

Comments on proposed amendments to Bylaw 60/2014, Solar Power System

Some amendments make solar system installations more expensive and difficult alluding to risks that are exaggerated while overlooking the benefits to ratepayers, electricity customers and contributions to emission reduction. A stark reminder of the need for the latter is Alberta's current wildfire situation which was not an unpredictable accident, as thoroughly explained in National Geographic 05/22, "Saving Forests".

The requirement for reclamation within 6 months of power shutdown appears to address Medicine Hat's experimental solar thermal project which involved high temperatures and pressures, phase change materials and complex mechanical systems, bearing no resemblance to current technology which has minimum performance guarantees of 25 years. Current systems are proven, repairable with on the shelf components, most with no moving parts but it is not inconceivable that a tornado could take out an installation. Should that trigger decommissioning if it could not be brought back on line in 6 months? No other industrial or commercial enterprise is subject to similar constraints and it is rather ironic that the orphan gas well fiasco is being used as one justification for impairing the competitive ability of a renewable technology which would reduce our reliance on the very industry which behaved so badly. Unlike sour gas installations, solar farms produce no emissions that can kill in seconds, foul odours, noise or fire risk resembling harvesting grain of a dry windy day.

Estimates for decommissioning projected 25 to 30 years in the future would be meaningless but materials like aluminum, structural steel, silver and copper conductors and high purity silicone will always have value and recycling facilities will emerge with demand as it already has in other jurisdictions. Requiring these to be in place decades before they are required makes no economic sense. It is unlikely that a more economical option to solar for summer peak demand will suddenly make it obsolete while advances in storage technology improve grid support making it less costly than gas even at current depressed prices. That spread will only increase with the completion of liquefied gas export terminals and pipelines.

Base support prices for renewables put in place in Alberta with the government picking up margins above the pool price have up to Oct 2022 garnered \$160 million in profit, current totals are not available but high pool prices make it certain that it is now much higher and available for customer subsidies. Solar and wind have been estimated by RMI to save Texas \$20 million dollars A DAY on natural gas costs amounting to \$247/yr per resident with solar and wind now accounting for 50% of the state's electrical output with storage playing an increasing role.

Understanding how power pool prices are set in Alberta precludes any suggestion that solar is subsidized. Apologies to those familiar with the system but here are the basics: The Power Pool aggregates minute by minute bids to supply the pool needs accepting the lowest bids first but the highest bid required to meet demand is what **everyone** is paid up to \$99.99 / megawatt hr (\$1/kwhr). The highest 2 month pool prices occurred in July and Aug of 2022 driven by air conditioning demand and solar automatically shaves some off the top dropping the pool prices and lowering everyone's cost. Natural gas co-generation at 90% efficiency would be a great partner for solar to address winter peak demands. More 30% efficient gas peaking plants are not the solution for high electricity prices.

Foothills county has hundreds of underutilized small lots, marginal land and degraded pastures. 20 acres dedicated to ground mount solar could supply enough electricity annually for over 400 homes. Smaller installations may be more palatable to those who oppose anything that does not burn fossil fuel but arrangements for aggregation or co-op installations on smaller parcels would face disproportionate compliance burdens from this bylaw, mostly it seems, to spare anyone seeing a solar panel and being reminded that the world is changing.

Improvements are also needed to the discriminatory development permit requirement for private ground mount solar large enough to meet household needs since these can be smaller overall and have better seasonal performance.

From: Dan Bilodeau <DgBilodeau@capitalpower.com>
Sent: May 12, 2023 11:40 AM
To: Heather Hemingway <Heather.Hemingway@FoothillsCountyAB.ca>
Subject: Proposed Bylaw Amendments for Solar Power Systems

Hi Heather,

Capital Power has read the Proposed Amendments to the Land Use Bylaw for Solar Power Systems. We are not planning to participate in the May 17 Council Meeting, but I would like to offer the following change for the County's consideration:

1. revise proposed clause 10.22.11 to allow an exception in instances of unforeseen events and outages where the owner fully intends to bring the facility back online, but the timelines may exceed 6 months. This may relate to an unexpected event or a major outage such as a major equipment failure or an act of nature, like a wildfire that will take longer than 6 months to repair or restore the facility.
 - a. Proposed edits underlined in red font: *"10.22.11 If the solar power system is out of service or not producing energy for a period of six months, and the owner has no intention of bringing the facility back into production with 24 months, it will be deemed non-operational and decommissioning, removal, and reclamation will need to commence in accordance with decommission and reclamation plan approved with the application, returning the site to the same or better condition as prior to project commencement."*

I look forward to seeing the final Land Use Bylaw amendments once available.

Sincerely,

Dan Bilodeau

Senior Business Development Manager (Canada)

CAPITAL POWER CORPORATION

Suite 1200, 401 – 9 Ave SW | Calgary, AB | T2P 3C5

Direct: 403-717-8147 | Mobile: [REDACTED] | www.capitalpower.com

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321-259 Midpark Way SE | Phone: 403.880.8921
Calgary, AB T2X 1M2 | TWPplanning.com



Foothills County
Box 5605
High River, Alberta
T1V 1M7

04/04/23

ATTN: Reeve Miller and Members of Council

RE: Consideration of Solar Amendment to the Land Use Bylaw

Dear Reeve Miller and Members of Council,

Though not residents of Foothills County, we are active in the County and have a very good working understanding of the Land Use Bylaw. We have reviewed the proposed amendments to the Foothills County land use bylaw, and we offer the following considerations for Council.

We do not believe Council should include Solar, Commercial as a permitted or discretionary use in the Highway 2A Industrial corridor. Introduction of it as a permitted or discretionary use in the land use bylaw is simply providing the AUC and applicants more ammunition by suggesting or even listing this use as appropriate in this location.

Solar, Commercial should entirely be discouraged by policy and definition in the Land Use Bylaw from locating in the Highway 2A Industrial Corridor, period. The County has invested significant dollars in infrastructure to grow employment and offset the residential tax base. This investment now is not going to make the proper connections south of Aldersyde along Highway 2A now that the "Saddlebrook industrial park" is now a massive solar farm. Someone other than TC Energy will now have to front end any pipe past that facility in order for it to be utilized for any employment or business uses. TC Energy's solar farm has created a deficit in the system and brought nothing to the table. We are seeing other proposals for solar in the 2A Corridor, these also present obstacles for transition to employment uses and create servicing deficits in the system. It is this servicing deficit and the misalignment of the use with the objectives, policies, and principles of the Highway 2A Industrial Corridor and runs counter to the express intent of the design guidelines as well as other significant concerns with regard to remediation and lifespan for what has been nothing but a carbon credit trading game.

We would respectfully request that Council consider precluding and discouraging any uses for large commercial solar installations in the 2A corridor as **(1)** they create gaps in the servicing infrastructure that are not overcome by other developers and certainly not front ended by the County in the absence of levy collection, and **(2)** they disrespect totally the long-standing intention of the Highway 2A Industrial ASP and its stated purpose to create complete, cohesive, well designed and intentional employment areas. We see this use here as counterproductive virtue signaling. The TC Energy installation is a blight in the corridor, no landscaping, no transitional interface, no off-site levy, no servicing connections for 1600 linear meters, this is huge deficit to growth and employment.

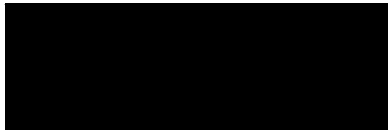
Council has made significant investment in the corridor, we are excited to work with landowners in the corridor to assist Council in achieving their vision for employment and business here. We have been waiting a long time for this investment by Council and we are working to ensure Council (and ratepayers) get paid back in **(1)** off-site recoveries, **(2)** stabilization of the tax base, **(3)** capitalization of locational attributes along the NAFTA corridor that very few places can offer (with spur line opportunities and grade separated overpasses!) and **(4)** increased and diverse employment opportunities. We do not consider solar, commercial as compatible in this area as it works against Council and area landowner objectives that have taken many years to materialize, and with Council's investment, they finally are.

Regarding Solar, Private, we suspect there is an unintended problem with the phrase, “not for distribution and/or sale off-site” which forms part of the proposed definition of Solar Power System, Private.

Such private systems are treated as “micro-generators” from an electrical power regulatory point of view as regulated by the Alberta Utilities Commission. It is our understanding that the way those micro-generators work, is that the private solar system sells excess kilowatts of power back into the grid during periods when there is excess solar generation, such as during daylight hours and during the summer, and then buys the same number of kilowatts back from the grid during periods when there is high power usage and insufficient solar generated power, such as during the night and during the winter.

There is a required balancing on an annualized basis, but the fact is that these private micro-generators do generate power for distribution and sale during certain times of the year and certain times of each day. Council may wish to consider revising that definition as proposed.

Sincerely,
Township Planning + Design Inc.



Kristi Beunder, B.A., M.E.Des.
RPP MCIP
Senior Planner / Principal
Urban + Regional Planning



May 16, 2023

Foothills County
Box 5605, High River, AB
T1V 1M7

Sent Via email

RE: Proposed Amendments to the Land Use Bylaw 60/2014 Re: Solar Power System

Dear Council Members,

Thanks for the opportunity to review and comment on the proposed amendments to the Foothills County (the “County”) Land Use Bylaw provisions pertaining to commercial solar power plants (or Solar Power System). Elemental Energy Renewables Inc. (“Elemental”) is a developer, owner and operator of renewable energy projects that accelerate the transition to clean energy that benefit our environment, our communities, our partners and our future generations. Elemental has extensive experience in the development, construction, and operation of renewable energy projects across Canada, with a total of ten projects in operations, including five solar projects in Alberta:

- Brooks Solar – County of Newell (Constructed in 2017)
- Innisfail Solar – Town of Innisfail (Constructed in 2020)
- Brooks Solar II – County of Newell (Constructed in 2021)
- East Strathmore Solar – Wheatland County (Constructed in 2022)
- Chappice Lake Solar + Storage – Cypress County (Constructed in 2023)

With our recent experience developing and operating renewable energy projects in Canada we understand both the opportunities and the challenges commonly faced by municipalities when considering renewable energy development in your communities.

In our review of the proposed Land Use Bylaw amendment, and other documents governing land use including the Municipal Development Plan, we are encouraged by your vision that characterizes Foothills County as a diverse rural landscape *“in which leadership and planning support a strong agricultural heritage, vibrant communities, a balanced economy and the stewardship of natural capital for future generations.”*

With respect to the County’s proposal to amend the Land Use Bylaw provisions for solar power systems, we agree that providing greater definition around development permit application information requirements and potential conditions that may apply to solar power plants will help prospective renewable energy developers submit development permit applications that contain information needed for Foothills County staff and elected officials to efficiently make decisions on projects against criteria that are of interest to Foothills County.

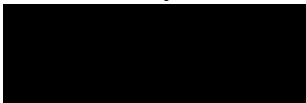
As an attachment to this letter, we have provided comments / input on the individual Land Use Bylaw amendments. While we are generally supportive of the amendments, there are two areas of interest that we are raising for your consideration when reviewing the proposed amendments:

1. **Ensure that application information requirements and plans are commensurate with the design stage that projects are typically in when applying for development permits.**
Some of the new application information requirements, such as the requirement to have executed crossing agreements for all collector lines that are proposed within the Municipal rights of way (10.22.7 (o)), may be better suited as a condition of approval, and not an application information requirement.
2. **Ensure consistency of conditions across Alberta Utility Commission and municipal development permit power project approvals.** Many of the requested plans identified as development permit application information requirements (10.22.7) are plans that are commonly submitted to the Alberta Utilities Commission as part of their review and conditions of approval for power plants. Considering that Land Use Bylaw amendments propose that Development Permit applications for Solar Power Systems require *“the full written approval by the Alberta Utilities Commission for the Solar Power System”* (10.22.7(a)), we submit for consideration that any condition that is imposed on a development permit consider and respect the terms and conditions of the AUC approval for the solar power plant.

As a responsible developer Elemental is committed to developing renewable energy projects that are respectful and responsive to municipal planning priorities, municipal development plans and land use bylaws.

Please don't hesitate to contact us should you have any follow-up questions regarding this submission or our participation in the public hearing.

Sincerely,



Jamie Houssian
Principal
Elemental Energy Renewables Inc.

Subsection	Proposed Change	Elemental Comments / Questions
10.22.7(g)	The amendment requires “a grading and drainage plan for the entire site, completed and stamped by an appropriate professional.”	<p>Development of a grading and drainage plan is typically included as a part of solar power plant project civil design package.</p> <p>We note that a stormwater management plan is often developed by a professional engineer and stamped prior to construction. As such, Elemental suggests revising “drainage plan” to “stormwater management plan” to improve clarity and reflect typical practice. Additionally, it’s not typical for a stormwater management or grading plan to be available at the time of development permit application, therefore Elemental recommends providing stamped copies of these plans be a condition of the development permit approval.</p>
10.22.7(k)	A cost estimate prepared by a qualified professional that details the costs of decommissioning the full installation and reclamation of the entire subject lands. This cost estimate must be submitted to the satisfaction of the Municipality and may be subject to third party review at the cost of the applicant.	Elemental suggests adding clarity to confirm that any third-party review, if required, would also be done by a qualified professional with subject matter expertise.
10.22.7(l)	A vegetation, weed and pest management plan that addresses how invasive plant, weeds, and pest such as Richardson Ground Squirrel, will be controlled during the construction period and the projected lifespan of the development, to be submitted for review and approval by the Foothills Agricultural Fieldman.	This proposed change is reasonable. A vegetation, weed, and pest management plan is typically included in an Environmental Protection Plan (“EPP”), which is required for all Alberta Utilities Commission (“AUC”) solar power plant applications.
10.22.7(m)	A soils erosion management plan to address: (i) on any proposal to strip and stockpile topsoil during the construction/erection period and the rationale or need for doing so, and (ii) The details on proposed soil management practices and erosion control due to both wind and water; for the period of both	This proposed change is reasonable. This requirement is consistent with typical commitments made by solar power plant developers to maintain or enhance land quality values, including soil structures and nutrient values, throughout the life of a project. Soil erosion, topsoil, and soil stockpile management plans are all included in an EPP which, as noted above, is required for all AUC solar power plant applications.

Subsection	Proposed Change	Elemental Comments / Questions
	<p>construction and post-construction (iii) Surface drainage and erosion control must also adequately address and account for impacts associated with the impervious nature of the collectors.</p>	
<p>10.22.7(n)</p>	<p>A landscaping and screening plan showing how the installation will be visually screened from neighboring parcels and adjacent roadways is to be submitted to the satisfaction of the County and in accordance with any screening standards or guidelines applicable on the subject lands. This plan will include sufficient construction details, plant lists and minimum sizes, and cost estimates.</p>	<p>It is customary during consultation to work with potentially affected stakeholders to understand the visual impact concerns. As a result, it is common for vegetation screening to be included in project site plans and AUC solar power plant applications.</p> <p>Elemental recommends the County provide guidance to a project developer so that the County's vegetation screening and landscape requirements are included and accounted for in the project site plan and power plant application that are submitted to the AUC.</p>
<p>10.22.7(o)</p>	<p>Copies of executed Crossing Agreements for all collector lines that are proposed within the Municipal rights of way.</p>	<p>In Elemental's experience, crossing agreements are executed once all permitting is complete. It may not be efficient on the part of the County or a developer to incur costs and expend resources drafting, negotiating, and executing crossing agreements before the development permit is approved.</p> <p>Elemental recommends executing crossing agreements with the County for all collector lines that are proposed within the municipal rights of way instead be a condition of the development permit.</p>
<p>10.22.7(p)</p>	<p>The amendment requires "an Environmental Assessment Review prepared by a qualified professional or other studies and reports to demonstrate site suitability and impact mitigation."</p>	<p>We are unsure of what constitutes an Environmental Assessment Review, and how this is different from required studies and submissions that are submitted to Alberta Environment and Protected Areas and the AUC as part the environmental review of solar power plant projects.</p> <p>Clarification is requested with respect to the intent of this requirement.</p> <p>Further to our discussion with the County's Director of Planning on May 12, 2023, Elemental understands that this is intended to be a Phase 1 Environmental Site Assessment, which is reasonable.</p>

Subsection	Proposed Change	Elemental Comments / Questions
10.22.7(q)	A Fire Safety Plan submitted with the application for review and approval by the Safety Codes Officer prior to project commencement.	<p>Utility scale solar power systems must abide by both the Alberta Electrical Utility Code and the Electrical Code of Canada. Both Codes contain a number of requirements for fire safety, and all commercial solar power systems are designed and engineered to comply with the Codes. In addition, all large solar power systems require an electrical permit and, following construction, are subject to an inspection to confirm compliance.</p> <p>Elemental is supportive of reviews and recommendations from the County to ensure solar power systems are developed in manner that does not present an undue risk to public safety. AUC Rule 007 requires solar power plant applicants to consult with local authorities and document all feedback and comments received, including how the developer intends to address the comments.</p>
10.22.7(s)	An Emergency Response Plan prepared by a qualified professional and approved by the County's Emergency Management Department prior to the submission of the development permit.	This is a reasonable requirement, and consistent with the approach taken by solar power plant developers to ensure alignment between how projects are constructed and operated such that Emergency Response Plans are coordinated with the responsible emergency response agencies.
10.22.7(t)	A Neighbour Emergency Response Plan prepared by a qualified professional which addresses safety, education, and emergency response plans for the benefit of landowners and businesses within the vicinity of the solar installation is to be submitted to the satisfaction of the County's Director of Emergency Management prior to the submission of the development permit for consideration.	<p>This is a reasonable requirement, and consistent with approach taken by solar power plant developers to ensure that adjacent landowners and neighbours are aware of the solar operations, potential events that could lead to an emergency response or requirement to evacuate, and how the solar operator will communicate / notify adjacent landowners / neighbours should an emergency response event occur.</p> <p>It is reasonable that educational materials, and emergency response procedures be shared with adjacent landowners and be approved by the County's Director of Emergency Management.</p>
10.22.8	The Approving Authority may impose as a condition, any reasonable measure to ensure suitability, compatibility and to mitigate potential impacts.	Elemental submits that any condition that is imposed on a development permit consider and respect the terms and conditions of the AUC approval for the solar power plant.
10.22.9 (iv)	Imposition of conditions.	Decommissioning and reclamation are currently governed by provincial legislation and regulations, specifically the <i>Environmental Protection and Enhancement Act</i> and

Subsection	Proposed Change	Elemental Comments / Questions
		<p>the <i>Conservation and Reclamation Regulation</i> enacted thereunder. Further, the Conservation and Reclamation Directive for Renewable Energy Operations sets out the requirements for conservation and reclamation of solar power plants.</p> <p>Decommissioning and reclamation obligations are also commonly subject to contractual requirements between landowners and project developers.</p> <p>We note that the County has no legal obligations as it relates to the decommissioning and reclamation of a solar power plant on private land. The requirement for the County to hold an irrevocable letter of credit, surety bond, or cash deposit to ensure the decommissioning and reclamation of the site creates the potential for conflict and/or overlap with this area of exclusive provincial jurisdiction and an AUC solar power plant approval, as well as with any private contractual decommissioning and reclamation security requirements.</p>
10.22.11	<p>If the solar power system is out of service or not producing energy for a period of six months, it will be deemed non-operational and decommissioning, removal, and reclamation will need to commence in accordance with decommission and reclamation plan approved with the application, returning the site to the same or better condition as prior to project commencement.</p>	<p>We understand the intent of this proposed change and the interest of the County to ensure that projects no longer producing power are decommissioned and the lands reclaimed in a reasonable amount of time, such that the solar power plant does not become derelict.</p> <p>However, we note that there may be situations that are beyond a developer’s control that require a project to shut down or curtail operations for longer periods of time.</p> <p>Elemental suggests that there should be an opportunity for the solar power plant operator to provide evidence with respect to why the solar system is out of service and their plan for bringing the solar system back into service before it is determined to be non-operational.</p>
Direct Control #34	<p>Solar power system, Private and commercial shall be moved from a permitted use to a discretionary use.</p>	<p>The proposed changes to Section 10.22.7 (a) require that an AUC approval for the solar power plant accompany the development permit application. In light of this and the operation of Section 619 of the <i>Municipal Government Act</i>, we would like to better understand the County’s intent in proposing the change from a “permitted use” to a “discretionary use”.</p>