically be interested in understanding the market participation and load participation authorizations of the parties under the electricity legislation and regulations of the respective province and the ability to transfer the selling party's eligibility under such legislative scheme to the acquiring party. As part of the due diligence process, the buyer/developer/investor will typically assess: (i) availability of any electricity generation facilities on the property including type, nameplate capacity, ownership, operation, location, interconnection, contract arrangements for the supply and output; (ii) general configuration and locations of the electricity distribution lines; and (iii) potential for upgrades and expansion to increase generation capacity of the electricity distribution system. If a lease is in place, the investors look for the tenant's rights under the lease agreement to increase power requirements among other considerations.

Governance

Depending on the parties involved in the transaction, and the structure of the deal, governance amongst the entities that will own the data centre can be an important consideration in the negotiation of the transaction agreements. For investors, some key considerations include: (i) obligations in respect of future capital/debt requirements; (ii) voting control, including shareholder approval thresholds such as supermajority approval; (iii) transfers of ownership interests; (iv) rights of first refusal and offer, tag-along rights and drag-along rights; (v) triggers for liquidity transactions and events of default; (vi) restrictive covenants; and (vii) board composition.

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[1] CER; see: APO-20241016-presentation-demand-forecast.pdf [IESO Demand Forecast]; see also: 2024-LTO-High-Electrification.pdf; see also: https://www.aeso.ca/assets/Uploads/grid/lto/2024/2024-LTO-Report-Final.pdf.

[2] See: Orennia, Data Centres 101, online: Data Centers 101 [Orennia].

[3] CER.

[4] CER and US Federal Government.

[5] See: Clean Energy Resources to Meet Data Center Electricity Demand | Department of Energy [US Federal Government], CER and ENCOR.

[6] CER and US Federal Government.

[7] CER.

[8] See: How Utilities, Hyperscalers Are Working to Tackle 'Extreme' Data Center Power Demands.

[9] See: Overview of the Connection Process [IESO].

[10] IESO.

[11] See: Cluster Assessment » AESO; see also: Connection Process » AESO [AESO Grid].

[12] AESO Grid.

[13] See BC Hydro, Business Practice for Load Interconnection Queue Management, Version 1.4 (July 10, 2024), online: Business Practice for Load Interconnection Queue Management (Updated: July 10, 2024) [BC Hydro]; see also: Transmission Generator Interconnections; see also: Interconnections Statistics Transmission Load (Q4 Report Fiscal Year 2022); see also: Interconnections Statistics Transmission Load (F2022-F2023 Q3 report).

[14] https://cassels.com/insights/regulatory-affairs-best-practices-for-working-with-counsel-on-corporate-renewable-energy-deals/.

[15] See: Data center decarbonization: The secret to success and sustainability? - DCD.

[16] *Competition Act* (RSC, 1985, c. C-34).

[17] *Investment Canada Act* (RSC, 1985, c. 28 (1st Supp.)).
