

Topic: **Bylaw 2014-24** Municipal Development Plan Amendment Agriculture to Industrial / Commercial; and
Bylaw 2014-25 Highvale End Land Use Area Structure Plan Amendment Agriculture / Nature
Conservation District to Direct Control District

Introduction

The Applicant has applied for an amendment to Map 2 of Municipal Development Plan Bylaw No. 37-2007 to redesignate approximately 120 ha (297 ac) of land within W5-04-52-10-NW & SW from Agriculture to Industrial/Commercial as well as an amendment to Figure 1, of the Highvale End Land Use Area Structure Plan Bylaw No. 28-97 to redesignate approximately 120 ha (297 ac) of land within W5-04-52-10-NW & SW from Agriculture/Nature Conservation District to Direct Control District;

Discussion

The Application

The Applicant has applied for an amendment to the Municipal Development Plan Bylaw No. 37-2007 and the Highvale End Land Use ASP Bylaw No. 28-97 to accommodate a new natural gas fueled power plant on W5-04-52-10-NW & SW.

TransAlta MidAmerican Partnership (TAMA Power) is proposing to construct and operate a new natural gas-fired thermal generation facility located near the existing TransAlta Corporation (TransAlta) coal-fired power generation facilities in the Lake Wabamun area. TAMA Power is a joint venture partnership between TransAlta and MidAmerican Energy Holdings Company. The Sundance 7 Project (the Project) is planned to be a combined-cycle natural gas-fired generation plant in a 2 x 1 configuration with a gross nominal generation capacity of 856 megawatts (MW). The Project is located in a green field site within W5-04-52-10-NW & SW, approximately 7 kilometres (km) southwest of the Village of Wabamun. It is anticipated the Project would be in-service in late 2018, prior to the first retirements of the existing coal-fired units in Alberta in 2019. TAMA Power is currently in the application process with the Alberta Utilities Commission (AUC) to construct the new proposed power plant.

The Site

The subject lands are situated just south of Wabamun Lake and east of the existing Sundance Cooling pond on Sundance Road half a mile west of Range Road 42. The Paul Band Reserve is located immediately to the north of the subject lands. The lands are currently undeveloped and historically used for extensive agriculture activities and separation buffer from the existing Cooling Ponds and other Power Plant infrastructure immediately to the west. The subject lands are not located within an Environmentally Significant Area as per the recently completed Parkland County's 2014 Environmental Conservation Master Plan (ECMP).

Additional Approvals

Development Permit

The applicant has applied for a development permit under file No. 14-D-040. As this parcel is within the Highvale Mine End Direct Control District of Land Use Bylaw No. 20-2009 the development permit was brought before Council on May 27, 2014 where it was tabled until June 10, 2014. At the June 10, 2014 Council meeting the development permit was tabled until such time as a decision is made on the subject amendments.

Approval of the Development Permit by Parkland County will be required prior to the project proceeding to the development phase.

Provincial Regulations

In Canada, provincial governments have the primary regulatory responsibility for the review of applications for natural gas fuelled power generation facilities. The following is an update of the approval statuses:

Regulatory requirements:

- TAMA Power will submit a Project Description to the Canadian Environmental Assessment Agency which will then determine if a Federal Environmental Assessment is required for this project.
The Applicant received notice on August 22, 2014 that a Federal EA is not required for the project. Parkland County has received a copy of the notice.
- TAMA Power has submitted their applications to Alberta Environment & Sustainable Resource Development for approvals under the *Environmental Protection and Enhancement Act* and the *Water Act*.
The Application was submitted April 14, 2014.
- This project requires approval from Alberta Utilities Commission (AUC) under the *Hydro and Electric Energy Act*. A Facility Application will be submitted to the AUC that will include technical details, an assessment of potential environmental effects and summary of consultation efforts.
- *The application was submitted to AUC April 22, 2014. There have been two rounds of information requests. The final response was submitted on Sept 5, 2014. The AUC has now officially accepted the application as completed and the Public will be able to make written submissions to the board until October 16th, 2014.*
- TAMA will also require a Connection Order from the AUC.
AltaLink will be responsible for the location and development of the transmission connection for Sundance 7. In coordination with the AESO and TransAlta/MidAmerican Partnership (TAMA Power), AltaLink is exploring various interconnections. Two of the possible interconnection alternatives involve:
 - 1. Connection to the existing Sundance 1-6 plant switchyard and running two transmission circuits from the existing plant to the new plant along Sundance Road,*
 - 2. Connection to a transmission line running out of Keephills north along Range Road 42 and then west along Sundance Road and a second transmission line connection from Sundance Road and running directly south to the new plant.*

Both of these alternatives would be at 240,000 volts.

At this current time, as AltaLink, AESO and TAMA Power review the alternatives, there are no indications of the type of tower structures, conductors or typical route locations. TAMA expects a more comprehensive plan on the proposed alternative by the end of October, 2014 and expects to approve the technical requirements and final alternative by the end of November, 2014.

- A Historical Resource Clearance from Alberta Culture must be obtained.
TAMA Power received clearance for the Project site under the Historical Resources Act (RSA 2000, c.H-9) on May 16, 2014. Parkland County has received a copy of the notice.
- Approvals are required under the *Alberta Safety Codes Act*.
TAMA confirms that approvals are required and will be obtained through the building permit request and will come from the contractor who will be constructing the facility on our behalf. Building permits cannot be received until a development permit has been issued.

Studies and Assessments

Risk Assessment

TAMA Power has conducted a risk assessment for the project to quantify the site-specific safety risks associated with the accidental/uncontrolled release of anhydrous ammonia from a storage tank(s) on site.

The risk assessment contemplates three cases in which the accidental release of ammonia could occur including:

Case 1- Two inch pipe rupture

Case 2- Safety relief valve venting

Case 3- Ten minute continuous release of ammonia

In all cases the potential exposure of nearby residents to ammonia cannot be sustained for a long enough period of time to impact human life or health. The report contains aerial maps for each of the scenarios showing the location of the areas where a one in one million chance of death would exist. The largest of the affected areas extends barely outside of the property line to the east, several hundred meters from the nearest residence. The assessment also addresses the ways in which TAMA will be mitigating the risks that were identified within the report.

Biophysical

A Biophysical Assessment was completed as part of the amendment application as the subject lands are within 800 meters of an environmentally significant area (Wamamun Lake) according to the Parkland County's 2014 ECMP. The biophysical assessment concluded that there are no environmental features which would preclude a change in designation of the subject lands. Also the study stated that the subject lands are substantially similar in nature to lands with existing power plants operating on them which are already within the proposed designations.

The report covers the following subjects in detail:

- Climate
- Physiographic Description
- Historical Air Photos Field Reconnaissance
- Topography and Soils
- Geology
- Hydrology
- Vegetation and Wetlands
- Wildlife
- Environmental Sensitivities and Protection of Sensitive Features

Traffic Management Strategy

Though a contract has not yet been awarded for the project, TAMA Power has committed to managing the traffic during the construction phase of the project. This includes the following:

Busing

- Promote ridership by working with business agents and worker representatives.
- Develop possible bus pick up location to encourage ridership
- To further encourage busing, parking on site may be limited to workers who live close to the plant, management and supervisors through the use of parking pass systems. Those who do not meet the criteria for a parking pass will need to bus to the site.

Shifts

- Coordination of the timing of the shifts with other industry in the area to minimize traffic on the roads.

Engagement

- On-going collaboration with the local industry, community organizations and law enforcement to discuss and address issues and concerns throughout the construction period.

Traffic Enforcement

- Work with the EPC contractor to enforce zero tolerance policy for unsafe driving.

Deliveries

- Explore whether use of the local rail line is a possibility. The railway may allow the Sundance 7 project to bring materials to site, removing traffic from local roadways.
- Material delivery to be outside of the shift change hours.

The Applicant has confirmed that a detailed Traffic Management Strategy to the satisfaction of the County is an acceptable condition through the Development Permit process. However it cannot be completed and submitted until all necessary provincial/federal approvals for the Project have been acquired and a construction contractor retained.

Alberta Transportation

The development permit application and the completed Traffic Impact Assessment (TIA) for the Project were referred to Alberta Transportation for review and comment. The response back was as follows:

"From the legal land location given in the Parkland County development permit application form, the development would be outside of the development control zone where they must obtain a permit from Alberta Transportation (300m from the highway ROW or within an 800m radius of the intersection of Highway 627 and the local road). From the drawings in their pamphlet, the development looks to be closer, perhaps within NW 3 but may still be outside our development control zone. In principal, AT does not object to this development so long as it does not adversely affect the operation of the provincial highway.

We note that this is a large project that is likely to generate significant traffic and that the intersection of RR42 with Hwy 627 has some challenges. It has poor sight distances and the geometric improvements are constrained by the coal mine's highway bridge over their haul road west of the intersection, making the tapers on this side of the intersection short. It is my understanding that the underpass is no longer needed because the mining on the south side of the highway is complete.

I would recommend that Parkland County require TransAlta to undertake a traffic impact assessment and ensure that any warranted improvements to the intersection are constructed. The department would be open to them removing their bridge and regarding the highway to improve sight lines if needed to make this intersection meet the needs of their development traffic."

Traffic Impact Assessment

The TIA summary and conclusions are as follows:

Highway 627 and Highway 770

- According to AT's Highway Geometric Design Guide (1999), a Type III intersection treatment is warranted. The existing intersection treatment is similar to a Type IV with the free flow on Highway 770, which is adequate for the project traffic operations and no additional intersection improvements is required.
- The critical movements are the eastbound (EB) and westbound (WB) left turn traffic on Highway 627, operating with Level of Service of D in their respective peak hours in 2033, which is acceptable on highway intersections.
- The site generated traffic has very limited impact on the traffic operation of this intersection in both the construction period and the design horizon year.

Highway 627 and Paul Band Road

- According to AT's Highway Geometric Design Guide (1999), a Type III intersection treatment is warranted. The existing intersection treatment is similar to a Type III with the free flow on Highway 627, which is adequate for the project traffic operations.

- The critical movement is the southbound (SB) left turn traffic on Paul Band Road, operating with Level of Service of B in the peak hours of the design horizon year, which is acceptable on minor roads at intersections.
- The site generated traffic has very limited impact on the traffic operation of this intersection in both the construction period and the design horizon year.

The findings of the TIA will be addressed through the development permit process.

Public Consultation

The applicant has completed extensive public consultation in relation to this Project. A Public Involvement Program for the Project was conducted that included:

Project Notification:

- all landowners, residents and occupants within 2,000 metres (m) of the Project site boundary;
- all residents that fall within postal code T0E 0N0; and
- other interested parties including government agencies, elected officials, Aboriginal groups, TransAlta employees, municipalities and non-government organizations.

Personal Consultation with:

- all landowners, residents and occupants within 800 m of the project site boundary;
- all residents within 2000 m of the Project site boundary; and
- Aboriginal groups identified by the Government of Alberta Aboriginal Consultation Office (Paul First Nation [PFN] and Enoch Cree Nation [ECN]).

A complete list of comments and concerns from these consultations was included within the application package. The main concern voiced at the public open houses was traffic on area roads. TAMA Power has committed to minimizing the impact of traffic on the community thorough the completion of a Traffic Impact Assessment and a Traffic Management Strategy.

The major concerns voiced from the consultations with the Paul First Nation were Air Quality and Noise.

TAMA Power has completed an air quality assessment that produced positive results within regulation. Also, the expected emissions from the Project are expected to be substantially less than the GHG emissions from a coal-fired generating facility.

The Project Engineering Team has responded to both regulatory requirements and the concerns of stakeholders about noise during the Project operation through a number of Project design elements. These include: planning the preliminary plant site layout to utilize building placement to block lines of noise transmission, placing noisy components inside insulated buildings where possible, specifying minimum noise performance specifications in requests for quotes from equipment suppliers, and strategic use of silencers, mufflers and other noise attenuation features in the preliminary Project design. This Project must comply with the Alberta Utility Commission (AUC) noise regulations. Compliance will be achieved by minimizing noise-emitting construction activities at night, ensuring equipment has noise attenuating mufflers, advanced communication of the schedule of noise-emitting construction activities to neighbors, and responding to complaints regarding construction noise in a timely manner.

Referrals

At the time of this report no referral comments have been received. Any comments received prior to the public hearing will be added to this report or given out as a handout at the hearing.

Analysis

Compliance with Capital Region Growth Plan and Approved County Plans

1. Capital Region Growth Plan

Bylaw 2014-24 requires referral to the Capital Region Board as Municipal Development Plan amendments are a requirement under the Regional Evaluation Framework. Administration is of the opinion that Bylaw 2014-24 and the development of W5-04-52-10-NW & SW is consistent with the land use policies of the capital region growth plan.

Bylaw 2014-25 does not require referral to the Capital Region Board as it does not meet the requirement under the Regional Evaluation Framework.

2. Strategic Plan

The proposed amendments are consistent with Goal 1 under the Economy Section of Parkland County Council's Strategic Plan. *Parkland County has a prosperous and sustainable economy.*

3. Municipal Development Plan (MDP)

The proposed development site is consistent with Section 5, Policy 5.14 of the County's MDP which states:

Resource extraction development proposals may be discouraged in close proximity to hamlets, predominantly residential areas or in areas which are known to possess historical resources and/or unique environmental features that would be disturbed or destroyed by resource extraction.

The MDP application requires referral to the City of Edmonton and all other adjacent municipalities as the proposed re-districting amendment is to the County's MDP.

4. Highvale End Land Use Area Structure Plan (ASP)

As the Highvale End Land Use Plan is designed as a reclamation plan for the area it does not specifically address interim land uses. It does however state in section 1.3 *that the description of the Area Structure Plan has to remain flexible. This will allow for changes and adjustments made to the mine End Land Use Plan but also allow for future developments to occur that are not currently envisioned.*

Alternatives:

1. Council could table Bylaw No. 2014-24 and 2014-25 and request additional information from Administration, the Applicant; or
2. Upon closing the Public Hearing, Council could defeat Bylaw No. 2014-24 and 2014-25 at second reading.
3. Upon closing the Public Hearing, Council could amend Bylaw No. 2014-24 and 2014-25 prior to second reading.

Conclusion/Summary:

Administration supports Bylaws No. 2014-24 and 2014-25 and recommends that Council give second reading to the requested amendments so that the application to the Capital Region Board can be made. The application is consistent with the Capital Region Growth Plan and general policies of the County's Municipal Development Plan and the Highvale End Land Use Area Structure Plan. Administration is of the opinion that this is an appropriate location for this type of land use while taking advantage of existing infrastructure already developed while having the least amount of impact on the community as far as adjacent land uses.

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