



# Synapse Data Center

## Power Generating Facilities

### Decommissioning and Reclamation Plan

Olds, Alberta

LSD: 04-33-01-W5M

**Document: 25040-REC-01**

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#### Disclaimer

This report has been prepared as an independent third-party decommissioning and reclamation cost estimate in accordance with Alberta Utilities Commission Rule 007 reclamation security requirements. This report is intended solely for the use of Planus Corp. in connection with the Synapse Data Center power plant application to the Alberta Utilities Commission.

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## 1 Introduction

This prospective decommissioning and reclamation plan outlines the overall strategy as well as estimated cost breakdown to decommission and deconstruct the planned Synapse Data Center Campus power generation facilities at the end of its life and return the land to its current state in accordance with the requirements of the Alberta Utilities Commission's (AUC) Rule 007.

The Synapse Data Center Campus consists of ten identical data centers, each with its own combined-cycle power block. Each power block has a nominal generating capacity of 140 MW and operates independently to supply power to its associated data center. This document describes the proposed approach for decommissioning one 140 MW combined-cycle power generation block. From the estimated decommissioning cost of a single power block, a total site decommissioning liability for all ten power blocks is derived. The approach presented here reflects typical North American industrial decommissioning practices for gas-fired combined cycle power facilities.

### 1.1 Existing Site Conditions

The Synapse Data Center Campus is located in the northeast quadrant of the Town of Olds, Alberta. The campus occupies two quarter-sections described under the Alberta Township Survey as SW-04-033-01-W5 and NW-04-033-01-W5, as shown in Figure 1-1.



Figure 1-1 Synapse Data Center Campus location

The NW-04-033-01-W5 quarter-section was recently redesignated from a Future Urban District (FUD) to a Light Industrial District (LID) to accommodate data centre and supporting energy infrastructure, pursuant to *Town of Olds Land Use Bylaw Amendment No. 2026-07* and matches the district designation of the SW quarter section.

### 1.1.1 Surrounding Land Use

The surrounding lands are predominantly rural and agricultural in character, with dispersed residential and agricultural uses in the broader region.

At the time of decommissioning, the site is expected to remain as a Light Industrial District (LID). Reclamation activities are therefore scoped to return the site to a stable industrial-grade condition suitable for future industrial redevelopment rather than restoration to pre-development agricultural conditions.

### 1.1.2 Current Soil Conditions

The project site is located within the Central Parkland natural subregion of Alberta, where the dominant soils are Black Chernozems. A review of the Canada Land Inventory (CLI) Agricultural Land Capability Classification confirms that soils within the local study area are classified as CLI Class 1, representing prime agricultural soils with minimal limitations for crop production.

Topsoil depths across the site range from 25 mm to 200 mm based on preliminary borehole soil sampling completed in January 2026 (Solstice Environmental Management, *Environmental Evaluation, Synapse Data Center Project*, 13 February 2026). This existing topsoil will be stripped and removed from the site during construction of the Synapse campus and conserved in accordance with the *Soils Conservation Act*, RSA 2000, c. S-15.

## 2 Facility Description

Each 140 MW power block consists of a self-contained combined-cycle power generation system designed to provide electrical power to the adjacent data center campus through an islanded 13.8 kV electrical distribution system. Each block is comprised of two natural gas-fired gas turbine generators, with nominal generating capacities of 50 MW each, integrated with a single heat recovery steam generator (HRSG) and a condensing steam turbine generator with a nominal capacity of 40 MW. Waste heat from the gas turbines is used by the HRSG to generate the steam that expands through the steam turbine to maximize energy recovery.

Each power block is housed within a purpose-built turbine building approximately 270 ft wide by 324 ft long (87,480 ft<sup>2</sup>) and 38 ft high, constructed with a structural steel frame and metal cladding, and incorporates the necessary mechanical, electrical, control, cooling, chemical treatment, and auxiliary systems required for safe and reliable operation. Each data center is also supported by multiple skid-mounted, portable diesel backup generators (approximately 2.3 MW each, 600V; 60 per data center, 600 total) located within the adjacent mechanical yard. These units provide emergency power to critical loads and are included in the decommissioning estimate. Two diagrams are provided in Appendix A of this document, which identify both the proposed site layout, as well as the configuration of equipment in each proposed plant layout. All major equipment considered in this decommissioning plan are encircled in red.

The major systems comprising each power block are described below.

### 2.1 Gas Turbine Systems

Each power block includes two natural gas-fired aeroderivative turbine generator units rated approximately 50 MW each. The aeroderivative units are mounted within modular acoustic enclosures inside the turbine hall. Each unit includes:

- air intake filtration and sound attenuation system with evaporative cooling

- aeroderivative gas turbine engine
- fuel gas conditioning system (cyclone separator, line heater, HP coalescing filtration)
- reduction gearbox
- synchronous generator
- modular acoustic enclosure
- lube oil console and cooling system
- fire suppression / explosion containment system

The exhaust system incorporates positive isolation sliding gates with sealing air, allowing exhaust gases to be routed either through the heat recovery steam generator gas path (Phase 2 combined-cycle operation) or directly to a dedicated bypass stack (Phase 1 simple-cycle operation or HRSG maintenance mode).

## 2.2 Heat Recovery Steam Generator

Each power block includes one dual-pressure heat recovery steam generator (HRSG) designed to recover thermal energy from the gas turbine exhaust streams. The horizontal HRSG is located externally to the turbine building, measuring approximately 45 ft wide, 150 ft long, and 45 ft high. The HRSG includes:

- high pressure steam circuit up to 6,300 kPa and 495°C (HP output: 140,000 kg/h)
- low pressure steam circuit up to 600 kPa and 254°C (LP output: 30,000 kg/h)
- economizer banks
- evaporator sections
- superheater banks
- duct burners
- Ammonia Injection Grid (AIG) and Selective Catalytic Reduction (SCR) reactor systems
- exhaust bypass ducting with diverter damper

The HRSG exhausts through a stainless-steel stack approximately 58 ft tall and 20 ft diameter. A parallel bypass stack of identical dimensions serves the high-temperature SCR path for Phase 1 operation and HRSG maintenance isolation.

### 2.2.1 SCR Emissions Control

Each power block incorporates a dual-path selective catalytic reduction (SCR) systems to reduce nitrogen oxide emissions from the HRSG exhaust gas stream:

- high temperature SCR consisting of zeolite catalyst grids
- low temperature SCR consisting of vanadium catalyst grids

Ammonia is injected into the flue gas upstream of the catalyst beds to facilitate the reduction of nitrogen oxides. The ammonia injection system per power block consists of:

- one ammonia day tank, (2 m<sup>3</sup>, double-walled, 316L SS)
- ammonia dosing pumps
- PLC-based injection control console

A centralized bulk aqueous ammonia storage system (two 90 m<sup>3</sup> double-walled tanks) serves all ten power blocks from a central unloading containment area.

A similar SCR system is incorporated in the bypass stack to control NO<sub>x</sub> emissions from the gas turbines when the HRSG or steam turbine is isolated for maintenance.

## 2.3 Steam Cycle System

The steam and boiler feedwater system is explicitly designed as a closed-loop cycle with no continuous liquid discharge. Steam generated in the HRSGs expands through the steam turbine and is exhausted to air-cooled condensers (ACCs) installed on the roof of each modular power block. The system includes:

- one 40 MW condensing steam turbine generator
- lube oil system
- three Air Cooled Condensers (ACC) modules bolted onto the roof structure of the turbine hall, each sized for full plant load equipped with variable frequency drives
- gland sealing system

### 2.3.1 Boiler Condensate Recovery Circuit

The steam condensed in the ACCs is returned to the HRSG through a closed-loop condensate recovery system, which consists of:

- two condensate extraction pumps
- condensate filtration and polishing system
- boiler feedwater chemical totes (1 m<sup>3</sup> each per chemical)
- after-condenser and 1st stage ejectors
- inter-condenser and 2nd stage ejectors
- hogging ejector with silencer
- condensate collection and storage tank (70 m<sup>3</sup>) with deaerator
- boiler feedwater pump skid

Boiler feedwater chemistry is maintained through automated water quality monitoring and chemical injection systems including anti-scalant, pH control, corrosion inhibitors, and oxygen scavenger chemicals stored in 1 m<sup>3</sup> supplier provided totes.

The steam cycle design incorporates a boiler Water Recovery System (WRS) utilizing filtration and reverse osmosis to recover blowdown and sample streams, minimizing raw water makeup demand. A centralized treated water storage tank (350 m<sup>3</sup>) provides makeup demineralized/deoxygenated water for boiler feedwater supply across the site. The tank is constructed of 304L stainless steel, insulated and heat-traced, and is located outdoors on curbed concrete containment.

## 2.4 Auxiliary Systems

Each power block includes the balance-of-plant systems necessary to support plant operation, control, and maintenance.

### 2.4.1 Cooling Water Circuit

Auxiliary cooling for generators and lubrication systems is provided through a closed-loop glycol cooling system. The system utilizes a 50/50 polypropylene glycol mixture and consists of:

- six generator coolers per plant
- six lube oil coolers per plant
- two gland steam condenser coolers per plant

- air-cooled chiller for glycol heat rejection
- one glycol expansion and storage tank per plant (10 m<sup>3</sup>)
- one set of glycol side-stream filtration and circulating pump package per plant
- water quality monitoring system

## 2.4.2 Building and Utilities

- turbine building (270 ft × 324 ft, approximately 1.98 acres of floor area)
  - building gantry crane (150-tonne lifting capacity)
  - Parts and tool storage buildings (110 ft × 25 ft)
  - Maintenance laydown hardstand areas (110 ft × 90 ft)
  - acoustic wall panels and building sound attenuation systems
  - rooftop sound attenuation barriers
  - fire detection and suppression systems
  - plant compressed air systems
  - building heating, ventilation, and air conditioning (HVAC) systems
  - building external pipe and cable racks
- electrical switch gear, transformers, and distribution equipment at 13.8 kV (islanded system, no AESO interconnection)
- motor control centers (MCC)
- Uninterruptible Power Supply (UPS) systems
- operator field control room with distributed control system (DCS) and programmable logic controller (PLC) systems

Other site-wide shared infrastructure includes:

- truck offloading containment pad (80 ft × 40 ft), grated/bermed, impermeable liner with sump
- stormwater retention pond (natural, unlined, southeast corner of site)
- groundwater monitoring well network (upgradient and downgradient wells)
- site security and access control (CCTV, security gates, access control)
- site roads, hardstand, and parking

## 3 Decommissioning Methodology

Decommissioning of each 140 MW power block will be conducted using established industrial demolition and environmental remediation practices appropriate for large gas-fired combined-cycle power generation facilities.

The decommissioning process will be executed in a controlled and sequential manner to ensure the safe isolation of plant systems, removal of hazardous materials, dismantling of mechanical and electrical equipment, and restoration of the site to a stable condition suitable for future industrial use.

All work will be carried out by qualified demolition and environmental contractors with experience in heavy industrial facility dismantling, and within the Synapse Emergency Management Program (EMP). Applicable occupational safety, environmental protection, and waste handling regulations will be followed throughout the decommissioning process.

The general sequence of decommissioning activities is described below.

### 3.1 Plant Shutdown and System Isolation

Decommissioning activities will commence following permanent shutdown of the power block. The plant will be electrically isolated from the site's islanded 13.8 kV electrical distribution system and all generation equipment will be secured.

The following activities will be completed:

- permanent shutdown of all generating equipment (GTGs, STG, duct burners)
- isolation and purging of natural gas supply systems and coordination with the upstream gas supplier for disconnection of the dedicated 16-inch buried transmission pipeline
- depressurization and isolation of steam systems including HRSG, steam turbine, and condensate systems shutdown of cooling water and glycol systems
- isolation of plant electrical systems including the 13.8 kV switchgear
- lockout and tagout of all mechanical and electrical energy sources
- ABSA deregistration of all registered pressure vessels (HRSGs, steam piping, air receivers, CO<sub>2</sub> cylinders)
- AEPA notification per applicable EPEA approval conditions.

Isolation procedures will be completed in accordance with established plant safety procedures to ensure that no stored energy sources remain active prior to dismantling.

### 3.2 Removal of Operating Fluids

Prior to mechanical dismantling, all process and auxiliary fluids will be removed from plant systems. Given the plant's design as a closed-loop, zero process liquid discharge (ZPLD) facility, fluid inventories are well-contained and manageable.

Fluids expected to be removed include:

- turbine lubrication oils from GTG and STG lube oil systems
- gearbox lubrication oils
- hydraulic control fluids
- 50/50 propylene glycol-water mixture from gas generator and lube oil cooling systems (approximately 10 m<sup>3</sup> per plant) and from the closed-loop auxiliary cooling circuit
- boiler feedwater and condensate inventories from HRSG and condensate storage systems
- 19% aqueous ammonia solution from day tanks (2 m<sup>3</sup> each) and the centralized bulk storage system (approximately 1.8 m<sup>3</sup> per plant pro-rated from the 90 m<sup>3</sup> site-wide bulk tanks) used for SCR emissions control
- boiler water treatment chemicals from 1 m<sup>3</sup> totes (oxygen scavenger, corrosion inhibitor, anti-scalant, pH control agent)
- transformer dielectric insulating fluids
- building heating medium fluids
- Backup generator diesel fuel, lube oil, and cooling liquids as applicable

Fluids will be drained into appropriate containment systems using existing secondary containment infrastructure and transported off-site for recycling or disposal at licensed waste management facilities in accordance with applicable Alberta regulations.

### 3.3 Removal of Hazardous Materials

A formal hazardous materials survey will be conducted by a qualified environmental consultant prior to decommissioning to identify and classify hazardous materials and establish handling, transportation, and disposal procedures. At a minimum, handling, transportation, and disposal of hazardous materials will be conducted in accordance with RSA 2000, Ch. E-12 *Environmental Protection and Enhancement Act*, and Alberta Regulations No. 192/1996, *Waste Control Regulation* and No. 157/1997, *Dangerous Goods Transportation and Handling Regulation*.

Hazardous materials expected to be present within the facility include:

- SCR catalyst materials (zeolite and vanadium) used in the emissions control system.
- residual ammonia reagent stored in day tanks and injection systems
- batteries associated with UPS systems
- oils and dielectric fluids contained within electrical equipment.

### 3.4 Mechanical Equipment Removal

Following removal of hazardous materials, major mechanical equipment will be dismantled and removed from the turbine building. Large rotating equipment will be removed using the building's 150-tonne gantry crane (82 m span) in combination with mobile cranes where required. The gantry crane will remain operational until the last of the heavy turbine equipment is removed and will itself be the final major mechanical item removed from the building.

The typical sequence of equipment removal will include:

- removal of modular gas turbine acoustic enclosures
- removal of gas turbine generator units
- removal of turbine gearboxes
- removal of the steam turbine generator unit
- removal of lube oil systems, including skids, and coolers; and auxiliary mechanical equipment

Large equipment may be removed as complete assemblies or separated into transportable sections depending on lifting and transportation constraints. Where economically viable, major equipment may be salvaged for resale (grey market) or recycled as scrap metal.

### 3.5 Heat Recovery Steam Generator Dismantling

Following removal of turbine equipment, the heat recovery steam generator and associated exhaust systems will be dismantled. The HRSG is located external to the turbine hall and is not accessible by the building gantry crane; an external mobile crane is therefore required for HRSG drum lifts and major picks.

Dismantling activities will include:

- removal of SCR catalyst modules
- removal of ammonia injection equipment and AIG systems from both SCR paths
- removal of duct burners and internal heat exchanger tube banks (superheater, evaporator, economizer)
- removal of HP and LP steam drums using external mobile crane
- dismantling of HRSG pressure parts, structural steel, and casing
- dismantling of exhaust bypass ducting
- staged dismantling of the HRSG stainless steel exhaust stack

- dismantling and removal of the stainless-steel bypass stack including diverter damper

The HRSG structure will be dismantled using mechanical cutting methods and mobile cranes. Structural steel will be segregated for recycling.

### 3.6 Cooling, Condensate Recovery, and Emission Control System Removal

Cooling, condensate recovery, and associated emissions control systems will be dismantled and removed following removal of the HRSG structure.

Activities will include:

- dismantling of three air-cooled condenser structures
- removal of fan assemblies and heat exchanger bundles
- removal of glycol piping systems and air-cooled chiller
- removal of glycol expansion and storage tanks and filtration equipment
- removal of condensate recovery system, including pump and filtration skid, condensate storage tank, chemical injection equipment with totes, centralized treated water storage tank, and associated water recovery system components.
- removal of SCR ammonia injection systems, including ammonia day tank, injection control console, and centralized bulk aqueous ammonia storage system.

Fluids will have been previously removed during the fluid removal stage.

### 3.7 Electrical and Control Systems Removal

Electrical infrastructure associated with each power block will be dismantled following removal of the mechanical equipment. As the plant operates on an islanded 13.8 kV electrical distribution system with no AESO interconnection, no utility disconnection coordination is required at the transmission level.

Electrical removal activities will include:

- removal of generators and generator bus systems
- removal of switchgear and motor control centers (MCC)
- removal of UPS systems and associated battery banks
- removal of DCS and PLC controller cabinets, field instruments, and loop disconnection
- removal of control room consoles, panels, and raised floor
- dismantling of above-ground cable trays and cable removal
- extraction of underground cable and conduit
- removal of lighting, communications, and security systems

Recoverable metals such as copper, aluminum conductors will be segregated for recycling.

### 3.8 Building and Structural Demolition

Following removal of mechanical and electrical equipment, the turbine building and associated structures will be dismantled.

Demolition activities will include:

- removal of acoustic wall panels and sound attenuation systems
- dismantling of structural steel framing
- removal of roof structures, metal cladding, and sound attenuation barriers

- demolition of equipment foundations, concrete slabs, and pads
- removal and disposal of underground utilities including piping, conduit, and duct banks
- removal and disposal of external pipe and cable racks
- removal of below-grade structures including sumps, valve vaults, and firewater infrastructure

Concrete materials will be broken, loaded, hauled, and disposed at an approved construction and demolition disposal facility. No concrete debris will be used for on-site backfill.

### 3.9 Site Restoration

Following completion of demolition activities, the site will be graded and stabilized.

Site restoration activities will include:

- removal of remaining underground utilities and services where required
- scarification of compacted road subgrade prior to site restoration activities grading and compaction of soils
- removal of demolition debris
- stabilization of exposed surfaces
- final site survey and brownfield closure documentation prepared by a licensed surveyor and environmental consultant in accordance with EPEA approval conditions

The site will be returned to an industrial-grade condition suitable for future redevelopment or continued industrial use.

## 4 Materials and Waste Management

Decommissioning of each 140 MW power block will result in the removal of structural materials, mechanical and electrical equipment, process fluids, and chemical products associated with plant operation. Materials will be segregated where practical to maximize recycling and ensure proper handling of hazardous substances.

Table 4-1 summarizes the primary material categories expected to be generated during decommissioning and the anticipated handling or disposal method.

*Table 4-1 Anticipated Materials Generated During Decommissioning (Per Plant)*

<b>Material Category</b>	<b>Source</b>	<b>Typical Handling Method</b>
<b>Structural steel</b>	HRSG structure, turbine building steel, ducting, ACC structures, equipment supports, pipe racks, cable tray supports	Recycled through licensed metal recycling facilities
<b>Mechanical equipment</b>	Gas turbines, steam turbine, generators, gearboxes, pumps, heat exchangers, ACC	Salvage where feasible or recycled as scrap metal
<b>Concrete</b>	Equipment foundations, pedestals, building slabs, ACC foundations	Hauled to approved C&D disposal facility
<b>Electrical equipment</b>	Switchgear, MCCs, UPS systems, cable trays, instrumentation panels, generator bus, transformers	Metals recovered for recycling; remaining components disposed at approved facilities
<b>Copper and aluminum conductors</b>	Power cables, control wiring, generator windings	Recycled through metal recovery facilities
<b>Lubricating oils</b>	Turbine and gearbox lubrication systems, backup diesel generator	Collected and transported for recycling or disposal through licensed waste contractors
<b>PCB-free mineral oils</b>	Transformer dielectric insulating fluids	Drained and disposed of through licensed chemical waste handlers
<b>Glycol coolant (50/50 polypropylene glycol)</b>	Generator and lube oil cooling systems, backup diesel generator (if applicable)	Recovered for recycling or disposed through licensed waste management providers
<b>Boiler water and condensate</b>	HRSG and condensate recovery systems	Drained and discharged or disposed in accordance with applicable regulations
<b>Water treatment chemicals</b>	Boiler feedwater treatment systems	Removed and disposed of through licensed chemical waste handlers
<b>Ammonia solution</b>	SCR emissions control system	Neutralized, removed and transported to licensed chemical disposal or recycling facilities
<b>SCR catalyst materials</b>	HRSG SCR reactors (zeolite and vanadium catalyst modules)	Returned to catalyst suppliers or disposed through licensed industrial recycling or disposal facilities
<b>General demolition debris</b>	Insulation, acoustic panels, building materials	Transported to approved waste disposal facilities
<b>Batteries</b>	UPS systems	Hazardous waste; Transported to licensed battery recycler or disposal facility

#### 4.1 Hazardous Waste

Materials will be assessed prior to demolition to identify its hazardous classification in accordance with Alberta Regulation No. 192/1996 *Waste Control Regulation*. Licensed waste contractors will confirm applicable waste codes and manifest requirements for each material stream at the time of

decommissioning. Actual waste classification, handling, transportation, and disposal procedures will be governed by the regulatory requirements in effect at the time of decommissioning.

## 5 Decommissioning Cost Estimate

The estimated cost of decommissioning a single 140 MW power block has been developed in accordance with AACE International Recommended Practice No. 18R-97, *Cost Estimate Classification System*. A Class 5 estimate has been selected based on the conceptual-level maturity of the project definition and considers the anticipated labour, equipment, demolition, removal, waste handling, and site restoration activities required for a combined-cycle power generation facility of similar size and complexity.

### 5.1 Decommissioning and Reclamation Considerations

The estimate covers the full decommissioning scope for a single 140 MW combined-cycle power block, comprising two 50 MW aeroderivative gas turbines and generators, one 40 MW condensing steam turbine and generator, one dual-pressure HRSG with dual-path SCR emissions control systems (bypass stack and HRSG-integrated), three roof-mounted air-cooled condensers, lube oil and generator cooling systems, auxiliary mechanical and electrical systems, the turbine building structure and overhead crane, equipment foundations, and site restoration.

The following considerations were used in developing the decommissioning and reclamation cost estimates:

- All turbine buildings, structural steel, acoustic systems, and associated structures are assumed to be demolished and removed.
- Equipment foundations and concrete structures are assumed to be demolished to below grade and removed where practical.
- Process fluids including lubricating oils, glycol coolant, ammonia solution, and water treatment chemicals are assumed to be removed and disposed of through licensed waste management providers.
- Materials generated during demolition are assumed to be transported to appropriate recycling or disposal facilities.
- The site is assumed to be graded and stabilized to an industrial condition suitable for future redevelopment, consistent with the Light Industrial District designation.
- The 150-tonne overhead gantry crane requires specialist rigging and is assumed to require a separate mobile crane mobilization for its removal following completion of turbine equipment removal.

### 5.2 Estimate Exclusions

The estimate excludes all the following:

- Salvage or scrap value credits of recovered or sold equipment. Exclusion of salvage value provides a conservative basis for decommissioning security estimation.
- Subsurface contamination investigation or remediation beyond known fluid inventories.
- Gas pipeline and conditioning facilities supplying the Synapse campus
- Subsurface contamination or remediation.
- Groundwater monitoring programs.
- Administrative, legal, and permitting fees associated with regulatory notifications and safety plan.
- Winter construction premium or weather allowances.

- Owner insurance and bonding (estimated 2–3% of total, if required).
- AESO disconnection costs (islanded 13.8 kV system).

### 5.3 Estimate Methodology

Cost estimates have been developed using a combination of experience-based labour estimates and parametric unit rates. Demolition labour and equipment removal costs were estimated based on direct experience in heavy industrial facilities, including assessment of crew sizes, equipment requirements, and durations for each major scope item. Where applicable, labour rates are based on Alberta Construction Labour Relations Association (CLRA) collective, inclusive of applicable labour burden and contractor markup. Waste disposal, concrete removal, and structural steel haul-away costs were developed using parametric unit rates expressed as cost per tonne or \$/m<sup>3</sup>, derived from current Alberta landfill tipping fees, haul rates, and scrap metal market pricing. All rates reflect 2026 Alberta market conditions.

The estimate is divided into direct (Table 5-1) and indirect costs (Table 5-2). Direct costs cover all field labour, equipment, and materials associated with physical decommissioning activities including fluid removal, hazardous materials handling, mechanical equipment removal, structural demolition, foundation removal, waste handling and disposal, and site grading and stabilization. Indirect costs cover project management, engineering oversight, construction management, health safety and environment coordination, temporary facilities, mobilization and demobilization, and permitting and regulatory coordination.

Hazardous and potentially hazardous solid materials, including SCR catalyst modules and battery banks, have been costed for disposal at a licensed Class 1 landfill facility approved to receive solid hazardous waste in accordance with the *Waste Control Regulation*, AR 192/1996. Liquid hazardous and potentially hazardous materials, including aqueous ammonia, glycol coolant, dielectric fluids, boiler water treatment chemicals, and building heating medium fluids, have been costed in accordance with their anticipated regulatory classification, reflecting licensed contractor handling, transportation, and disposal at approved Alberta facilities.

*Table 5-1 Direct Decommissioning and Reclamation Costs per 140 MW Power Block*

Direct Cost Item	Estimated Cost (2026 CAD)
Pre-decommissioning: hazmat survey, fluid removal, regulatory notifications, and decommissioning engineering	\$1,311,098
Site preparation and utility de-energization	\$328,796
Mechanical equipment removal: gas turbines (2 units), steam turbine, HRSG with SCR systems and stacks, air-cooled condensers (3 units), and auxiliary mechanical systems	\$6,726,044
Electrical and instrumentation removal: switchgear, MCCs, UPS and batteries, DCS/PLC, cable systems, and portable backup generators (60 units)	\$1,351,634
Civil, structural, and building demolition: structural steel, foundations, underground utilities, site grading, topsoil placement, and brownfield closure	\$4,377,348
Waste management and disposal: scrap steel, concrete rubble, SCR catalyst, hazardous waste, general industrial waste, and environmental coordination	\$2,181,43
<b>Total Direct Costs per 140 MW power block</b>	<b>\$16,276,359</b>

*Table 5-2 Indirect Decommissioning and Reclamation Costs per 140 MW Power Block*

Indirect Cost Item	Estimated Cost (2026 CAD)
Project management, HSE coordination, and site close-out	\$1,300,000
<b>Total Indirect Costs per 140 MW power block</b>	<b>\$1,300,000</b>

A contingency of 30% has been applied to the combined direct and indirect cost subtotal. This contingency reflects the Class 5 estimate classification and the following key cost risks:

- Uncertainty in required labour estimates based on conceptual-level facility design
- Uncertainty in quantities of construction material such as structural steel tonnage and concrete volumes
- Future changes to hazardous waste disposal regulations, particularly with respect to SCR catalyst classification
- Uncertainty in foundation removal depth requirements

### 5.3.1 Escalation

This estimate is expressed in 2026 Canadian dollars. No escalation factor has been applied to the current estimate. Future updates will apply the Alberta Construction Price Index (ACPI) from the 2026 base year, or as otherwise agreed with AEPA at the time of each periodic review.

## 5.4 Total Project Decommissioning Liability

The Synapse Data Center power generation campus consists of ten identical 140 MW power blocks. Based on the estimated decommissioning cost per plant, the total estimated decommissioning liability for the full 10-plant development is as follows. This total given in Table 5-3 represents the aggregate prospective liability for decommissioning and site restoration of the power generation facilities only, and does not include associated data centre infrastructure, off-site transmission lines, or gas pipeline infrastructure.

*Table 5-3 Total Project Decommissioning Liability*

Estimate Range	Per Plant (2026 CAD)	10-Plant Campus (2026 CAD)
Base estimate	\$17,576,359	\$175,763,589
<b>AACE Class 5 high range estimate (+65%)</b>	<b>\$29,000,992</b>	<b>\$290,009,921</b>

Total recommended AUC security: **\$290,009,921 CAD**

## 5.5 Decommissioning and Reclamation Considerations

Several special considerations could alter the estimated decommissioning and reclamation capital costs presented in this plan, including:

- On-site investigations for Phase 1 and Phase 2 Environmental Site Assessments (ESA) have not yet been completed as the facility has not been constructed. A Phase 1 ESA may be required prior to decommissioning to investigate areas of potential environmental concern.

- Further engineering development of the proposed facility and confirmation of final equipment specifications, weights, and materials.
- Identification of actual equipment and material weights from OEM documentation (e.g. HRSG drum weights), which are critical in determining crane selection and associated hire costs.
- Confirmation of SCR catalyst formulation (zeolite vs. vanadium) from OEM material safety data sheets and corresponding waste classification from AB Environment.
- Constructability challenges unique to the site location or equipment configuration.
- Changes in environmental or disposal legislation affecting hazardous waste classification or disposal requirements.
- Changes in economic considerations such as Alberta labour rates, demolition costs, landfill tipping fees, or metal scrap pricing.
- Changes in contracting methodology or scope allocation between owner and contractor.
- Future land use requirements at time of decommissioning (Light Industrial District designation may relax topsoil replacement requirements compared to agricultural reclamation).
- Changes to project contingency costs based on further engineering development.
- Regulatory changes to AUC decommissioning security requirements.

## 5.6 Estimate Update Schedule

Per industry practice and AUC Rule 007 TP30 guidance, this estimate must be updated:

- At completion of detailed engineering, updated to AACE Class 3 accuracy by an independent qualified P.Eng.
- At minimum every five (5) years from the date of AUC facility approval
- Following any material change to facility configuration, decommissioning scope, or applicable regulations

The security instrument amount must be adjusted within 90 days of each update.

## 6 Salvage Value Estimate

No salvage credit has been applied to the required security amount, providing a conservative estimate basis. The estimated gross salvage value of major recoverable equipment and materials from the total decommissioning is set out below for information only, consistent with the AUC Rule 007 TP30 requirement to describe salvage value even where no credit is applied. Actual salvage proceeds at the time of decommissioning will depend on equipment condition, market conditions, and buyer availability, and could differ materially from the indicative values presented.

Item	Estimated Value (2026 CAD)
Gas Turbines	\$178,000,000
Steam Turbines	\$49,000,000
Scrap Steel	\$2,760,000

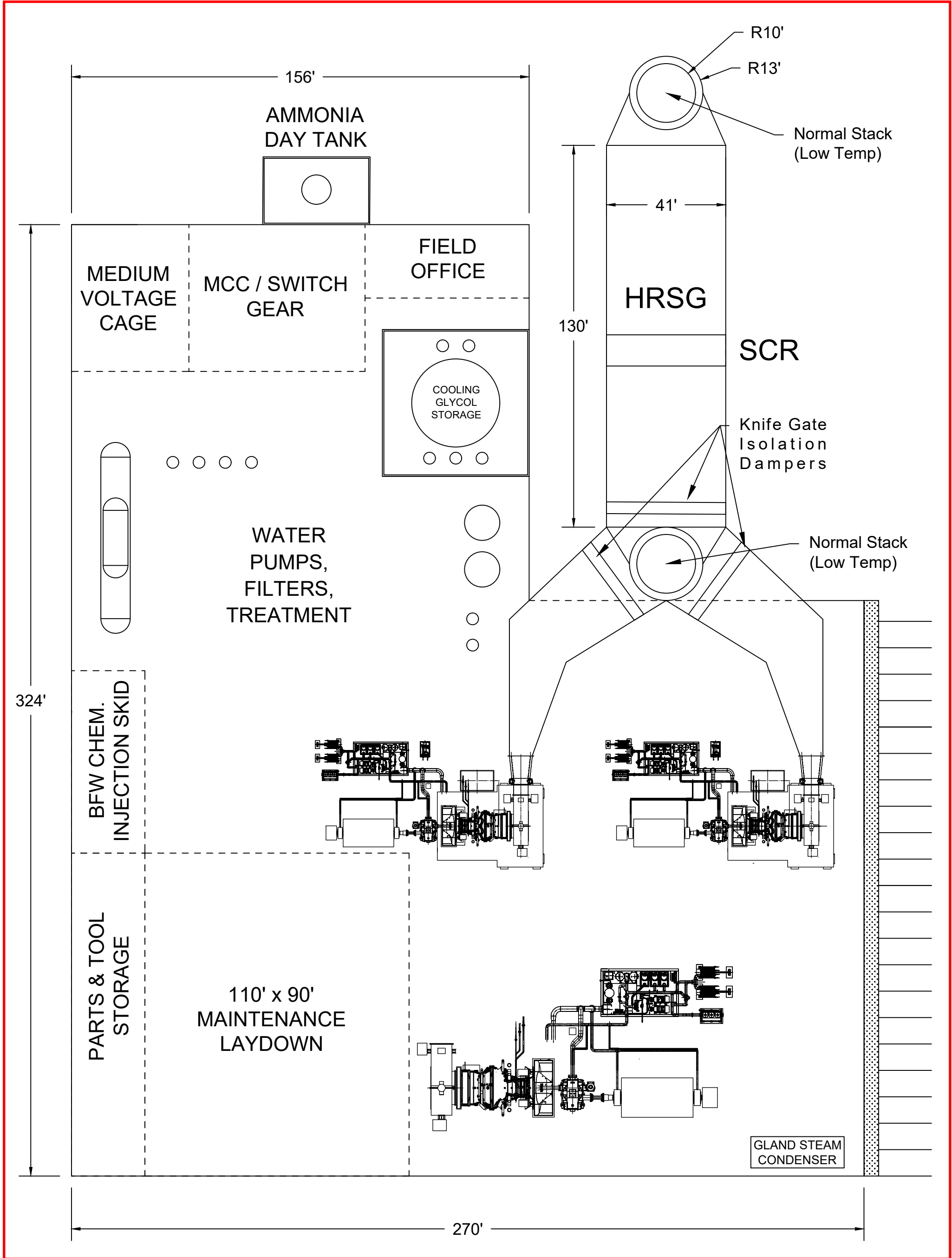
## 7 Conclusion

The Synapse Data Center Campus power generation facilities comprise ten identical 140 MW combined-cycle power blocks located in the Town of Olds, Alberta. Based on a parametric and experience-based

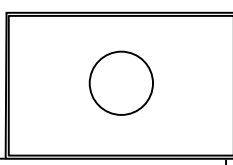
cost estimate developed at a Class 5 level of definition, the total estimated decommissioning liability for all ten power blocks is \$290,009,921 CAD (2026 dollars), inclusive of direct costs, indirect costs, and a 30% contingency allowance. No salvage credit has been applied, providing a conservative basis for reclamation security sizing.

The estimates contained herein are subject to the limitations and exclusions described in Section 5.2 of this report. Actual decommissioning costs will vary from those estimated due to changes in market conditions, regulatory requirements, facility condition, and other factors that cannot be predicted at this time.

## Appendix A – Plant and Site Layouts



AMMONIA DAY TANK



MEDIUM VOLTAGE CAGE

MCC / SWITCH GEAR

FIELD OFFICE

COOLING GLYCOL STORAGE

WATER PUMPS, FILTERS, TREATMENT

HRSG

SCR

Knife Gate Isolation Dampers

Normal Stack (Low Temp)

324'

BFW CHEM. INJECTION SKID

PARTS & TOOL STORAGE

110' x 90' MAINTENANCE LAYDOWN

GLAND STEAM CONDENSER

270'

