Thermal power plant application

Date: 2026-04-03

Applicant's company name: Synapse Real Estate Corp

Project description

Thermal power plant requirement (TP1)

State the approvals that are being applied for from the AUC and describe the power plant and collector system including:

- Number of generating units and their make, model and the nominal capability of each generating unit in megawatts (MW).
- The total capability of the power plant in MW.
- The anticipated make and model of each generating unit.

Synapse Real Estate Corp is seeking approval under Section 11 of the Hydro and Electric Energy Act (RSA 2000, c H-16) (HEEA) to construct and operate a natural gas-fired power plant with a nominal combined-cycle capacity of approximately 1,400 MW and 1800MW of emergency/backup diesel generators (the Power Plant). The Power Plant shall be co-located with approximately 1,000 MW data center load (together with the Power Plant, the Project). Synapse Real Estate Corp also requests any other approvals or exemptions that may be required by the Alberta Utilities Commission (AUC) to permit the Project to proceed.

Describe the power plant and collector system:

The Project consists of twenty (20) natural gas-fired combustion turbine generating units, each with a nominal simple-cycle capability of approximately 50 MW, and ten (10) Heat Recovery Steam Generators (HRSGs) supplying steam to ten (10) steam turbine generators, each with a nominal capability of approximately 40 MW in combined-cycle configuration. In a 2:1 combined cycle configuration, each power plant is designed to provide a nameplate power output of 140 MW.

The facility will be constructed and operated in a phased configuration. Initial operation of each combustion turbine will occur in simple-cycle mode. Combined-cycle operation will be achieved through the subsequent installation of HRSGs and steam turbine generators, resulting in an increase in output per unit block upon conversion to combined-cycle operation.

The total installed nameplate capacity of the project in combined-cycle configuration, consisting of ten (10) islanded power blocks, is approximately 1,400 MW. Due to site-specific conditions, including elevation-related derating, the expected net output is currently estimated to be lower, with final values subject to detailed design and optimization. Under normal operating conditions, the Project is expected to operate within a range of approximately 800 MW to 1,300 MW depending on configuration, ambient conditions, and operational dispatch.

The anticipated combustion turbine and steam turbine generator equipment will be industrial frame units in the 50 MW and 40 MW classes, respectively, supplied by established original equipment manufacturers (OEMs). Final equipment selection remains subject to regulatory approval, procurement and detailed engineering. All equipment will meet applicable industry standards for performance, emissions, and reliability consistent with the specifications presented in this application. Final equipment will be confirmed at time of final project update prior to commencing construction.

The Project does not include a collector system or connection to the Alberta Interconnected Electric System (AIES), as it is designed to operate as an islanded generation facility dedicated to on-site load. No connection to the AIES is proposed and no system access service request has been submitted to the Alberta Electric System Operator (AESO).

The configuration of generating units into combined-cycle blocks may be refined during detailed engineering, but will not materially change the overall project capacity, impacts or environmental performance described in this application. Final project layout will be confirmed at final project update.

Thermal power plant requirement (TP2)

Provide a list of existing approvals for facilities directly affected by this project, if any.

Synapse Real Estate Corp is not aware of any existing approved facilities that will be directly affected by the Project. Accordingly, no existing facility approvals have been identified as being directly impacted at the time of submission. The Project is being developed on privately owned land and is not anticipated to require modifications to existing approved infrastructure

Thermal power plant requirement (TP3)

Provide details of the project ownership structure, including the names of all companies having an ownership interest in the project and their ownership share, and if applicable, the name of the project operator. Confirm that the applicant is a qualified owner.

The Project is 100% owned by Synapse Real Estate Corp. Synapse Real Estate Corp is federally incorporated and registered in the Province of Alberta. Synapse Real Estate Corp will be the owner and operator of the Project. See Appendix A for Canadian Federal Certificate of Incorporation and Alberta Certificate of Registration.

Synapse Real Estate Corp confirms that it is a qualified owner and has the financial and technical capability to construct, operate, and maintain the proposed power plant in accordance with applicable regulatory requirements.

Thermal power plant requirement (TP4)

For a municipality or a subsidiary of a municipality to hold an interest in a generating unit, provide documentation confirming compliance with Section 95 of the *Electric Utilities Act*.

Not applicable. No municipality or municipal subsidiary holds any ownership interest in the proposed generating units. Accordingly, Section 95 of the *Electric Utilities Act* does not apply to the Project.

Thermal power plant requirement (TP5)

Describe the location of the project:

- Provide the legal description of the proposed power plant boundary (legal subdivision [LSD], section, township, range, meridian and/or plan, block, lot, municipal address for urban parcels) and connection point, if applicable.
- Provide a Keyhole Markup Language (.kml/.kmz) file that reflects the information shown on the drawings and maps submitted to address information requirement TP6. The file should contain the geospatial data (geometry location, and attributes) of each of the major components. See the glossary definition for .kml/.kmz files for detailed specifications.

The Project is located on two (2), contiguous quarter sections, in the Northeast section of the town of Olds. The land is privately owned, zoned industrial and currently farmed agricultural.

Legal description of the proposed power plant site:

The Project will be located on the NW and SW quarters of 04-33-01W5M

Legal description of the connection point, if applicable:

No connection point to the Alberta Interconnected Electric System (AIES) is proposed.

Please see Attachment TP 5 – Synapse Data Center + Plant Layout.kml

Thermal power plant requirement (TP6)

- Provide the following drawings and maps with units of measure/scale and the direction of north specified.
  A legible plant site drawing showing all major equipment components, for example, generators, turbines, heat recovery steam generator, step-up transformers, boilers and the power plant project boundary.
- Legible maps showing:
  - The power plant project boundaries.
  - Land ownership of surrounding lands, including any residences and dwellings within the notification and consultation radii described in Appendix A1– Participant involvement program guidelines, Table A1-1: Electric facility application notification and consultation requirements.
  - Neighbouring municipalities, First Nation reserves, Metis Settlements, including nearby roads, waterbodies and other landmarks that may help identify the general location of the project area. This map may be at a larger scale than the detailed maps provided in response to other information requirements.
  - Important environmental features and sensitive areas in the local study area.
  - Any additional energy-related facilities within the project area.
  - The major land use and resource features (e.g., vegetation, topography, existing land use, existing rights-of-way). This information should also be provided in air photo mosaics.

Drawings and maps required under TP6 have been provided in Attachment TP6 – Drawings & Maps. These materials include a plant site drawing showing all major equipment components, including combustion turbines, heat recovery steam generators (HRSGs), steam turbine generators, emergency/backup generators and the overall project boundary.

The submitted mapping set includes:
• The power plant project boundaries
• Land ownership of surrounding lands, including residences and dwellings within the applicable notification and consultation radii
• Neighbouring municipalities, nearby roads, waterbodies, and other key geographic reference features
• Important environmental features and sensitive areas within the local study area
• Existing energy-related facilities within the project area, where applicable
• Major land use and resource features, including vegetation, topography, existing land use, and rights-of-way, supported by air photo mosaics
• Distance to nearest indigenous community (>85km)

All drawings and maps include appropriate scale, units of measure, and direction of north.

Additional mapping related to participant involvement, including mail-out maps identifying nearby residents, is provided in Attachment TP37.

Thermal power plant requirement (TP7)

Present the estimated power plant heat rates, efficiency of the power plant and details of the cooling system for the power plant.

The estimated heat rate of each plant within the Project is 7.48 GJ/MWh.

The estimated electrical efficiency of the Project is 48.1%.

The heat rate and efficiency values presented above are representative of the Project in combined-cycle configuration. During initial simple-cycle operation, heat rate and efficiency will be lower, consistent with typical simple-cycle gas turbine performance.

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 m^3/day across all ten (10) power blocks, attributable primarily to evaporative losses within the boiler feedwater cycle. Ongoing detailed engineering and system optimization efforts are focused on minimizing this requirement to the lowest practicable level through iterative design refinement.

- Total Heat Rejection for the full site power production = 976 MW_{th}

- Total Heat Rejection for each power plant = 97.6 MW_{th}

- Steam Cycle Rejection for the full site power production = 948 MW_{th} (via Air Cooled Condensers)
  - Steam Cycle Rejection for each power plant = 94.8 MW_{th} (via Air Cooled Condensers)

- Auxiliary Cooling Rejection for the full site power production = 28 MW_{th} (via Glycol/Water Air Coolers)
  - Auxiliary Cooling Rejection for each power plant = 2.8 MW_{th} (via Glycol/Water Air Coolers)

The cooling system has been designed to eliminate reliance on water sources while maintaining reliable thermal performance under site-specific operating conditions.

Thermal power plant requirement (TP8)

For power plants with natural gas piping located within the power plant boundary, provide the following information:

- A schematic showing the tie-in points and associated design and operating pressures (both upstream and downstream of the tie-in points).
- The diameter, maximum operating pressure (in kilopascals), design pressure (in kilopascals), wall thickness, pipe specification, pipe grade and length of the natural gas pipelines proposed within the power plant boundary.
- The design philosophy that will be utilized for the pipeline connections.
- The associated qualifications of the gas installation contractor.
- Confirmation that the fuel gas piping within the proposed plant site will be designed and constructed as pressure piping in accordance with the *Pressure Equipment Safety Regulation* AR49/2006 administered by the Alberta Boilers Safety Association (ABSA) and that all required ABSA approvals will be obtained before operation.

Please refer to Attachment TP8- Process Flow Diagram outlining the equipment and process parameters used during the natural / fuel gas distribution system and all associated piping designs.

Natural gas will be supplied via natural gas pipeline, providing production gas directly from local natural gas producers at 5,200 kPa, and an inlet pressure to site of 4,100 kPa.

Tie-In Points and Pressure Interfaces

The primary tie-in point to the facility is located at the upstream interface of the inlet pipeline pig receiver. The downstream tie-in point, defining the transition to facility piping, occurs at the first flange downstream of the inlet isolation valve. Additional tie-in points occur at each branch connection from the main distribution header to individual gas turbine units. Upstream and downstream pressures at these locations are as follows:

- **Upstream supply pressure:** approx. 5,200 kPa
- **Inlet to facility:** approx. 4,100 kPa
- **Distribution header:** approx. 4,080 kPa
- **Gas turbine inlet:** 2,500–2,900 kPa

The new pipeline is currently in development, and the upstream pipeline operator will be responsible for obtaining all required permits and approvals for its construction and operation.

The demarcation point between CSA Z662 and ASME B31.3 codes of design, is after the first flange downstream of the first inlet isolation valve, located downstream of the inlet gas pipeline pig receiver. This demarcation point represents the transition from pipeline operation and management, and the facility's fuel gas distribution system. The piping specification used after the specification break, to the pressure control system, is SAW-PS-FG-C600, designed to 9,090 kPa at 120 ºC, utilizing ASME B16.5 material group 1.1 components. Pipe materials are carbon steel conforming to applicable ASME B31.3 requirements (e.g., ASTM A106 Grade B or equivalent), consistent with the specified piping class.

The main inlet header is a 16" pipe, consisting of a 0.884" nominal wall thickness (Sch. 80). The inlet header system consists of a metering skid, a cyclone separator to provide liquid knockout, a line heater to provide optimal gas combustion temperature (40 ºC to 45 ºC), and a pressure letdown control station which reduces header pressure to 4,080 kPa prior to entering a series of parallel gas filters. These filters remove particulate prior to admission to the gas distribution header.

The piping specification used in the gas delivery system is SAW-PS-FG-B300, designed to 5,110 kPa @ 38 ºC, utilizing ASME B16.5 material group 1.1 components. The piping which feeds each gas turbine is 4", with a 0.237" nominal wall thickness (Sch. STD) of the same specification as the distribution header.

At the inlet to each 50 MW gas turbine package, pressure is once again reduced to between 2,500 kPa and 2,900 kPa, as per turbine manufacturer specification. The fuel gas piping within each turbine package, as supplied by the turbine manufacturer, is constructed of stainless steel and is designed to the same applicable pressure rating and piping specification as the upstream carbon steel fuel gas distribution system, ensuring consistency in pressure containment and code compliance (especially CSA B149.1/3).

Segment	Diameter	Wall Thickness	$P_{operating}$ (kPa)	P_{design} (kPa)	Specification	Material Grade
Inlet Header	16"	0.884" (Sch. 80)	4,100	9,090	SAW-PS-FG-C600	Carbon Steel
Distribution Header	16", 14", 12", 10", 8"	Varies	4,080	5,110	SAW-PS-FG-B300	Carbon Steel
Turbine Feed Lines	4"	0.237" (Sch. STD)	2,900	5,110	SAW-PS-FG-B300 SAW-PS-FG-B300S	Carbon Steel / Stainless Steel

The total installed length of the main fuel gas header is approximately 1,293 m, with individual branch connections to each gas turbine varying based on plant layout.

The site is to be equipped with a natural gas distribution manifold, which reduces in size as it provides adequate natural gas flow to each data center campus power plant. The manifold has been designed to, and will be constructed to, acceptable codes and standards adopted by the Alberta Boilers Safety Association (ABSA). All pressure piping systems will be registered with ABSA where required, and applicable design registrations (CRNs) will be obtained prior to fabrication and installation.

A mechanical contractor has not yet been selected for construction. All contractors considered for the project will be required to hold a valid Alberta Boilers Safety Association (ABSA) Certificate of Authorization Permit (CAP), maintain an approved Quality Management System (QMS), and demonstrate compliance with Pressure Equipment Integrity Management (PEIM) requirements in accordance with AB-518. Contractor selection will be restricted to firms with demonstrated experience in high-pressure natural gas and process piping systems.

Design Philosophy for Pipeline Connections and Safety Systems

The natural gas fuel gas distribution system has been designed to ensure safe, reliable, and code-compliant delivery of fuel to all power generation units, while incorporating multiple layers of protection against overpressure, loss of containment, and uncontrolled release. All specification breaks are identified downstream of the first flange following the inlet isolation valve, consistent with the defined demarcation between CSA Z662 pipeline systems and ASME B31.3 facility piping, and at transition points between differing piping classes within the distribution system.

The fuel gas header spans approximately 2,756 ft (840 m) from the inlet building towards the north, supplying the first six (6) data center power plants. The above-ground piping reduces in diameter from 16" to 14" after the first four (4) plants, from 14" to 12" after the next four (4) plants, and continues at 12" for the remaining northern units before turning east. The header then extends approximately 1,486 ft (453 m) to supply the final four (4) power plants, reducing from 12" to 10", and subsequently from 10" to 8" prior to termination at the easternmost facility.

All fuel gas piping systems are designed in accordance with the Alberta Pressure Equipment Safety Regulation (AR 49/2006, as amended), and applicable CSA standards, including CSA B149.1 and CSA B149.3 for gas-fired equipment integration, and all required ABSA approvals will be obtained prior to operation. Piping design, materials, fabrication, inspection, and testing will comply with applicable ASME codes, including ASME B31.3 for process piping.

Pressure Protection and Relief Philosophy

The fuel gas system is designed with comprehensive overpressure protection in accordance with ASME and ABSA requirements. Pressure Safety Valves (PSVs) are installed at appropriate locations to protect all sections of the piping system from overpressure scenarios, including regulator failure, thermal expansion, and blocked-in conditions.

Rather than venting to atmosphere or a conventional flare stack, relieved gas is routed through a controlled relief collection system designed to meet Safety Instrumented System (SIS) requirements, with appropriate Safety Integrity Level (SIL) classification based on hazard analysis. The collected relief gas is directed to the duct burner systems associated with the Heat Recovery Steam Generators

(HRSGs), where it is safely combusted, while the source of the leak is automatically isolated and depressurized through automatic relief valves. This approach minimizes environmental impact, reduces fugitive emissions, and aligns with Alberta air quality and environmental protection requirements. This relief handling approach will be validated during detailed engineering to ensure compliance with applicable CSA, ASME, and ABSA requirements for pressure relief and safe disposal of gas.

Emergency Shutdown (ESD) and Isolation Philosophy

The system incorporates multiple layers of automatic and manual isolation to rapidly mitigate abnormal or hazardous conditions:

- A primary Emergency Shutdown (ESD) valve is installed at the main gas inlet riser downstream of the pig receiver, providing full-site isolation from the upstream gas supply.
- Secondary ESD valves are installed at each power plant connection from the main distribution header, allowing isolation of individual units without impacting the remainder of the facility.
- Tertiary shutdown functionality is integrated within each gas turbine's combustion control system, in accordance with CSA B149 requirements, ensuring rapid fuel isolation at the unit level in response to turbine or combustion system faults.

These shutdown systems are designed to operate in a coordinated manner, with defined cause-and-effect logic, to ensure safe and controlled system response under upset conditions. This integrated approach ensures that the fuel gas system meets applicable regulatory requirements while maintaining a high standard of process safety, operational reliability, and environmental stewardship.

Thermal power plant requirement (TP9)

Provide the requested approval date from the Commission, the expected construction start date, the expected in-service date of the project and the requested construction completion date to be used in the project approval. Provide the rationale for these dates.

The requested approval date is September 2026. Construction of the natural gas power plant is expected to commence in October 2026, or upon receipt of all required regulatory and environmental approvals.

The Project will be constructed and commissioned in a phased approach. Initial commissioning will occur in simple-cycle configuration, with approximately 100 MW of capacity brought into service on April 30, 2027. Additional simple-cycle generating units, each approximately 100 MW, will be brought online at approximately one-month intervals thereafter until the full simple-cycle buildout is achieved.

Combined-cycle components, including heat recovery steam generators (HRSGs), low-temperature selective catalytic reduction (SCR) systems, and steam turbine generators, are expected to be installed on a lagging basis approximately four months after the corresponding simple-cycle units are commissioned. This staged approach allows early energization and operational ramp-up while completing the full combined-cycle configuration.

Upon conversion to combined-cycle operation, each unit is expected to achieve a nominal nameplate capacity of approximately 140 MW. Due to site-specific conditions, including elevation-related derating, the expected net output is currently estimated at approximately 123 MW per unit. Final output values remain subject to ongoing design optimization and efficiency improvements.

1. AEPA Application - February 19th, 2026
2. Development Permit Application – April 2026
3. AUC Application - April 2026
4. AEPA Approval – July 2026*
5. AUC Approval - September 2026*
6. Development Permit Issuance –June 2026*
7. Construction Start – 15 days following AUC approval**
8. Commercial Operation Date – Four to six months following AUC approval for first 100MW Data Center and attached Power Plant

*Anticipated
**Subject to financing

The requested construction completion date for the project is October 30, 2031. This schedule reflects the phased construction and commissioning approach, as well as allowances for integration of combined-cycle equipment, testing, and contingency.

Thermal power plant requirement (TP10)

Describe any public benefits that will be generated by the proposed project.

The Project is expected to provide significant and sustained public benefits at both the local and provincial levels, including economic development, workforce training, infrastructure investment, and support for emerging high-demand industries.

Key public benefits include:

- **Taxes and Royalties to Government**

  The Project will contribute meaningfully to public funds via taxes paid to the Town of Olds, Government of Alberta, and Government of Canada. A comprehensive estimate of tax contributions cannot be calculated at this time, and will not be known until detailed assessments become possible as the Project advances. However, the Project will provide property taxes, corporate income taxes, royalties, other specific levies, and other public fiscal benefits to each of the federal, provincial, and municipal levels of government. The Government of Alberta also collects royalties and tax contributions on any natural gas sourced and produced within the province, and the Government of Alberta intends to sector-specific levies on certain elements of data centres. The Project will provide considerable fiscal benefits to various levels of government through these tax, royalty, and levy mechanisms.

- **Employment and Workforce Development**

  - Approximately 500 direct long-term operational jobs, including roles in operations, maintenance, security, and facility management. Included in this figure, the Power Plant is expected to create approximately 100 direct long-term operational jobs.
  - A structured training and workforce development program will be established in collaboration with local educational institutions to develop skilled labour within the region.
  - An additional 500 to 1,000 indirect and induced jobs are anticipated through supporting industries and services.
  - Between 1,000 and 2,000 construction jobs are expected during the development phase.

- **Educational and Institutional Collaboration**
  The Project's strategic proximity—located within approximately 500 metres of the local college—creates a unique opportunity for a vertically integrated talent pipeline. By establishing a direct physical and operational link, we can facilitate real-time collaboration on specialized training programs and co-op placements tailored specifically to high-density computing and power systems. This proximity ensures that workforce development is not just theoretical but aligned with the immediate technical needs of the facility, providing students with a clear pathway to high-value careers and ensuring the Project has access to a skilled, locally-grown workforce. Synapse has engaged with Olds College with respect to these opportunities and the College has confirmed that such programs are feasible and will be explored if the Project proceeds..

- **Alignment with Municipal Planning and Land Use**
  The Project conforms with the Area Structure Plan (ASP) and the town's long-term developmental vision. By focusing growth within a designated industrial zone, the Project optimizes the use of lands already earmarked for high-intensity development, preventing urban sprawl and preserving the integrity of non-industrial areas. This alignment demonstrates a commitment to orderly and planned growth, ensuring that our presence serves as a cornerstone for the municipality's broader industrial strategy rather than an outlier to it.https://www.olds.ca/media/2itn31g3/northeast-area-structure-plan.pdf

- **Strategic Infrastructure for Emerging Industries**
  As Alberta positions itself as a global hub for the digital economy, this co-located data center campus provides the essential infrastructure required for next-generation computing. By integrating on-site power generation, we address the critical provincial demand for reliable, high-density electrical supply that traditional grids may struggle to support. This infrastructure is purpose-built to host Artificial Intelligence (AI), High-Performance Computing (HPC), and cloud-based services, ensuring that Olds becomes a primary node in the global digital supply chain and a leader in Alberta's technological diversification.

- **Efficient Land Use and Integrated Development**
  The integration of power generation directly with data center infrastructure represents a "behind-the-fence" solution that significantly **enhances system-wide efficiency**. By co-locating these facilities, we minimize the need for extensive new transmission lines and reduce the line losses typically associated with transporting electricity over long distances. This integrated approach not only lessens the Project's physical footprint on the landscape but also reduces the burden on the provincial transmission grid, creating a more sustainable and self-sufficient model for industrial development.

- **Environmental and Aesthetic Considerations**
  We recognize that being a good neighbor requires a commitment to visual and environmental harmony. Our site design goes beyond basic functionality, incorporating proactive landscaping and architectural buffering to visually integrate industrial

infrastructure into the natural character of the Olds region. By utilizing strategic setbacks, noise mitigation technologies, and aesthetic screening, we ensure that the facility remains compatible with adjacent land uses. This focus on "low-impact" industrial design protects the visual landscape of the community while maintaining the high operational standards required for a project of this scale.

- **Community Benefits Program**
  As the largest initiative in the history of the Town of Olds, the Community Benefits Program moves beyond traditional philanthropy by establishing a collaborative governance model where community members, town leadership, and company representatives jointly decide how funds are allocated. This partnership ensures that the Project's economic momentum translates directly into tangible, self-determined local priorities—from infrastructure and education to environmental stewardship—guaranteeing that the community remains a primary stakeholder and long-term beneficiary the economic activity generated from the Project.

Project connection

Thermal power plant requirement (TP11)

If a connection order is not concurrently being applied for, provide the expected date when the connection order application will be submitted, if available.

A connection order is not being applied for as part of this application, and no grid connection is currently planned. The Project is designed to operate as a self-supplied, islanded generation facility, providing power exclusively to the co-located data center campus.

Accordingly, there is no anticipated date for submission of a connection order application at this time.

Should future project requirements change such that a connection to the Alberta Interconnected Electric System (AIES) is pursued, any required connection order applications would be submitted at that time in accordance with applicable regulatory requirements.

Thermal power plant requirement (TP12)

Provide asset identification code assigned by the independent system operator (ISO) and the ISO project ID number related to the system access service request, if available.

Asset identification code: N/A

Project ID number: N/A

No asset identification code or ISO project ID has been assigned, as no system access service request has been submitted to the Alberta Electric System Operator (AESO). The Project is not seeking connection to the Alberta Interconnected Electric System (AIES) and is designed to operate as an islanded, self-supplied facility serving a co-located data center.

Thermal power plant requirement (TP13)

If the power plant is to be connected to the transmission system, provide a map with one or more conceptual layouts showing possible routes and general land locations for facilities that would be used to interconnect the power plant to the Alberta Interconnected Electric System.

If the power plant is to be connected to the distribution system, provide a statement from the distribution facility owner indicating that it is willing to connect the generating facilities.

The Project is not proposed to be connected to either the transmission system or the distribution system. The facility is designed to operate as an islanded, self-supplied generation system, providing power exclusively to the co-located data center.

Accordingly:

- No transmission interconnection routes or layouts have been developed; and
- No discussions or agreements have been pursued with any distribution facility owner.

Should future project requirements change to include interconnection with the Alberta Interconnected Electric System (AIES), the Applicant will undertake the necessary studies, stakeholder engagement, and regulatory applications at that time.

Cumulative effects

Thermal power plant requirement (TP14)
Confirm whether the applicant is aware of other existing developments in the project area that could cumulatively affect the rural setting/landscape due to their proximity and/or number.

Based on a review of publicly available information and the Applicant's understanding of the local area (other than data center development inside of the site boundary)the Applicant is only aware of one existing development within 5km of site boundary that, due to their proximity and / or number, would result in cumulative effects on the rural setting or landscape.

On March 12th, 2026 Mountain View County approved a redesignation for a proposed residential, commercial/industrial, green corridor mixed use subdivision development at SE 3-33-1-5 encompassing 51.23 acres. The redesignation is situated ~1600m to the east of site boundary.

The Project is located within an area designated for industrial development under the applicable land use planning framework, and the proposed development is considered consistent with the existing and planned land use context.

Thermal power plant requirement (TP15)
Discuss any potential positive or negative cumulative social, economic or environmental impacts or effects that may occur considering the proposed project, existing developments and any other currently planned developments. This discussion may include, but is not limited to, any economic spinoffs, community and employment benefits, visual impacts, proliferation, land fragmentation (including fragmentation of agricultural uses, wildlife habitat fragmentation, etc.), the impact of adherence to municipal planning documents, wildlife, species at risk, air quality impacts, recreational or tourism impacts, impacts to existing or anticipated resource development, wetlands, native grasslands, watersheds and water quality impacts, and surface management.

Cumulative Effects and Regional Context

In aligning this Project with Alberta's evolving regulatory landscape, it is important to acknowledge the inherent limitations of assessing cumulative effects on an individual, project-specific basis. As noted by the Government of Alberta's Land-use Framework, traditional project-by-project environmental impact assessments often struggle to address the combined effects of multiple activities in the absence of clearly defined provincial planning benchmarks or regional environmental management frameworks. Because specific regional thresholds for air, water, land, and biodiversity are not known to have been established for this specific area of the province, the Project's ability to quantitatively measure its contribution to broader cumulative impacts is constrained. However, in the absence of these provincial benchmarks, we have adopted a "Shared Stewardship" approach—committing to transparent monitoring and adaptive management to ensure our development remains a responsible component of the region's long-term environmental and socio-economic health.

The Project has been designed to align with the Town of Olds 2024 Northeast Area Structure Plan (ASP), which designates the area for light industrial development, including data centers supported by on-site power generation. As such, cumulative effects are considered within the context of planned industrialization of the area.

Economic Effects:

The Project is expected to result in significant positive cumulative socio-economic impacts, including:

- A substantial and sustained contribution to the municipal tax base, estimated at approximately 10% of total municipal revenues when fully developed, representing a significant and stable long-term source of property tax revenue to fund local services and infrastructure needs;
- Creation of approximately 1,000 to 2,000 construction jobs during the development phase;
- Creation of 1,000 or more long-term operational and indirect jobs, including data center and supporting services; and
- associated direct and indirect contributions to provincial and federal tax revenues.

Support for Local Businesses and Services
Beyond the direct energy and technology investments, the Project is expected to act as a major catalyst for the regional service economy. The influx of construction personnel, specialized technicians, and long-term operational staff are expected to drive significant sustained demand for Olds' hospitality sectors. From increased occupancy in local hotels and restaurants to the utilization of regional equipment suppliers and maintenance contractors, the "multiplier effect" of this $10 billion project will circulate capital throughout the local business

ecosystem, strengthening the town's overall economic resilience

Direct to Producer Natural Gas Purchasing Model
Natural gas is expected to be sourced from three local natural gas producers at a premium to the AECO benchmark, this project provides a critical economic floor for the region's energy sector. This localized demand creates a "locked-in" market that shields local producers from the volatility of broader commodity pricing. This may incentivize continued upstream investment and help stabilize operational revenue for regional drillers. By sourcing energy locally, we reduce the industry's reliance on constrained export pipelines. This arrangement transforms the data center into a high-value anchor tenant for the local oil and gas industry, bolstering job security and providing the financial certainty needed for future infrastructure and innovation.

Housing Development
Analysis from established local real estate brokers indicates that the current housing inventory in Olds is likely insufficient to meet the anticipated influx of permanent operational staff and their families. This supply-demand gap is likely to trigger new localized residential development, incentivizing homebuilders to invest in diverse housing. By driving this private-sector investment, the Project doesn't just bring workers to Olds; it anchors them as long-term residents, expanding the municipal tax base and supporting the sustainable, long-term growth of the town's neighborhoods.

Social and Visual Effects:

The Project is expected to result in moderate positive social impacts, including workforce development, increased regional employment opportunities, and attraction of high-value technology investment to central Alberta. Potential cumulative visual impacts associated with industrial development are mitigated through:

- Site planning that locates the power generation equipment primarily at the rear of the development, reducing visibility from public viewpoints;
- Natural gas power generation infrastructure occupies less than 10% of the total project footprint; and
- Planned landscaping and integration measures to maintain compatibility with surrounding land uses.

Given the existing ASP designation and anticipated build-out of similar developments, cumulative visual effects are expected to be consistent with the planned industrial character of the area.

Environmental Effects:

Air Quality
Cumulative air emissions from the Project have been assessed through dispersion modelling (refer to TP25), demonstrating that emissions will remain within Alberta Ambient Air Quality Guidelines (AAAQG). No significant adverse cumulative air quality effects are anticipated.

Noise
Cumulative noise emissions from the Project have been assessed through modelling (refer to TP31), demonstrating that noise can remain within AUC Rule 012 permissible sound level requirements. No significant adverse cumulative noise effects are anticipated.

Land Use and Fragmentation

The Project will result in the conversion of agricultural land to industrial use; however, this conversion is consistent with the approved ASP and planned future development of the area. The project footprint has been optimized to minimize land disturbance and fragmentation, with development located adjacent to existing municipal boundaries and infrastructure. Given the planned industrialization of the ASP area, cumulative land use effects are considered consistent with municipal land use policy.

Wildlife and Habitat

Potential cumulative effects of the Project include habitat disturbance and fragmentation. The site is however, located in an area designated for development and is not identified as critical habitat for species at risk. Standard mitigation measures and regulatory requirements will be implemented to minimize impacts. The residual cumulative effects on wildlife are expected to be low and not significant. Upon completion the Project is expected to represent ~13% of the towns total developed footprint.

Water, Wetlands, and Soil

The Project utilizes a closed loop cooling/heat rejection systems, resulting in minimal water consumption and reducing potential cumulative effects on local water resources. Potential impacts to soil, groundwater, and surface water will be managed through established design, construction, and operational controls. No significant adverse cumulative impacts to watersheds, or water quality anticipated.

Development of the Project will require the permanent removal of all existing wetlands from within the Project lands. For some wetlands, this will result in the entire loss of the wetland area, while for some wetlands that straddle the Project boundary, the Project will result in partial loss of wetlands. The Alberta Wetland Policy (2013) (Wetland Policy) provides a comprehensive framework for wetland management, emphasizing a cumulative effects-based approach that incorporates the relative value of individual wetlands into decision-making. The Wetland Policy evaluates wetlands based on metrics such as biodiversity, water quality improvement, hydrologic function, human uses and relative abundance. This approach acknowledges that wetlands vary in their contributions, with some providing greater ecological and function benefits than others. It is intended to provide regulatory clarify and support informed management decisions by approval authorities with the overall objective of minimizing the loss and degradation of wetlands while allowing for continued growth and economic development in the province. Synapse Real Estate Corp will replace impacted temporary wetlands by paying compensation for direct impacts as required under the Wetland Policy.

Traffic

The project will add to regional traffic during the construction and operations phase. Coordination has occurred with the town of Olds, and Mountainview County to minimize traffic impact. A Traffic Impact Assessment will be conducted prior to commencement of construction. Project setback includes space for expansion of highway 2A and 27 if required. The Project's South West entrance will align with 43 st at the request of TEC.

Summary of Cumulative Effects

Overall, cumulative effects associated with the Project are expected to be predominantly positive from an economic and social perspective, while environmental effects are anticipated to be low in magnitude, mitigated through design and regulatory compliance, and consistent with the planned industrial development of the area.

Thermal power plant requirement (TP16)

Discuss the applicant's alignment, or efforts to align, with Alberta's Land-use Framework and the economic, orderly and efficient development of industrial facilities including efficient land use principles.

The Project has been intentionally designed to align with both the Town of Olds 2024 Northeast Area Structure Plan (ASP) and Alberta's Land-use Framework, supporting the principles of orderly, efficient, and sustainable development.

Alignment with these principles is demonstrated as follows:

- The Project is located within lands designated for light industrial use under the ASP, ensuring consistency with municipal planning objectives and avoiding land-use conflicts. Development within a planned industrial area supports coordinated infrastructure use and long-term regional planning.
- The Project integrates power generation with a co-located data center campus, minimizing the need for additional transmission infrastructure and reducing overall land disturbance. This co-location strategy represents an efficient use of land and energy resources by directly coupling generation with end-use demand.
- The use of 100% closed loop/heat rejection systems eliminates process water consumption and reduces strain on local water resources. The site layout has been optimized to concentrate infrastructure within a defined footprint, limiting fragmentation and preserving surrounding lands.
- The Project contributes significantly to the local and regional economy while supporting Alberta's transition toward high-value, data-driven industries. The development provides long-term employment, infrastructure investment, and a stable municipal tax base, consistent with the Land-use Framework's objective of balancing economic growth with responsible land stewardship.
- The Project's location adjacent to the Town of Olds allows for efficient access to existing transportation corridors, utilities, and workforce, reducing the need for extensive new infrastructure and supporting compact, efficient development patterns.
- The *Alberta Land Stewardship Act* (ALSA) established the provincial Land Use Framework (LUF), which contemplates the development of regional plans to guide landscape-level decisions. The Project is located in the Red Deer LUF region, where such regional planning initiatives have not yet started and therefore do not apply to the Project.

Overall, the Project represents a coordinated and efficient industrial development that is consistent with municipal planning documents, and the principles of responsible resource and land management.

Emergency response plan

Thermal power plant requirement (TP17)

Confirm the applicant has or will have a corporate or site-specific emergency response plan for the construction and operation of the proposed power plant.

If the applicant will have a corporate emergency response plan, explain why it decided not to develop a site-specific emergency response plan.

Synapse Real Estate Corp has developed a comprehensive, site-specific Emergency Management Program (EMP) for the proposed power plant and associated data center development. The EMP establishes the overarching framework for emergency preparedness, response, and recovery, including governance, communication protocols, regulatory notification requirements, and coordination with external emergency services and authorities.

The EMP has been circulated to the Town of Olds and local emergency response stakeholders for review and comment and has also undergone peer review with experienced industry professionals to support alignment with regulatory expectations and industry best practices.

Supporting the EMP, a site-specific Emergency Response Plan (ERP) for the construction phase is currently under development and will be finalized prior to the commencement of construction activities. The Construction ERP addresses hazards and risks associated with large-scale industrial construction, including heavy equipment operations, structural assembly, temporary energy systems, and environmental conditions.

A separate Operations ERP will be developed and implemented prior to commissioning and startup of the facility. This plan will address operational hazards associated with combined-cycle power generation, fuel gas systems, high-energy electrical systems, and Battery Energy Storage Systems (BESS), and will align with applicable regulatory, insurance, and industry best practices.

The EMP and supporting ERP documents are informed by Synapse's Risk Management Program and associated risk matrix, which is used to identify credible emergency scenarios, assess risk severity, and define appropriate response strategies, escalation protocols, and resource requirements.

Both construction and operations emergency response plans will be maintained as living documents and will be reviewed and updated as project design advances, construction activities evolve, and operational conditions are established. Ongoing engagement with local authorities and emergency responders will be maintained to ensure continued alignment with municipal and regional emergency response frameworks. Please refer to the draft ERPs attached under TP 17. They will be updated upon the completion of detailed design and subsequent process hazard analysis (including qualitative risk assessment as applicable).

Thermal power plant requirement (TP18)

Provide a summary of the following:

- The site-specific risks (construction phase and operations phase) that have been identified to date.
- The emergency mitigation measures that have been identified.
- The site monitoring and communication protocols that will be put into place.

Site-specific risks for the Synapse Data Center and associated power plant have been identified for both the construction and operations phases based on current project design, planned construction activities, environmental assessments, and preliminary hazard identification processes.

Construction Phase Risks include:

- High-risk construction activities, including heavy lifting, structural assembly, excavation, and work at elevation
- Interaction between personnel and heavy equipment or construction traffic
- Temporary energy systems, including electrical systems, fuel gas tie-ins, and hot work activities
- Environmental risks, including accidental spills or releases of fuels and lubricants
- Adverse weather conditions and wildfire interface risk
- Site access and transportation hazards associated with construction traffic and emergency access

Operations Phase Risks include:

- Fuel gas handling and high-energy systems associated with combined-cycle power generation
- Fire and explosion hazards related to gas turbines, HRSG systems, and auxiliary equipment

- Electrical hazards, including high-voltage systems and grid or islanded operation
- Battery Energy Storage System (BESS) and UPS-related risks, including thermal runaway and associated gas release hazards
- Environmental risks, including air emissions, noise, and potential releases to soil or water
- Public interface risks, including trespass and unauthorized access

These risks have been identified and prioritized using Synapse's Risk Management Program and associated risk matrix, which evaluates the severity and likelihood of potential events and supports the identification of credible emergency scenarios.

Emergency Mitigation Measures

A combination of engineered controls, administrative controls, and emergency response measures will be implemented to reduce or eliminate identified risks. These include:

- Design of systems in accordance with applicable codes and standards (e.g., CSA, ASME, Alberta regulatory requirements)
- Implementation of safety systems, including Emergency Shutdown (ESD) systems, pressure protection systems, and fire detection and suppression systems
- Controlled handling and storage of fuels and hazardous materials, including spill prevention and containment measures
- Development and implementation of site-specific Emergency Response Plans (ERP) for both construction and operations
- Establishment of exclusion zones, access control measures, and traffic management plans
- Environmental protection measures as outlined in the Environmental Protection Plan (Attachment TP28)
- Integration of risk-based decision-making through the Synapse Risk Matrix to ensure mitigation measures are commensurate with identified risks

Site Monitoring and Communication Protocols

Monitoring and communication protocols will be established and implemented through the Synapse EMP and supporting ERPs to ensure effective detection, communication, and response to emergency conditions. These include:

- Continuous monitoring of site conditions through supervision, inspection programs, and operational systems
- Use of audible alarm systems to initiate emergency response and direct evacuation actions
- Established evacuation protocols, including designated muster locations and wind-aware evacuation procedures
- Communication systems including two-way radios, mobile communication, and direct supervision
- Implementation of an Incident Command System (ICS) structure to manage emergency response and coordination
- Defined protocols for internal communication, emergency escalation, and external notification (including 911 and regulatory agencies)
- Coordination with local emergency responders and municipal authorities to ensure alignment with regional emergency response capabilities

Monitoring and communication protocols will be refined as the project progresses and will be validated through training, drills, and ongoing engagement with site personnel and external stakeholders.

Additional details regarding environmental risks and mitigation measures are provided in Attachment TP26 – Environmental Evaluation and Attachment TP28 – Environmental Protection Plan.

Thermal power plant requirement (TP19)

Confirm that local responders and authorities have been contacted or notified regarding the project emergency response plan.

Describe any requirements or feedback received and describe how the applicant intends to address the requirements and feedback received.

Synapse Real Estate Corp. confirms that local emergency responders and municipal authorities, including the Town of Olds Fire Department and associated emergency services, have been contacted and notified of the proposed project as part of the ongoing stakeholder engagement and consultation process. Please refer to the attached TP 19 – Emergency Management Plan A9.

A draft Emergency Management Program (EMP) has been developed and circulated to the Town of Olds for review and comment. The EMP has also undergone peer review with industry professionals to ensure alignment with applicable regulatory expectations and industry best practices. Engagement with local responders is ongoing and will continue through the development and finalization of both the construction-phase Emergency Response Plan (ERP) and the operational ERP.

Feedback received to date from local responders has included:

- The need to ensure reliable and immediate emergency access through site security systems, including electrically controlled perimeter fencing and gated access points;
- The provision of approved lock box systems or equivalent emergency override mechanisms to allow rapid entry by emergency personnel;
- Relocation of fire hydrants as per municipal bylaws and the Alberta Fire Code;
- Early coordination on site access routes, muster locations, and emergency response interfaces; and
- Inclusion of BESS / UPS systems into preliminary construction ERPs and the EMP.

Synapse has incorporated this feedback into the project design and planning basis. This includes integration of emergency access provisions within the site security design, and the commitment to coordinate directly with local responders during detailed design and prior to construction.

As the project progresses, Synapse will continue structured engagement with local authorities to:

- Validate emergency access and response assumptions;
- Align site-specific ERP procedures with local emergency response capabilities; and
- Incorporate responder input into final ERP documentation for both construction and operations.

While draft ERPs are prepared, final ERPs will be completed prior to commencement of construction and will be maintained and updated through commissioning and into operations, consistent with the overarching Emergency Management Program.

Municipal land use information

Thermal power plant requirement (TP20)
Confirm whether the proposed project area complies with the applicable municipal planning documents including municipal development plans, intermunicipal development plans, area structure plans, land use bylaws (including applicable setbacks) and other municipal bylaws.

Identify any instances where the proposed project area does not comply with applicable municipal planning documents and provide a justification for any non-compliance.

Confirmed.
The project is situated in land zoned for light industrial use. A Development Plan for the site is in late stages of review by the Town of Olds with comments received by Synapse Real Estate Corp from the town of Olds. The town has indicated that no bylaw amendment will be required for the Project.

Town of Olds October 2025 Land Use bylaws identify data centers as discretionary use for light industrial. See section 6.14 of link provided. https://www.olds.ca/media/mvqblbgp/town-of-olds-lub-bylaw-2025-14-signed.pdf

Town of Olds Zoning map identifies the entire area within site boundary as zoned for light industrial use. https://olds.giscloud.com/

A completed AUC municipality form engaged has been provided in TP 40.

Thermal power plant requirement (TP21)
Provide the current land use zoning for the proposed project area. If applicable, provide the land use amendment and/or development permit status for the proposed project area.

Current land use zoning is light industrial. Discretionary use allows for data centers.

Environmental information

Thermal power plant requirement (TP22)
Identify the current emissions standards or guidelines that are applicable to the proposed project. Submit a table that provides the plant's emission rates (e.g., kg/MWh) for nitrogen oxides (NOx), sulphur dioxide (SO2), and primary particulate matter. The table must compare the emission rates to the current *Alberta Air Emissions Standards for Electricity Generation* and any other emission standards or guidelines that are applicable to the proposed project.

The proposed project is subject to the applicable Alberta Air Emissions Standards for Electricity Generation and other applicable Alberta air quality regulatory requirements for thermal power generation. Applicable emissions parameters include nitrogen oxides (NOx), sulphur dioxide (SO_2), and primary particulate matter.

Plant emission rates have been developed based on the project design basis and the emissions modelling completed for the Project. These emission rates, and their comparison to the applicable Alberta Air Emissions Standards for Electricity Generation, are provided in Attachment TP25 – Air Quality Assessment, specifically Table 6 Maximum predicted ground-level NO2 concentrations associated with the operation of stationary combustion equipment at the Plant.

Thermal power plant requirement (TP23)

Indicate whether the proposed plant will be in compliance with the Alberta air quality standards or guidelines (e.g., *Ambient Air Quality Objectives and Guidelines Summary*) applicable to the proposed project for ground-level concentrations of pollutants. Identify all standards and guidelines that apply.

Confirmed. The proposed natural gas-fired power plant is expected to comply with the Alberta Ambient Air Quality Objectives (AAAQOs) and applicable Alberta air quality guidelines for ground-level concentrations of pollutants.

An air dispersion modelling assessment has been completed in accordance with Alberta Environment and Protected Areas (AEPA) requirements to evaluate predicted ground-level concentrations resulting from the project during both normal and worst-case operating conditions.

The assessment considers key combustion-related contaminants, including:

- Nitrogen dioxide (NO_2)
- Carbon monoxide (CO)
- Sulphur dioxide (SO_2)
- Particulate matter ($PM_{2.5}$ and PM_{10})

Predicted concentrations for these parameters have been evaluated against the applicable Alberta Ambient Air Quality Objectives and Guidelines Summary, including relevant averaging periods (e.g., 1-hour, 24-hour, and annual criteria, as applicable).

The results of the assessment demonstrate that the project will operate within applicable Alberta air quality objectives at all identified receptor locations, including nearby sensitive receptors.

Please refer to Attachment TP25 – Air Quality Assessment for detailed modelling methodology, assumptions, emission sources, and compliance results.

Thermal power plant requirement (TP24)

Provide a summary of any feedback received to date from Alberta Environment and Protected Areas (AEPA) addressing the environmental aspects of the project and any mitigation measures and monitoring activities recommended by AEPA.

Synapse Real Estate Corp. has engaged Alberta Environment and Protected Areas (AEPA) to introduce the Project and discuss anticipated environmental regulatory requirements. Multiple consultations have been conducted to date to support early-stage project development and alignment with AEPA expectations.

At this stage of project development, AEPA has not issued formal written feedback specific to mitigation measures or monitoring requirements. However, discussions to date have focused on ensuring that the Project is designed and assessed in accordance with applicable regulatory requirements, including:

- Completion of an air quality assessment, including dispersion modelling, in accordance with AEPA guidance;
- Identification and assessment of potential environmental effects, including emissions, noise, and potential impacts to wildlife and sensitive areas;
- Development of appropriate mitigation measures and environmental protection strategies, as reflected in the Environmental Protection Plan (Attachment TP28); and
- Preparation of an application under the Environmental Protection and Enhancement Act (EPEA), which will include detailed mitigation measures and monitoring programs.

An application for EPEA approval for the Project was submitted during the week of February 17th. The AEPA is reviewing for completeness. Synapse will continue to work with AEPA throughout the regulatory review process to incorporate any additional feedback received, including refinement of mitigation measures and development of site-specific environmental monitoring programs as required.

Thermal power plant requirement (TP25)

Provide the emissions modelling report that was prepared for the *Environmental Protection and Enhancement Act* application to AEPA.

The emissions modelling report prepared in support of the Environmental Protection and Enhancement Act (EPEA) application to Alberta Environment and Protected Areas (AEPA) is provided as see Attachment TP25 – Air Quality Assessment.

The Air Quality Assessment includes:

- A description of emission sources associated with the Project;
- Air dispersion modelling methodology and assumptions, developed in accordance with AEPA guidance;
- Predicted ground-level concentrations for key contaminants, including NO_2, CO, SO_2, $PM_{2.5}$, and PM_{10};
- Assessment of results against the Alberta Ambient Air Quality Objectives and Guidelines; and
- Identification of receptor locations and evaluation of compliance under normal and conservative operating conditions.

This assessment supports the conclusion that the Project will comply with applicable Alberta air quality requirements.

Thermal power plant requirement (TP26)

If preparation of either a federal impact assessment or a provincial environmental impact assessment report was required, provide a copy as an appendix to the application and a separate environmental evaluation is not required. [Attach]

If a federal impact assessment or a provincial environmental impact assessment is not required, submit an environmental evaluation of the project. The environmental evaluation must:

- Describe the present (pre-project) environmental and land use conditions in the local study area. Provide all definitions and standards (i.e., *Alberta Wetland Identification and Delineation Directive*) used to prepare this description.
- Identify and describe the project activities and infrastructure that may adversely affect the environment. Include a description and the area (hectares) of permanent and temporary project activities and infrastructure.
- Identify what specific ecosystem components (i.e., terrain and soils, surface water bodies and hydrology, groundwater, wetlands, vegetation species and communities, wildlife species and habitat, aquatic species and habitat, air quality and environmentally sensitive areas) within the local study area may be adversely affected by the project.
- Describe any potential adverse effects of the project on the ecosystem components during the life of the project.
- Describe the methodology used to identify, evaluate and rate the adverse environmental effects and determine their significance, along with an explanation of the scientific rationale for choosing this methodology.
- Describe the mitigation measures the applicant proposes to implement during the life of the project to reduce these potential adverse effects.
- Describe the predicted residual adverse effects of the project and their significance after implementation of the proposed mitigation.
- Describe any monitoring activities the applicant proposes to implement during the life of the project to verify the effectiveness of the proposed mitigation.
- List the key environmental regulations and guidelines applicable to the project and provide rationale for any deviations from the guidelines.
- List the qualifications of, or provide a CV for, the individual(s) who conducted or oversaw the environmental evaluation and indicate the respective practice areas, practice standards or standards of competence demonstrated by these individuals.

With respect to federal impact assessments, see TP 33.

Provincial impact assessment is not required for Data Centers or thermal plants generating power exclusively for a data center that are not connected to the grid. An EIA summary table was submitted on January 5th 2026. The EIA confirmed on March 3rd, 2026, that "further assessment of the activity is not required. Therefore a screening report will not be prepared and an environmental impact assessment report is not required."

The Project is listed under the provincial Activities Designation Regulation (Alta Reg 276/2003) as a "power plant", where a plant that has a rated peak production output of greater than one megawatt under peak load. However, the Project does not represent an activity that is listed in the Environmental Assessment (Mandatory and Exempted Activities) Regulation (Alta Reg 111/1993). Therefore, the Project will require an approval issued under EPEA, but an environmental impact assessment(EIA) is not mandatory under the EPEA. An environmental evaluation was prepared for the Project. Please see Attachment TP26 – Environmental Evaluation. A wetland field investigation is scheduled for May 2026 under seasonally appropriate growing season conditions. Upon completion of the follow on field investigation, an

addendum to the document will be prepared under separate cover for submission no later than June 2026.The Environmental Evaluation describes the present environmental conditions, identifies Project activities and infrastructure, discusses specific ecosystem components, describes potential adverse effects of the Project along with proposed mitigation measures, and identifies predicted residual effects of the Project and their significance and describes proposed monitoring programs. The proponent will implement the recommended mitigation measures described in the Environmental Evaluation.

Thermal power plant requirement (TP27)

For projects wholly or partially located on federal lands (First Nation reserves, national parks or military bases), provide a copy of the environmental impact analysis completed for the corresponding federal government department. [Please submit along with your application].

Indicate whether the project has the potential to cause effects that may cross into another jurisdiction. Environmental effects that originate on federal lands, but cross into another jurisdiction, must be addressed as part of the environmental review process. If not contained within the impact analysis, include information describing all potential environmental effects of the project. Projects on federal lands may be subject to provincial laws, standards and permits.

The applicant must address how it has considered AUC Rule 007 and Rule 012 and describe the steps taken, if any, to address specific requirements set out in these rules.

Not applicable. The Project is not located on federal lands, and is not anticipated to cause effects that may cross into another jurisdiction.

Thermal power plant requirement (TP28)

Submit a stand-alone, project-specific environmental protection plan (or environmental management plan) that itemizes and summarizes all of the mitigation measures and monitoring activities that the applicant is committed to implementing during construction and operation to minimize any adverse effects of the project on the environment.

Please see Attachment TP28 – Environmental Protection Plan.

Visual impact assessment

Thermal power plant requirement (TP29)

If the project is located within a buffer zone or a visual impact assessment zone, as defined in Schedule 2 and Schedule 3 of the Electric Energy Land Use and Visual Assessment Regulation and in the Pristine Viewscapes and Visual Impact Assessment Zones map, submit a visual impact assessment. The visual impact assessment must include:

- An evaluation of the anticipated visual impacts on the buffer zone or visual impact assessment zone.
- Visual simulations from key vantage points illustrating the potential visual impact of the project.
- Key vantage points should include locations with viewscapes determined to have a major or major/moderate severity of impact ranking in the visual impact assessment. If desired, visual simulations may also be provided for other viewpoints in the project area so that a range of views at different distances and in different landscapes may be presented. Some of these additional visual simulations can include viewpoints from nearby residences.
- Visual simulations must include an accurate representation of the viewscape:
    - Before project construction has commenced.
    - After project construction has been completed, but without any mitigation measures implemented.
    - After project construction has been completed, and any proposed mitigation measures have been implemented.

- The visual simulations should include an explanation of how they were prepared, how they are to be viewed, and what was done to ensure they were prepared accurately. A map must be provided that shows the location and direction of each visual simulation.

- Proposed mitigation measures to minimize or offset any adverse visual effects on the buffer zone or visual impact assessment zone.

- Where mitigation is proposed, describe the mitigation measures that will be implemented, including their location, predicted effectiveness during the project's full life cycle and whether the mitigation measures have been discussed with adjacent landowners. If vegetation screening is planned, confirm that the final plan has also been or will be discussed with local authorities.

Based on a review of the *Pristine Viewscapes and Visual Impact Assessment Zones Map* issued by the Government of Alberta, the Project is not located within a designated Buffer Zone or Visual Impact Assessment Zone as defined under the *Electric Energy Land Use and Visual Assessment Regulation*.

As the Project is outside of these designated areas, a formal visual impact assessment is not required for this application.

Notwithstanding this, visual considerations have been incorporated into site layout and design, including equipment arrangement and architectural treatment of major structures, to minimize visual impacts to the surrounding area. A landscaping and berm plan has been developed in coordination with the town of Olds. It has been included in the development permit application. The berm and landscaping plan is expected to include the planting over 1500 coniferous trees/bushes and is currently 3m in height. The plan is expected to be improved upon as part of ongoing community consultation.

End-of-life management and reclamation security

Thermal power plant requirement (TP30)

Describe the reclamation security plan for the proposed power plant. The plan should include:

- A cost estimate prepared by a third party which describes the estimated costs of reclaiming the proposed project.
- Confirmation that the operator will have sufficient funds at the project end of life to meet its reclamation security plan.
- How the amount of the reclamation security will be calculated.
- The year of initial posting and when each subsequent amount will be added.
- The frequency with which the reclamation security estimate will be updated or re-assessed.
- What form the reclamation security will take (e.g., letter of credit, surety bond, other). Include an explanation of why the form of security was selected, having regard to its attributes and priority in bankruptcy, including how the secured party would be able to realize on the reclamation security should the project owner and operator be in default.
- The security beneficiaries to whom the reclamation security will be committed.
- When and how the beneficiary can access the security and any constraints on such access.
- The estimated salvage value of project components, including any supporting calculations and assumptions used to substantiate the salvage value.
- The standard to which the project site will be reclaimed upon decommissioning.

Synapse Real Estate Corp. has developed a comprehensive reclamation security plan for the Project, supported by a third-party Decommissioning and Reclamation Plan and Cost Estimate prepared by Base Concepts, provided as Attachment TP30 – Decommissioning Plan.

Third-Party Cost Estimate:

The Base Concepts report provides an independent cost estimate for decommissioning and reclamation of the Project in accordance with AUC Rule 007. The estimate is developed using an AACE Class 5 methodology and includes direct and indirect costs, as well as a contingency allowance.

The estimated total decommissioning liability for the full 10-block facility is $290,009,921 CAD (2026 dollars). This value represents a conservative estimate, as no salvage value credit has been applied.

Salvage Value:

A salvage value assessment was completed for major recoverable components (e.g., turbines and scrap steel); however, no salvage credit has been applied to the security estimate, ensuring a conservative basis for reclamation funding.

Reclamation Standard:

The site will be reclaimed to a stable industrial-grade condition suitable for future redevelopment, consistent with the Light Industrial District designation of the site.

Reclamation Security

The *Conservation and Reclamation Regulation*, established under the EPEA, provides the framework for reclaiming lands disturbed by specific activities. According to this regulation, operators of certain projects must provide financial security to ensure the reclamation of their sites (Reclamation Security Requirement).

The Reclamation Security Requirement applies to projects that (1) are specified under Division 3 of Schedule 1 of the *Activities Designation Regulation* (which does not include thermal power plants); (2) require registration under EPEA, or (3) are designated by the Minister as requiring reclamation security. The Reclamation Security Requirement currently does not apply to operators of thermal power plants. Therefore, thermal power plant operators may plan internally to allocate designated funds to meet mandatory conservation and reclamation standards. Synapse is committed to adhering to all current and future reclamation and security obligations, including any new Reclamation Security Requirement that may be introduced for thermal power plants.

For thermal power plants, contamination is generally confined to the project site. Since Synapse anticipates owning the project site before construction begins, Synapse will primarily be responsible for meeting the mandatory conservation and reclamation standards. In the absence of a Reclamation Security Requirement and where a proponent owns the project site, there is no obvious beneficiary. Synapse is willing to post security in the form of a secured line of credit starting at year 15 of operations, in regular intervals until the entire reclamation amount is fully secured at year 25. Synapse commits to consulting with all potential beneficiaries to determine a willing party, including the Town of Olds. In the absence of a willing beneficiary, Synapse commits to setting aside funds for reclamation on the same schedule (i.e., starting in year 15 of operations until fully funded at year 25) to ensure that it can comply with any future Reclamation Security Requirement, and to ensure sufficient funds are available at end-of-life.

Noise

Thermal power plant requirement (TP31)
Provide a noise impact assessment in accordance with Rule 012. If mitigation measures are recommended in the assessment, confirm the mitigation measures the applicant will implement.

A Noise Impact Assessment (NIA) has been completed for the Project in accordance with AUC Rule 012: Noise Control and is provided as Attachment TP31 – Noise Impact Assessment.

The assessment evaluates predicted sound levels at nearby receptors under representative operating conditions and compares them to the applicable permissible sound levels (PSLs) defined in Rule 012.

Please see Attachment TP31 – Noise Impact Assessment.

Synapse confirms that it will implement the noise mitigation measures recommended in the NIA. As such, the Power Plant is expected to comply with Rule 012.

With respect to the emergency backup generators, two generator models are assessed in the NIA using assumptions to represent a potential emergency outage at the combined cycle plants. The 75dBA at 7m option produces on average 5.5 dBA more noise at the modelled receptors than the 65dBA at 7m option and, according to the modelled results, produces exceedances of PSLs as determined pursuant to Rule 012 at several residential receptors near the Project. However, such noise is only expected to arise in rare circumstances (e.g., <1% of the time and less than four times per year) and is necessary to preserve valuable and, potentially, critical access to data stored within the data centre. As such, Synapse understands that the PSLs under Rule 012 do not strictly apply to the emergency backup generators. Moreover, while 65dB at 7m generators are available, they are significantly more expensive and would materially reduce the funds available for a Community Benefits Program by tens of millions of dollars (see TP10). In these circumstances, Synapse's position is that approval of the Power Plant, including the 75dB at 7m generators, is in the public interest.

Thermal power plant requirement (TP32)

Confirm that the applicant will comply with the construction noise requirements in Section 2.10 of Rule 012 or explain why it is not feasible or practical to implement them.

Synapse Real Estate Corp. will comply with the construction noise requirements set out in Section 2.10 of AUC Rule 012: Noise Control.

Construction activities will be planned and managed to minimize noise impacts to nearby receptors. This includes:

- Limiting high-noise construction activities to appropriate daytime hours, where practical;
- Maintaining construction equipment in good working order to reduce unnecessary noise emissions; and
- Implementing reasonable noise control measures where warranted by site conditions.

Synapse will also establish procedures to receive, document, and respond to any noise-related concerns during construction, consistent with the intent of Rule 012.

Approvals, reports and assessments from other agencies

Thermal power plant requirement (TP33)

Identify any other acts (e.g., *Environmental Protection and Enhancement Act, Water Act, Public Lands Act* and *Wildlife Act)* that may apply to the project, identify approvals the project may require, and provide the status of each of these approvals.

Applicable legislation and anticipated approvals are summarized below, along with their current status. Updates will be provided as they become available.

Legislation / Regulation	Approval / Authorization Required	Status
Environmental Protection and Enhancement Act (EPEA)	Industrial Approval (Air)	AEPA application submitted February 19th, 2026 - pending review
Environmental Assessment (Mandatory and Exempted Activities) Regulation	Environmental Assessment determination under EPEA	EIA confirmation (on March 3rd, 2026) that further assessment of activity is not required
Activities Designation Regulation	Project classification under EPEA	AEPA application submitted February 19th, 2026 - pending review
Water Act	Water Act Approval (if applicable – water diversion/use, stormwater)	Potential water diversion/use including from wetlands – submission, depending on upcoming assessment (spring 2026) Potential storm water application submission pending
Public Lands Act	Disposition / Temporary Field Authorization (if applicable)	No anticipated permits or approvals required
Wildlife Act	Wildlife protection compliance / timing restrictions	Ongoing compliance obligations (see TP26).
Migratory Birds Convention Act	Compliance (federal)	Ongoing compliance obligations (see TP26).
Species at Risk Act	Compliance (federal)	Ongoing compliance obligations (see TP26).

Conservation and Reclamation Regulation	Reclamation obligations	Pending requirements established in EPEA approval
Historical Resources Act	Historical Resources Act approval	Application submitted on January 23rd, 2026 – pending review (see TP34).
Impact Assessment Act / Physical Activities Regulation	Federal impact assessment	Ongoing review and engagement with respect to federal impact assessment requirements – see below (see also Environmental Evaluation at TP26)
Soil Conservation Act / Weed Control Act	Compliance during construction and reclamation	Ongoing compliance obligations (see TP26),, and any further related requirements established under EPEA approval

Synapse Real Estate Corp. will obtain all required approvals prior to construction and will comply with all applicable legislative and regulatory requirements throughout the lifecycle of the Project.

Synapse acknowledges the Commission's comments in Proceeding 30625 that Synapse did not adequately justify its conclusion that the federal *Impact Assessment Act* (IAA) does not apply to the Power Plant. The Commission noted that the *Physical Activities Regulations* (Project List) designates the construction, operation, decommissioning and abandonment of a new fossil fuel-fired power generating facility with a production capacity of 200 MW or more as a designated project for the purposes of the Act.

Synapse is continuing to evaluate its approach to addressing the federal *Impact Assessment Act* and is actively monitoring the evolving legal framework. For the reasons outlined below, Synapse respectfully requests that the Commission process the within Application expeditiously.

The federal process at issue is a preliminary screening mechanism intended to determine whether a full impact assessment is required. Recent federal practice demonstrates that, for thermal generation projects, including those significantly exceeding 200 MW, this process has routinely concluded without requiring a impact assessment.[1] The Supreme Court of Canada has held that the designated projects regime under the IAA is unconstitutional to the extent it applies to projects that do not give rise to effects within federal jurisdiction, and the Project does not engage any such effects. Alberta has maintained that the current iteration of the IAA continues to raise the same constitutional concerns. Consistent with that position, Canada and Alberta have entered a November 27, 2025, memorandum of understanding and, recently, a draft cooperation agreement that emphasize respect for provincial jurisdiction and provide that, for projects regulated at the provincial level (such as the Power Plant), provincial assessment and regulatory processes are to be relied upon in the first instance.[2]

While the Project List suggests the initial federal screening step applies, there is a reasonable basis to expect that the Power Plant would not proceed to a federal impact assessment in any event.

In these circumstances, requiring the Company to complete the federal project description process prior to the Commission advancing its review would introduce delay and uncertainty without a corresponding regulatory benefit or legal rationale.

The Project is located entirely within Alberta and will be assessed under applicable provincial environmental legislation, including the *Environmental Protection and Enhancement Act*. The conclusion that no provincial environmental impact assessment is required reflects the low likelihood of significant effects and relies on the adequacy of Alberta's regulatory framework to address potential environmental effects for projects of this nature. Proceeding with the Commission's review is therefore consistent with an efficient, coordinated approach to project regulation.

Synapse understands that the Commission's mandate is grounded in provincial legislation and directed at the orderly development and

[1] See, for example: Beacon AI Centers Indus Project; Mihta Askiy Data Center Project; Moraine Power Generation Project; and Flipi Gas-Fired Generation Project.

[2] Canada-Alberta Memorandum of Understanding (Nov 27, 2025); Co-operation Agreement between Alberta and Canada (Draft) (March 6, 2026).

regulation of electricity generation within Alberta. The preparation of an initial project description and associated materials under the federal regime is not a purely administrative step; it entails time, cost, and allocation of technical resources, notwithstanding the likelihood that no further federal review will be (or, arguably, can legally be) required.

While any future federal determination may have implications for Project timing, the existence of a potential federal screening process does not, in the Synapse's respectful submission, require the Commission to pause or defer its own statutory decision-making.

Accordingly, the Synapse respectfully requests that the Commission continue to process the Application in the ordinary course, without awaiting confirmation as to whether the Project will be required to undergo a federal impact assessment under the IAA.

Thermal power plant requirement (TP34)

Confirm that a *Historical Resources Act* approval has been obtained or has been applied for. If a *Historical Resources Act* approval has been obtained, provide a copy of it.

If a historic resource impact assessment is required, briefly describe any known historical or archaeological sites, palaeontological sites, or traditional use sites of a historic resource nature.

An approval under the *Historical Resources Act* has been applied for. The application was submitted on January 23, 2026 (File No. 031591214) and is currently under review with Alberta Arts, Culture and Status of Women (ACSW), with a status of “In Screening.”

At this stage, no Historical Resources Impact Assessment (HRIA) requirements have been issued. No known historical, archaeological, palaeontological, or traditional use sites of a historic resource nature have been identified within the Project area to date.

Should an HRIA be required as part of the approval process, Synapse Real Estate Corp. will complete the assessment in accordance with regulatory requirements and incorporate any resulting mitigation measures into project planning and execution.

Thermal power plant requirement (TP35)

If the government of Alberta, through the Aboriginal Consultation Office (ACO) or otherwise, directed consultation with an Indigenous group for related approvals (e.g., *Public Lands Act*, *Water Act*, *Environmental Protection and Enhancement Act*, *Historical Resources Act*, *Government Organization Act*) the applicant must provide the pre-consultation assessment, the adequacy assessment and the specific issues and response table (if prepared).

If the government of Alberta, through the ACO or otherwise, indicated that a pre-consultation assessment is not required, the applicant must provide that direction. [Please submit along with your application].

If advice from the government of Alberta has not been obtained, the applicant must provide justification for its decision to not seek advice:

There are no Indigenous Groups within the consultation and notification radii of the Project.
ACO replied indicating no indigenous consultation is recommended. Please see Attachment TP 35- ACO Consult Response FNC202650329

In any event, Synapse Real Estate Corp attempted to engage with 5 Indigenous groups by email and phone. Two were spoken with by phone. None have raised concerns, provided additional requests for information or otherwise provided feedback on the proposal.

Participant involvement program

Thermal power plant requirement (TP36)
Summarize the participant involvement information, including a description of the activities undertaken and include any engagement materials provided (see Appendix A1– Participant involvement program guidelines and Appendix A1-B – Participant involvement program guidelines for Indigenous groups).

We at Synapse Real Estate Corp fully acknowledge the concerns raised by the Alberta Utilities Commission (AUC) regarding our initial application for the Synapse Data Center Project. We understand that meaningful consultation is the cornerstone of a successful utility project, and we have heard the Commission's feedback regarding the depth and timing of our Participant Involvement Program (PIP). Our goal remains to ensure that every member of the Olds community whose rights may be affected by this development has a clear and influential voice in the process. We are committed to fostering a transparent dialogue that ensures all residents—including the more than 700 identified within our project radius—have their concerns heard, documented, and addressed in a substantive, respectful manner.

In our upcoming re-filing, we are providing significantly enhanced detail regarding our PIP to support the Commission's review and reflect the significant efforts we have put into community engagement. This updated submission will include a comprehensive feedback summary table that details the specific concerns raised by stakeholders, the specific steps taken to resolve them, and the mitigative measures we are implementing in response. We are dedicated to delivering an application that fully aligns with Rule 007 requirements and demonstrates our long-term commitment to being a responsible neighbor in Olds.

Refer to TP 36 – Project Involvement Program Summary Report for detailed information on out >8 week consultation period.

See attachment TP 36.1 - Synapse Data Center – Project Information Package that was distributed with TP36.2 AUC Public Involvement Brochure, TP6-Drawings & Maps, and Applicant has retained copies of in person consultation forms, mailout labels, contact addresses, list of addresses visited (spoken to or package left after 3rd attempt) and 3rd visit photos

Thermal power plant requirement (TP37)
List all persons within the appropriate notification radius as described in Appendix A1– Participant involvement program guidelines, as well as Indigenous groups or other interested persons that were notified or consulted as part of the participant involvement program.

TP 36 – Project Involvement Program Summary Report contains a summary of all individuals who expressed concerns or showed support for project and provides full overview on consultation conducted as part of personal consultation with over 700 individuals and broad community outreach.

Synapse has retained copies of in person consultation forms, mailout labels, contact addresses, list of addresses visited (spoken to or package left after 3rd attempt) and 3rd visit photos

See TP 35- ACO Consult Response FNC202650329 identifying no consultation required. See TP 36 – Project Involvement Program Summary Report for details on the consultation for 5 Indigenous groups contacted.

Thermal power plant requirement (TP38)
Supply a list of contact information for all persons listed in TP37 who had been contacted as part of the participant involvement program in an Excel spreadsheet in accordance with the template included in Appendix A1 – Participant involvement program guidelines.

See Attachment TP-38 – Individuals Contacted In Appendix A1 Format through mail

Thermal power plant requirement (TP39)

Summarize consultation with local municipal jurisdictions (e.g., cities, towns, municipal districts, counties). Describe any concerns or requests identified by the local municipality(ies) and steps taken to resolve those concerns or requests.

Refer to Attachment TP 36 – Project Involvement Program Summary Report for detailed information on correspondence with Mountainview county and the town of Olds.
Town of Olds Municipal Engagement Form–see Attachment TP40

Thermal power plant requirement (TP40)

As described in Section 6.3 of Appendix A1, confirm that the municipal engagement form was provided to the applicable municipality to complete for a minimum of 30 days, before filing the application. If the municipality completed the municipal engagement form, provide this form. If the municipality declined to complete the municipal engagement form, confirm what steps were taken to follow up with the municipality, including submitting copies of correspondence.

See Attachment TP40

Thermal power plant requirement (TP41)

Describe how the applicant engaged with applicable municipalities to modify the proposed power plant or to mitigate any of its potential adverse impacts to the municipality, prior to filing the application.

The Town of Olds and the Applicant engaged in consultation. The town of Olds identified the following items of concern during initial discussion:

- Install screening berms and aesthetic trees around property to improve aesthetic appearance of property.
- Facility proximity to road given the size of development
- Position of natural gas power plant on property
- Visibility of facility in winter months
- Noise conformance to provincial permitting requirements
- That efforts be made to exceed AUC noise minimums
- Cumulative noise impact of Data Center and Power Plant
- Impact of emergency generator testing procedures on noise levels
- Water use of facility

Synapse will comply with all of these requests. There are no outstanding requests from the Town of Olds in relation to the Project.

Thermal power plant requirement (TP42)

Provide a feedback summary table to identify all persons who expressed a concern(s) about the project that includes the following information:

- The name and land location of the person(s).
- The specifics of the concern(s).
- Steps taken to try and resolve the concern(s).
- Whether the concern(s) was resolved.

Refer to Attachment TP 36 – Project Involvement Program Summary Report

When complete, save a copy of this form as a PDF file and submit the file to the AUC through the eFiling System.

Appendix A

Innovation, Science and Economic Development Canada
Corporations Canada

Innovation, Sciences et Développement économique Canada
Corporations Canada

Certificate of Incorporation

Canada Business Corporations Act

Certificat de constitution

Loi canadienne sur les sociétés par actions

Synapse Real Estate Corp.
Synapse Immobilier Corp.

Corporate name / Dénomination sociale

1761912-0

Corporation number / Numéro de société

I HEREBY CERTIFY that the above-named corporation, the articles of incorporation of which are attached, is incorporated under the *Canada Business Corporations Act*.

JE CERTIFIE que la société susmentionnée, dont les statuts constitutifs sont joints, est constituée en vertu de la *Loi canadienne sur les sociétés par actions*.

Hantz Prosper

Director / Directeur

2026-01-14

Date of Incorporation (YYYY-MM-DD)
Date de constitution (AAAA-MM-JJ)

Canada

CORPORATE ACCESS NUMBER: 2127832265

Government of Alberta

BUSINESS CORPORATIONS ACT

CERTIFICATE

OF

REGISTRATION

SYNAPSE REAL ESTATE CORP. / SYNAPSE IMMOBILIER CORP.
WAS REGISTERED AS AN EXTRA-PROVINCIAL CORPORATION IN ALBERTA ON 2026/01/23.

REGISTRAR OF CORPORATIONS