Data Centres

What is a Data Centre?

A secure facility that houses computer servers and electronic equipment.

Traditional Data Centres

- *Database management, cloud computing, website hosting*
- *CPU (central processing units)*

Artificial Intelligence Data Centres

- *AI training, cryptocurrency, parallel processing, complex analytics*
- *CPUs + GPUs (graphics processing unit)*

Why Do They Exist?

Because the internet is a physical asset:

- **Backbone**
  - Submarine and Fiber-Optic Cables that connect cities, provinces, countries, and continents to each other's data.
- **Storage**
  - Data Centers that host servers (~12,000 globally / ~300 in Canada / ~39 Alberta)
- **Transit**
  - Internet Exchange Points (IXPs) where different internet service providers (ISPs) and content delivery networks (CDNs) connect their networks to each other.
- **Last Mile**
  - Cell towers, Starlink Satellites, Household modems that facilitate personal computers and smart phones to access the internet.

Projected Demand for DCs (2025 – 2030)

- **~33%** annual growth in capital investment in AI Data centres.
- 5-year capital investment demand projected **$6.7 trillion** (*McKinsey*)
- 2026 capital deployment: **~$600 billion** (*Goldman Sachs*)
  - ~40% of this investment in North America
  - Alberta targeting $100 billion over 5 years

Who is Responsible for this Growth?

The ‘Magnificent Seven’ account for about 1/3 of all data centre usage worldwide and over half new AI data centre construction demand:

- Alphabet
- Amazon
- Apple
- Meta
- Microsoft
- Nvidia
- Tesla

‘Hyperscalers’

Who Owns Data Centres?

- Hyperscalers (e.g., META & Amazon Data Campuses)
- 3rd Party Operators (e.g., Equinix, Digital Realty, CyrusOne)
- Private Equity / Investment Consortiums (e.g., Blackrock)
- Specialized Firms / Others (e.g., Bell Canada, Beacon, TNE)

What Determines Suitable Locations?

- **Infrastructure**
  - Power availability, network connectivity, land scalability.
- **Geographical & Regulatory Environment**
  - Climate, environmental risks, government regulations
- **Societal Factors**
  - Skilled workforce, community support, physical security

Why Canada / Alberta / Olds?

➢ Canada

- AI Sovereign Compute Strategy (~$2 billion to support new & expanded DCs)
- Federal 'Cloud-First Strategy' and Digital Resilience Initiatives
- Political & Economic Stability
- Suspension of Clean Energy Regulations for Alberta

➢ Alberta

- Provincial AI Data Centre Strategy & Data Centre Concierge
- Regulatory Modernization / Relaxation / Incentivization
- Land, Natural Gas, Cold Climate

➢ Olds

- Natural Gas Proximity
- Trunk Fibre lines
- Land Availability & Zoning
- Labour Pool
- Proximity to YYC


AI Data Centre Strategy
Powering the future of artificial intelligence

Data Centres & Olds

SNDL Rezoning

- *May 12th, 2025: 1st Reading of Bylaw 2025-11*
- *June 9th, 2025: Public Hearing + 2nd/3rd Reading of Bylaw 2025-11*
- *'Data Centre' use added to Town zoning for 1st time*

Land Use Bylaw Review

- May & June: Presentation on proposed LUB Update
- *July & August: Survey, Open Houses, Pop-up engagements*
- *August 25th, 2025: 1st Reading of Draft LUB*
- *September 8th: Public Hearing*
- *October 14th, 2025: 2nd & 3rd Reading of LUB*

Danielle Smith
December 18, 2025 at 7:32 AM ·

Amazing news! Getting the net zero power regs lifted under the MOU has resulted in four new datacentres (worth $1.2 billion) being announced for construction in Olds and Bonnyville.

As the CEO says: "The main [reasons] would be the [province's] openness to business, which we've faced in a not-so-seamless way in other jurisdictions."

The renewed Alberta Advantage is here. More to come 😀

IG NEWS:

Nate Glubish · Following
Minister of Technology & Innovation @ Govern...
2w ·

"A new date centre has been announced for Olds that could generate up to $300 million in investment and create nearly 300 jobs next year.

Invest Olds, the town's investment attraction and business development initiative, said it has been working since September with Data District Inc. on a "state-of-the-art data centre campus" expected to be operational by the second half of 2026. Data District is a division of Swiss asset management firm Alcral AG."

Read more at: https://lnkd.in/gAage87N

https://lnkd.in/gAage87N

Data centre announced for Olds - Red Deer Advocate
reddeeradvocate.com

230 15 comments • 23 reposts

Nate Glubish · 2nd
Minister of Technology & Innovation @ Government of Alber...
5d ·

Connect

If you doubt Alberta has momentum in data centres, I encourage you to read this. It shows the international interest in major infrastructure in our province.

https://lnkd.in/gxiXt8W2

Swiss-backed data centre plan targets $12.8 billion in gas-rich Alberta
financialpost.com

Important Notes

No development permit applications have been received for a data centre to date.

The Town does not have a role in private land transactions.

Data Centres: Municipal vs. Provincial

Municipal Scope = Zoning, Land Use Approvals, Safety Codes, Local Infrastructure (Roads/Servicing), Aesthetics

Provincial Scope = Water, Power, Emissions

Areas of Overlap = Noise & Light Mitigation

Primary Concerns & Risks

➢ Resource Risks

- Power Grid Capacity
- Water Consumption

➢ Community Concerns

- Electricity Costs
- Water Scarcity
- Noise, Light, Emissions
- Emergency Response

‘Out of Scope’ Issues

- AI Cyber-attacks / Data Privacy
- Bankrupt/Stranded Assets
- Other effects of an ‘AI’ Economy

Mitigation: Municipal Issues

Noise & Visibility Concerns

- Setbacks & buffering requirements during permitting process

Roads & Servicing

- Developer's cost
- Admin confirms most suitable water, sanitary, & storm options
- Development Agreement

Emergency Response

- Water availability is most important issue
- OFD already trains for industrial emergency response

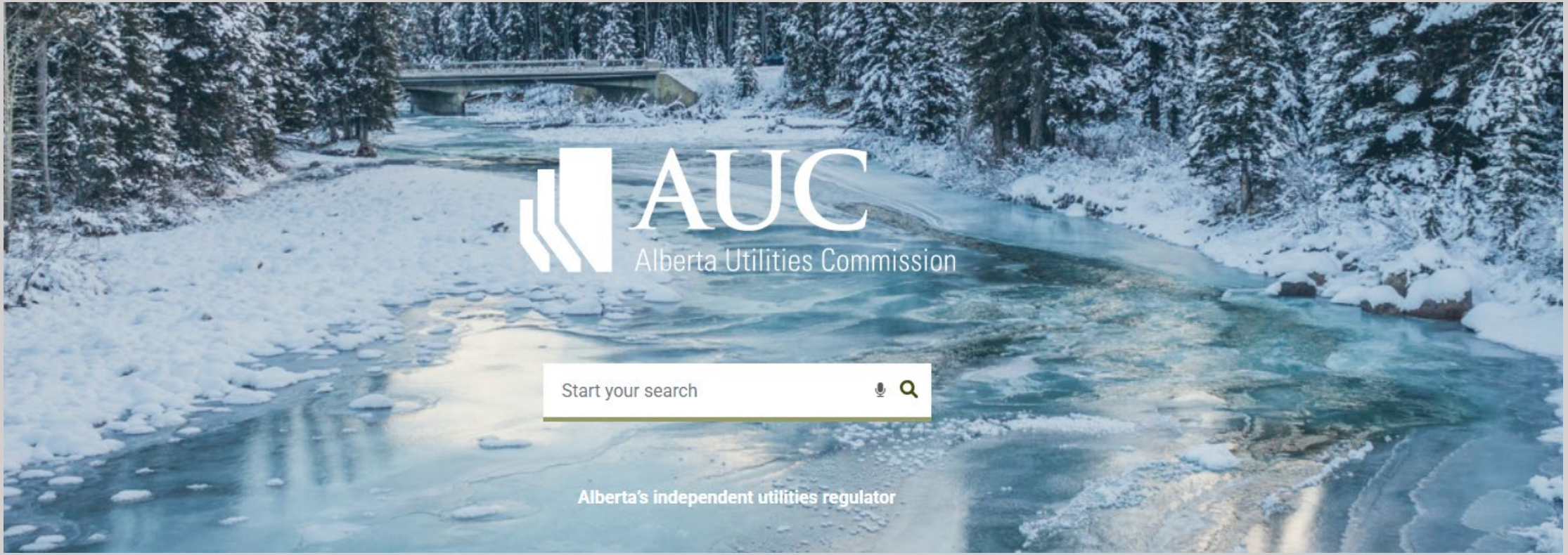
Mitigation: Provincial Issues

Power Grid Demand (AUC / AESO)

- DCs prioritized by self-generation capacity (i.e., NG Cogen)
- Primary focus on stabilizing prices for existing customers
- AUC Engagement Process

Water Consumption (Alberta Environment and Protected Areas)

- DCs must align with existing water allocations.
- Red Deer Basin & MVRWSC have excess license capacity.
- Approval required for ‘significant’ industrial water use.



Rule 007: Facility Applications

AUC Engagement Process

Participant Involvement Program (PIP) to be developed

- Notifying landowners & occupants, neighbouring municipalities, and indigenous groups (where applicable).
- Provide understandable information about:
  - Nature, purpose, scale of the proposed project, potential impacts, and regulatory approvals being sought.
- Document concerns and responses
- File ‘PIP Summary’ as part of the AUC Application

AUC Approval Process

1. Application (w/ Completed PIP) is filed with the AUC
2. AUC Completeness Review
3. Public Notice & Opportunity to Participate (If deemed necessary)
4. Additional Information Requests (if deemed necessary)
5. Hearing (if deemed necessary)
6. AUC Decision (ultimate authority)

Power & Water Considerations

- **Power Needs**
  - Natural Gas Co-generation (no grid tie in)

- **Water Needs**
  - ‘Closed Loop Systems’ (single fill ~300 – 500cm3 per data centre)
  - SNDL: ~5,500cm3 per month

❖ *Water Commission holds an annual license of ~9.9 million cubic meters of water, uses ~50% of that allocation.*

Potential Positive Impacts

- Temporary & Permanent Jobs Created
- Billions of dollars invested into our economy & province
- Tax & franchise fee revenue impact
- Ancillary Impacts (housing, business, community investment, etc.)
- Technology Hub Potential

Employment?

➢ Construction requires hundreds to thousands of workers.

➢Data Centres are traditionally modest employers (~30 – 150 FTE)

- **Trades:** Electricians, HVAC Operators, Natural Gas Plant Operators
- **IT & Network Operations:** Network Engineers & Technicians
- **Site Management & Security:** Managers, Logistics, Security Personnel

➢Indirect Jobs

❖ **Natural Gas Co-Generation employment is uncertain**

Conclusion

- AI Data Centres are a significant part of our economy
- Attracting them is one piece of our larger Ec Dev Strategy
- There are risks, issues, & concerns that need to addressed
- The Town can mitigate issues in our scope and will work the AUC & the Province should an application be submitted
- The economic potential is significant for Olds & Alberta

Thank you

Questions?