

Date: August 21, 2026

To: Laura Watson, Project Manager, Customer Grid Access – Alberta Electric System Operator

From: John Naughton, Land Planner, Land & Environment – ATCO Electric

Subject: Environment & Land Use Impacts Memo – P2716 Wapiti Load

ATCO Electric Ltd. (ATCO) has reviewed and completed a high-level desktop environment and land use analysis of Alternatives 1, and 7 from the Environment and Land Use Evaluation Scope document for the Wapiti Load project (AESO Project Number P2716).

Alternative 1 includes the following developments:

- Add a new 144/25 kV point of delivery (POD) substation, designated as Pakenham 2103S substation, including one 144/25 kV transformer, one 144 kV circuit breaker;
- Add one 144 kV circuit, approximately 15 km in length, to connect the proposed POD substation to the existing 144 kV transmission line 7L228 (between Big Mountain 845S and Thornton 2091S substations) using T-tap configuration;
- Add or modify associated equipment as required for the above transmission developments.
- Add two distribution feeders, approximately 1 km each from the Pakenham 2103S substation to the customers site; and
- Detailed routing & siting have been completed, and land rights have been obtained.

Alternative 7 includes the following developments:

- Upgrade the existing Wapiti 823S substation, including adding one 144/25 kV transformer;
- Add or modify associated equipment as required for the above transmission developments.
- Add three 25 kV feeders. Each feeder will be approximately 38 km in length and will require two regulators and one MVar compensator; and
- Detailed routing & siting were not completed, and land rights have not been obtained for this alternative.

ATCO is confident that the attached metrics table and maps will be adequate to provide the AESO with sufficient environment and land use data. This assessment was completed by John Naughton, Land Planner, Land & Environment, and approved by Nicole Hupka, Planning Supervisor, Land & Environment. Questions concerning this submission can be directed to John Naughton by phone at 825-966-9143 or by email at john.naughton@atco.com.

Sincerely,

ATCO Electric Ltd.



John Naughton

Land Planner, Land & Environment

Wapiti Load - P2716

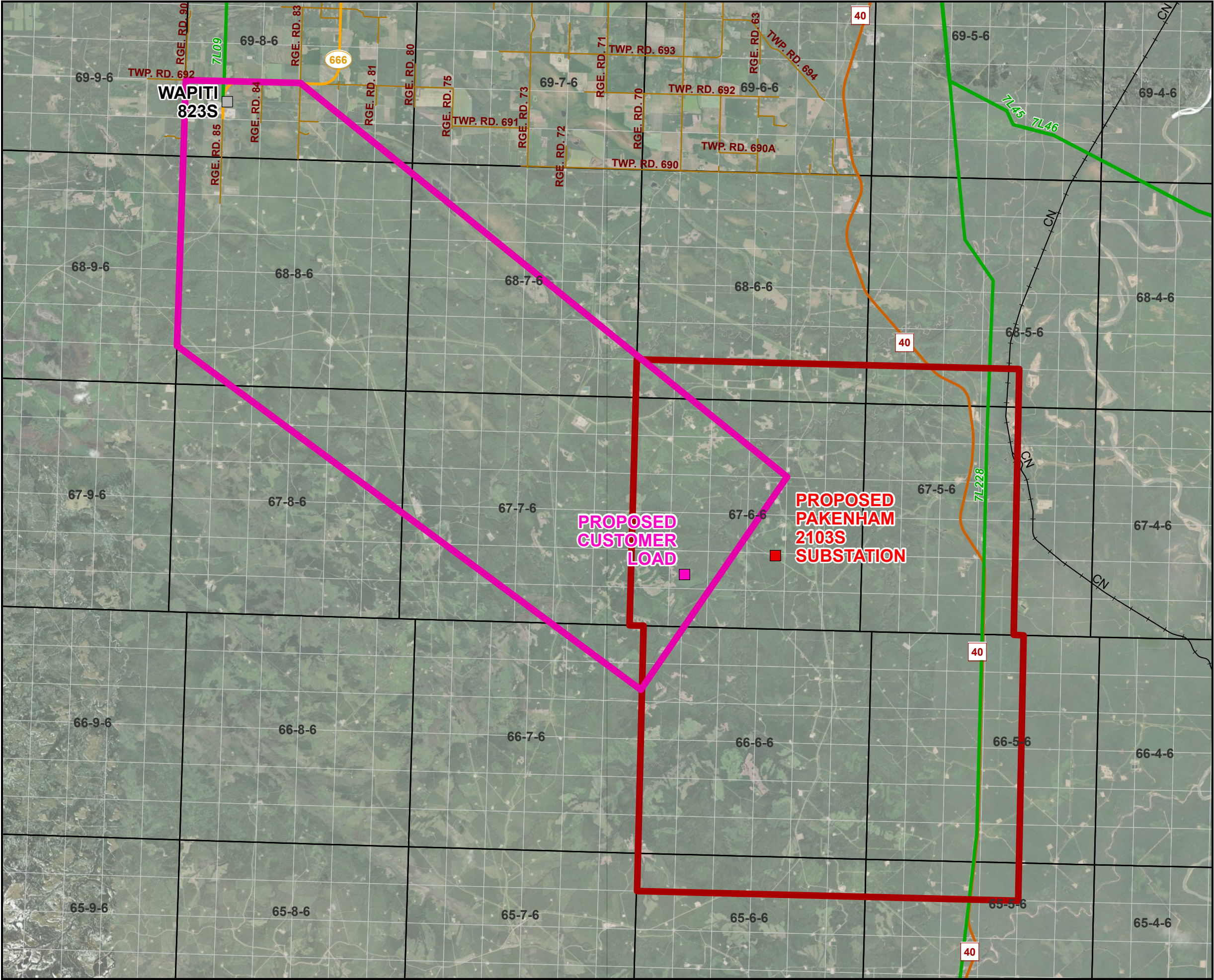
Metric	Alternative 1: New Point of Delivery with a T-tap connection to the 144 kV transmission line 7L228	Alternative 7: Upgrade Wapiti 823S substation	ATCO Comments
Transmission Line Length	Approx. 15 km	None	Alternative 7 has no transmission scope, however, it would require the construction of two 38 km distribution easements (one double circuit and one single circuit). This additional easement would result in an overall greater footprint of disturbance when compared to Alternative 1.
Distribution Line Length	Approx. 1 km of double circuit	Approx. 38 km, one double circuit and one single circuit	
Land Constraints	Located entirely on Crown land Forested terrain and roadside	Located primarily on Crown land Approx. 1 km on private land Forested terrain, roadside and cultivated lands	Routing feasibility for Alternative 7 may be limited as there are several distribution facilities routed in the same area. Objection from private landowners is a risk.
Water Crossings	Big Mountain Creek - Class C Multiple Creek/Tributary Crossings required *Class C Water Restrictions - Restricted Activity Period (RAP) within high water mark from August 1 to July 15.	Bald Mountain Creek - Class C Multiple Creek/ Tributary Crossings Required *Class C Water Restrictions - RAP within high water mark from August 1 to July 15.	River crossings and associated wildlife constraints will pose challenges for access and construction timing for both Alternatives 1 & 7.
Wildlife	Grizzly Bear - Den sites require a 200m setback during RAP from Oct. 1 to April 30	Grizzly Bear - Den sites require a 200m setback during RAP from Oct. 1 to April 30 Trumpeter Swan Buffer - RAP from April 1 and Sept. 30, the Disposition Holder must not conduct any activities within 800 metres of the bed and shore of a known or identified Trumpeter Swan watercourse or water body	Wildlife constraints are similar for Alternatives 1 & 7. The addition of Trumpeter Swan waterbodies may introduce increased risk for wildlife interactions and timing restrictions for Alternative 7.
Historical Resource Value (HRV)	No HRV noted. - Historical Clearance Application filed - HRIA was requested and completed - No resources were found	No HRV noted	Alternatives 1 & 7 are similar and both require Historical Clearance. HRIA has been completed for Alternative 1.
First Nations	Due to Crown land requirements, First Nations consultation will need to be considered	Due to Crown land requirements, First Nations consultation will need to be considered	Consultation requirements have been completed for Alternative 1. Alternative 7 would require additional time for consultation.
Public - Residences	No residences Local trapper notifications may be required	Minimal residences Local trapper notifications may be required	Alternative 1 has no residences along the route. Alternative 7 interacts with private land which adds risk due to potential for objections.
Industry - Pipelines & Facilities	Multiple Oil & Gas Facilities		Alternative 1 & 7 are similar.
Overall Recommendation:	The environmental and land use constraints are similar for Alternatives 1 & 7, with Alternative 7 being slightly more complex due to the addition of Private lands and a Trumpeter Swan waterbody, which requires buffers and setbacks. Alternative 7 has a greater footprint due to the requirement for 3 distribution lines, across 2 easements. Alternative 7 is expected to have a greater environmental impact.		

Spatial Datasets:

Historical Resource Value Listings - Government of Alberta 2026

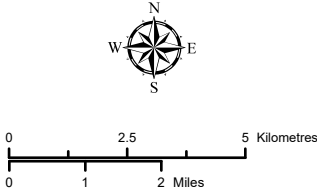
Alberta Merged Wetland Inventory - Alberta Environment and Parks, Government of Alberta 2026

Alberta Conservation Information Management System (ACIMS) - Alberta Parks 2026



- Study Area - Alternative 1
- Study Area - Alternative 2
- Proposed Customer Load
- Proposed Substation
- Existing Substation
- Existing Substation Footprint
- Existing 144 kV Transmission Line
- Railway
- Primary Highway
- Secondary Highway
- Road

CREDIT NOTES
Alberta Data Partnerships, S&P Global Commodity Insights, Esri World Imagery (2024)



NOTES:
- Only facilities in the vicinity of the project are shown.

This map is the property of ATCO. This map is not intended to be used in place of Alberta One Call. Always practice extreme caution when near power lines!

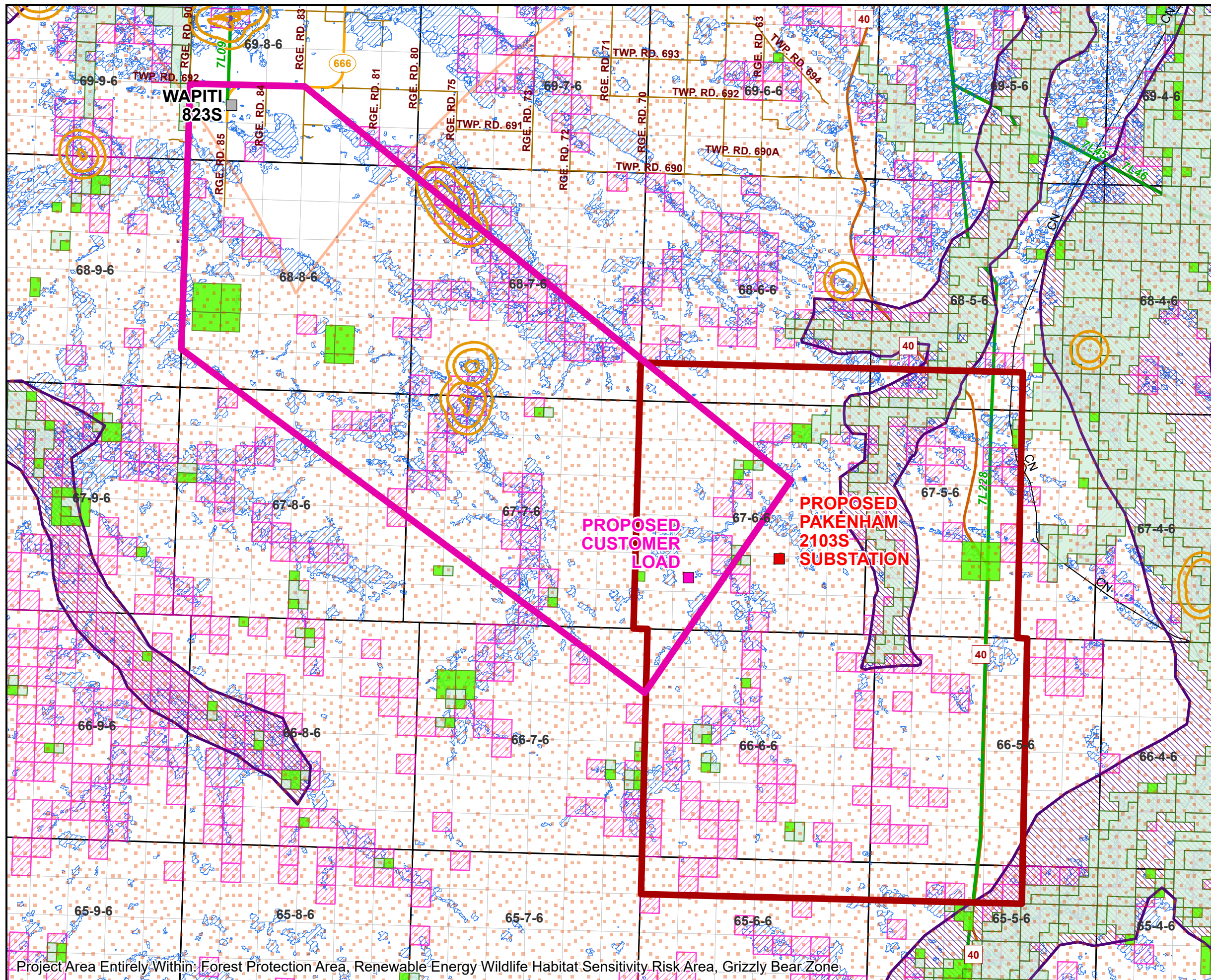
ATCO Energy Systems™

P2716 Wapiti Load

STUDY AREA

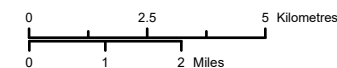
August 2026

RS-7LA228 - ELU - 01



- Study Area - Alternative 1
- Study Area - Alternative 2
- Proposed Customer Load
- Proposed Substation
- Existing Substation
- Trumpeter Swan Buffers
- Mountain Goat And Sheep Areas Disease Buffer
- Alberta Merged Wetland Inventory
- Historic Resource Value 4
- Historic Resource Value 5
- Environmentally Significant Areas (2014)
- Key Wildlife and Biodiversity Zone
- Existing 144 kV Transmission Line
- Railway
- Primary Highway
- Secondary Highway
- Road

CREDIT NOTES
Alberta Data Partnerships, S&P Global Commodity Insights



NOTES:
- Only facilities in the vicinity of the project are shown.

This map is the property of ATCO. This map is not intended to be used in place of Alberta One Call. Always practice extreme caution when near power lines!

ATCO Energy Systems™

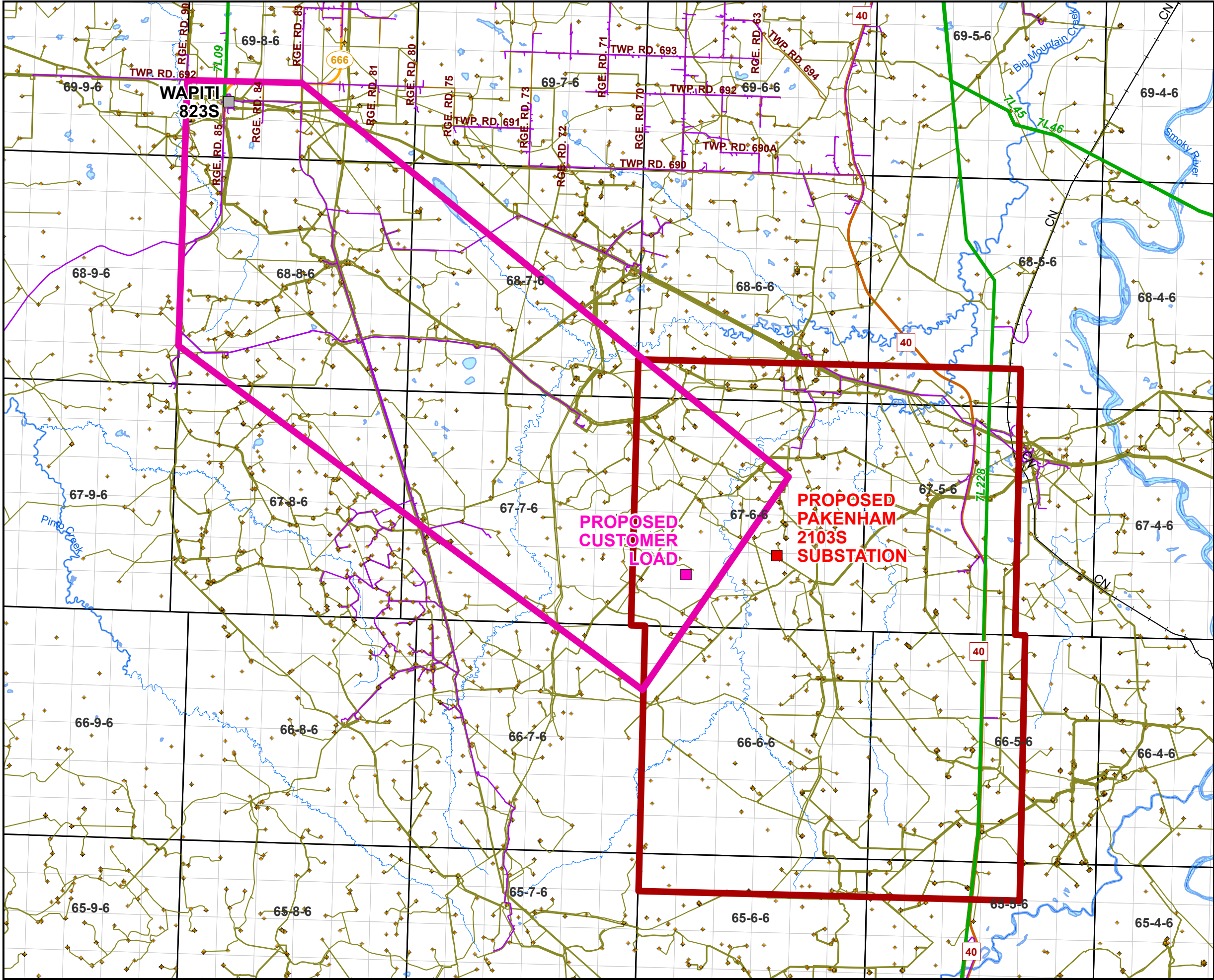
P2716 Wapiti Load

ENVIRONMENTAL AND HISTORICAL
CONSTRAINTS MAP

August 2026

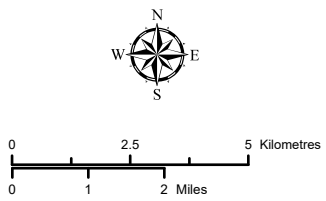
RS-7LA228 - ELU - 02

Project Area Entirely Within: Forest Protection Area, Renewable Energy Wildlife Habitat Sensitivity Risk Area, Grizzly Bear Zone



- Study Area - Alternative 1
- Study Area - Alternative 2
- Proposed Customer Load
- Proposed Substation
- Existing Substation
- Existing 144 kV Transmission Line
- Distribution Conductors
- Surface Well Sites
- High Pressure Pipelines
- Waterbodies
- Railway
- Primary Highway
- Secondary Highway
- Road
- Watercourse

CREDIT NOTES
Alberta Data Partnerships, S&P Global Commodity Insights



NOTES:
- Only facilities in the vicinity of the project are shown.

This map is the property of ATCO. This map is not intended to be used in place of Alberta One Call. Always practice extreme caution when near power lines!

ATCO Energy Systems™

P2716 Wapiti Load

**LAND USE
CONSTRAINTS MAP**

August 2026

RS-7LA228 - ELU - 03