

July 9, 2026

Jason Van Gaal
CEO
Synapse Real Estate Corp
25 Chemin Ôra
Saint-Adolphe-d'Howard, Que. J0T 2B0

Dear Jason Van Gaal:

Synapse Real Estate Corp
Synapse Data Center Power Plant Project
Proceeding 30732
Application 30732-A001

Information request round 2

1. Synapse Real Estate Corp filed the subject application with the Alberta Utilities Commission on April 3, 2026. The Commission issued information requests to Synapse on May 14, 2026, and received responses to the requests on June 5, 2026, and supplemental information on June 10 and 11, 2026.
2. The Commission has reviewed the application, information responses and supplemental information and has the following additional information requests. To maintain application processing timelines, the Commission would appreciate if you could please provide your response by **July 23, 2026**.
3. Should you have any questions, please contact the undersigned at 403-592-4439 or by email at victor.choy@auc.ab.ca.

Yours truly,

Victor Choy, P.Eng.
Lead Application Officer
Facilities Division

Attachment

**Synapse Real Estate Corp
Synapse Data Center Power Plant Project
Proceeding 30732
Application 30732-A001**

**Alberta Utilities Commission Information Request Round 2 to
Synapse Real Estate Corp (Synapse)**

Synapse-AUC-2026JUL09-001

References: Exhibit 30732-X1241, TP 31 - Noise Impact Assessment - Stage 2, PDF pages 56-58;
Exhibit 30732-X1223.01, Synapse Response to AUC IR No. 1, PDF pages 65-66

Issue: Final equipment and noise mitigation implementation

Quotes: Exhibit 30732-X1241, PDF pages 56-58:
“Appendix F: Noise Control Acoustic Specifications

Summary

The table below lists the noise control items designed to bring the Olds Data Center in compliance with regulations for nighttime operations.

Table 5: Noise Control Recommendations – Nighttime

Item	Noise Source	Noise Control
1	Chillers	Install chillers with ≤ 85 dBA [A-weighted decibels] PWL [sound power level] per unit
2	ACC Discharge	Install discharge silencers on all ACCs with specifications below
3	Condenser Cooling Pumps Rooftop	Operate one (1) out of (3) units that are located on the rooftops of all power plant buildings
4	Plant -South-west Side	Upgrade and install ≥ 8 m high, highly absorbing (both sides assumed absorption coefficient 0.84) noise barriers as depicted on the figure below, see below for available industrial noise barrier specifications

...

The table below lists the noise control items designed to bring the Olds Data Center in compliance with regulations for the identified worst-case event assuming nighttime compliance is achieved by implementing the above noise control recommendations. [underline emphasis removed]

Extended Noise Control Recommendations - Worst-Case - Nighttime

Item	Noise Source	Noise Control
1	Emergency Back-up Generators Upgrade	Upgrade all emergency back-up generators to achieve 65 dBA @ 7m [metres] for single unit

”

Exhibit 30732-X1223.01, PDF pages 65-66:

“Confirmed. The NIA [noise impact assessment] concluded that implementation of the **four “Noise Control Recommendations – Nighttime” items** in Appendix F of the Project Noise Impact Assessment (NIA) (Exhibit 30732-X011, TP 31 – Noise Impact Assessment) is required to achieve compliance with the applicable Permissible Sound Levels (PSLs) at nearby receptors for nighttime operations. Accordingly, Synapse will implement **those four recommendations**,

or equivalent measures demonstrated through detailed engineering to provide the same or improved acoustic performance, to ensure compliance with AUC Rule 012 [*Noise Control*]. This will be incorporated into the final facility design and reflected within the final NIA.” [emphasis added]

Preamble: The NIA demonstrates compliance with Rule 012 following the implementation of specific noise control measures and assumptions regarding equipment performance; however, detailed engineering and procurement activities remain ongoing, and final equipment specifications have not yet been confirmed. The assessment therefore relies on representative or assumed sound power levels and mitigation measures that are to be incorporated at a later stage. Synapse has committed to implement the mitigation measures for the normal operation scenario.

Request:

- (a) Please describe the current status of equipment procurement and detailed engineering. In particular, confirm whether key equipment (e.g., turbines, chillers, generators) has been selected.
- (b) Please confirm that, in addition to the mitigation measures for the normal operation scenario, Synapse will implement the mitigation measures for the worst-case scenario.
 - (i) Specifically, confirm that the emergency backup generators will achieve a maximum sound level of 65 dBA at seven metres for each unit, or equivalent or better acoustic performance, consistent with the assumptions in Appendix F of the NIA.
- (c) Please confirm that procurement and construction specifications will include acoustic performance requirements consistent with the modelling assumptions and all noise control measures identified in the NIA (e.g., maximum sound power levels, enclosure performance, barrier specifications), including vendor guarantees where applicable.
- (d) Please confirm that an updated NIA, based on the final project design and equipment specifications, will be filed prior to operation to validate compliance with Rule 012.
- (e) Please describe how the effectiveness of mitigation measures will be verified and maintained during operations, including any monitoring, testing, or corrective action processes.

Synapse-AUC-2026JUL09-002

Reference: Exhibit 30732-X1223.01, Synapse Response to AUC IR No. 1, PDF page 2

Issue: Procurement and construction

Quote: “Current indications from the preferred gas turbine supplier suggest that turbine delivery can occur as early as November 2026, subject to final procurement arrangements and permitting timelines.”

Request:

- (a) How long would it take for Synapse to procure all the gas turbines, steam turbines and diesel generators required for the full build of the project?
- (b) How does the estimated procurement of the first gas turbine line up with permitting, construction and operation of the pipeline to supply the gas?

Synapse-AUC-2026JUL09-003

Reference: Exhibit 30732-X1223.01, Synapse Response to AUC IR No. 1, PDF page 6

Issue: Project siting

Quote: “The Town of Olds and Synapse engaged in discussions regarding a potential 1GW [gigawatt] data center with attached 1.4GW natural gas power plant in December of 2025. The North East Area Structure Plan was identified as the preferred location within the Town of Olds because its ILD [Light Industrial District] zoning allows for data center development as a discretionary use.”

Request:

- (a) Did Synapse consider other potential locations for the project, specifically ones farther away from population centres?
- (b) If yes, why was the current proposed location selected over the other option(s)?

Synapse-AUC-2026JUL09-004

Reference: Exhibit 30732-X1223.01, Synapse Response to AUC IR No. 1, PDF pages 14, 16 and 17

Issue: Real-world examples

Quote: PDF page 14:

“10 substantially identical data centers and power plants are expected to be built as part of the Project. An example rendering is provided in Exhibit 30732-X0013 with a site plan showing the location of all buildings.”

Preamble: Synapse provided updated renderings of the project on PDF pages 16 and 17 in Exhibit 30732-X1223.01 of the modular design with integrated gas power plants and an open-air mechanical yard.

Request:

Please provide real-world examples of data centres of a similar size, modular design and an open-air mechanical yard.

Synapse-AUC-2026JUL09-005

Reference: Exhibit 30732-X1223.01, Synapse Response to AUC IR No. 1, PDF pages 19 and 21

Issue: Diesel generators

Quotes: PDF page 19:

“... in the event of an interruption to the natural gas supply requiring diesel generation that would exceed emission and/or noise limits >1% of a calendar year (87.6 hours), the facility would be safely shut down, unless otherwise permitted by regulatory authorities.”

PDF page 21:

“All mechanical and electrical systems in the data center are monitored by a centralized building monitoring system. Emergency runtime hours for each unit will be recorded, and alarm will be set to ensure they do not exceed allowed site runtime limits.”

Preamble: It may be possible that a mix of diesel generation and gas generation is used to power the data centre and this mix does not result in an exceedance of noise or emissions limits.

Request:

- (a) Given that it is possible that diesel generation is used that does not result in noise or emissions exceedances, please elaborate on how tracking each emergency generator's runtimes and alarms will limit the noise and emissions exceedances to 87.6 hours per year?
- (b) Has Alberta Environment and Protected Areas indicated if it will regulate the diesel backup generation?
 - (i) If yes, does Synapse anticipate that the *Environmental Protection and Enhancement Act* approval will require monitoring and reporting of runtime and emissions from the diesel backup generation?
 - (ii) If not, how will Synapse actively monitor emission exceedances to ensure the cumulative annual exceedance does not exceed 87.6 hours per year?
- (c) How will Synapse actively monitor noise exceedances to ensure the cumulative annual exceedance does not exceed 87.6 hours per year?
- (d) What combinations of diesel and gas generation would result in noise or emissions exceedances?

Synapse-AUC-2026JUL09-006

Reference: Exhibit 30732-X1223.01, Synapse Response to AUC IR No. 1, PDF page 20

Issue: Diesel generators

Quote: “Following a loss of generation, the emergency diesel generators may operate for a limited duration, within the operating limits prescribed by regulatory requirements, to support critical facility functions and provide operators with an opportunity to restore normal power generation. If natural gas-fired generation can be re-established within the regulatory permitted period, the facility will transition back to normal operations and the emergency generators will be cycled down.

If normal generation cannot be restored within the permitted emergency operating period, the data center will be transitioned to a controlled shutdown state and the facility will enter a blackout condition. Once the cause of the outage has been resolved, designated emergency diesel generators will provide black-start capability to restore power to essential plant systems and facilitate the restart of the natural gas-fired generating units.”

Preamble: For each pair of natural gas-fired combustion turbine generating units and heat recovery steam generator there are 60 diesel generators.

Request:

- (a) In the event of a loss of generation from a gas-fired turbine, how many diesel generators would operate?
- (b) How many diesel generators are required for black-start capability to restore power and transition to the natural gas-fired generating units?
- (c) Please confirm whether the 60 diesel generators attributed to a modular block can be used for another modular block.

Synapse-AUC-2026JUL09-007

Reference: Exhibit 30732-X1223.01, Synapse Response to AUC IR No. 1, PDF page 20

Issue: Diesel generators

Quote: “Diesel will be stored in generator belly fuel tanks. The belly fuel tanks are double walled with vacuum leak detection. They are expected to be manufactured with heavy gauge steel and powder coated. They are equipped with spill containers at each fill connection that are fixed to the tank and equipped with a manual valve drain into the primary tank. Tanks will also be equipped with vents that will relieve excessive internal pressure caused by exposure to fires. The venting devices will be installed and maintained in accordance with the National Fire Protection Association (NFPA) code NFPA 30, *Flammable and Combustible Liquids Code*.”

Request:

- (a) Please describe the process of refilling/topping up the diesel fuel tanks for the entire facility.
- (b) How many fuel trucks would be required, how long would it take to refuel and how frequently would this operation occur?

Synapse-AUC-2026JUL09-008

References: Exhibit 30732-X0007, TP 25 - Air Quality Assessment v1.2, PDF page 19;
Exhibit 30732-X1223.01, Synapse Response to AUC IR No. 1, PDF pages 2
and 12

Issue: Generator stack heights

Quotes: Exhibit 30732-X1223.01, PDF page 2:

“The Project Noise Impact Assessment (NIA) and Air Quality Assessment (AQA) were completed using the performance characteristics of the preferred equipment currently under evaluation by Synapse. Commercial negotiations and procurement activities had not been completed when the assessments were prepared and, as described in the response to (a), remain ongoing. Therefore, the assessments relied on performance-based design criteria rather than identifying a specific manufacturer and model.”

Exhibit 30732-X1223.01, PDF page 12:

“The location of the power plant and associated stacks is shown in Exhibit 30732-X0013, on PDF page 6. Each stack is ~450m from the front of the building. The exhaust stack is therefore not readily apparent at the scale of the rendering as it is currently designed with a diameter of 6 m. At the time Exhibit 30732-X0013 was prepared, the stack heights had not yet been finalized. The stack heights were, and continue to be, optimized to ensure compliance with the AAAQO [Alberta Ambient Air Quality Objectives] while minimizing visual impacts.”

Preamble: The air quality dispersion modelling assessment (Exhibit 30732-X0007, PDF page 19) lists the stack height of the natural-gas generators as 17.4 metres and the stack height of the emergency backup generators as nine metres.

Request:

- (a) Please confirm whether the stack heights described in the air quality dispersion modelling assessment are representative of the final stack heights.
- (b) Is Synapse able to commit to stack heights of 17.4 metres and nine metres as the maximum stack heights for the natural gas generators and diesel generators, respectively?

Synapse-AUC-2026JUL09-009

Reference: Exhibit 30732-X1223.01, Synapse Response to AUC IR No. 1, PDF page 28

Issue: Gas supply

Quote: “The available gas capacity is as follows:

Potential Supply Volume	Potential Gas Supply per Supplier		Potential Gas Supply Cumulative	
	Normal Baseline (4,900 E3M3/day)	Peak Load (6,720 E3M3/day)	Normal Baseline (4,900 E3M3/day)	Peak Load (6,720 E3M3/day)
900 E3M3/day	18%	13%	18%	13%
2,830 E3M3/day	58%	42%	76%	56%
2,688 E3M3/day	55%	40%	131%	96%
3,500 E3M3/day	71%	52%	202%	148%
2,000 E3M3/day	41%	30%	243%	177%
Up to 6,720 E3M3/day	137%	100%	380%	277%

Request:

- Please identify the gas plant operators and plant locations (legal subdivision) listed in the table and, for each, provide the corresponding potential gas supply (in 10³ m³/day) and the approximate distance from the facility to the project. Please confirm the gas supply is sales gas specification.
- Please provide, for each gas plant identified in the table, a five-year history of average gas supply (in 10³ m³/day). This information should be presented as monthly average daily values for each of the past five years.
- Please confirm which suppliers Synapse is planning to use for the project.
- Please confirm whether there is adequate gas supply if any of the planned suppliers have extended planned or unplanned outages (such as plant turnarounds, equipment failures or production upset events).

Synapse-AUC-2026JUL09-010

Reference: Exhibit 30732-X1223.01, Synapse Response to AUC IR No. 1, PDF pages 28-29

Issue: Gas supply

Quote: “To ensure reliable gas supply over the lifetime of the Project, other options are being explored with a variety of suppliers including:

- increasing number of additional private suppliers;
- working with major local sources to increase natural gas supplier production capacity;
- working with major local sources to improve gas plant reliability;
- working with major local sources to improve gas plant utilization;
- connection to non-regulated long and short duration gas storage facilities; and
- the use of existing ATCO pipeline through property or supply from other nearby gas utility providers.

Synapse is committed to ensuring reliable gas supply to the facility and supporting central Alberta local natural gas producers and contractors. In the unlikely event the supply diversity and storage options identified above are not determined to provide reliable gas supply to the facility, Synapse will examine connection options into the Integrated Alberta System.”

Request:

Please confirm whether any local natural gas producers hold any proven undeveloped reserves in the project area and, if so, whether there are any current or planned development activities associated with those reserves.

Synapse-AUC-2026JUL09-011

References: Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF page 3;
Exhibit 30732-X1223.01, Synapse Response to AUC IR No. 1, PDF page 38

Issue: Water usage

Quotes: Exhibit 30732-X0001, PDF page 3:
“The cooling system details:

- Type: 100% dry cooling system utilizing air-cooled condensers for steam cycle heat rejection and air-cooled radiators for auxiliary glycol/water systems. No continuous water consumption is required, as all process water (e.g., blowdown, sampling) is captured, treated, and returned to the closed-loop condensate cycle. The current design basis indicates a total maximum make-up water requirement of approximately 20 m³ [cubic metres]/day across all ten (10) power blocks, attributable primarily to evaporative losses within the boiler feedwater cycle.”

Exhibit 30732-X1223.01, PDF page 38:

“Synapse anticipates a total daily water demand of 60m³, consisting of approximately 20m³ for plant operations and 40m³ for onsite staff.”

Request:

- (a) Please provide examples of real-world gas power plants using the proposed dry cooling system along with the generation capacity and water usage of those examples.
- (b) Please comment on the assumptions and level of certainty associated with the water use estimates. In your response, provide the qualifications or relevant expertise of the individual(s) who prepared or reviewed the estimates.