

Alberta Utilities Commission
Proceeding 28501

Electricity Generation Inquiry – Module A

The Pembina Institute's Written Submission

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I. Introduction

The Pembina Institute (“Pembina”) provides this written submission for Module A of the Alberta Utilities Commission’s inquiry on electricity generation in Alberta.

Pembina is a leading national clean energy think tank and charity that advocates for strong, effective policies to enable Canada’s clean energy transition in a manner that supports communities, the economy, and a safe climate. In the electricity sector, Pembina’s research and other work has focused on decarbonizing and diversifying the grid in a way that fosters a resilient, reliable, and affordable electricity system. Decarbonizing the grid is especially important as more and more activities rely on clean electricity for energy.

A continuing and strong renewable energy power sector is critical for grid decarbonization, will serve other grid management goals and lower electricity consumers’ costs, and will help diversify Alberta’s economy.^{1,2} (Pembina will address the role of renewable energy in grid management in Module B of this inquiry.)

For these reasons, Pembina objects to the Government of Alberta’s (GoA) Order in Council directing the Commission to hold off issuing new renewable power plant approvals until the end of February 2024.³ However, Pembina appreciates the Government’s decision to establish this inquiry, so Pembina and others can weigh in on the inquiry’s topics outside the more formal, quasi-judiciary context of a specific power plant approval proceeding.

That said, the topics of the inquiry include issues that must be addressed for other land uses – especially those with existing and substantial environmental, social, and economic impacts.

It is Pembina’s view that renewable energy projects should be held to fair rules informed by regional planning under the Alberta Land Stewardship Act that are consistent with rules for other land uses. It is our observation that in many cases the renewable energy sector is already being held or considered for stricter standards than other land uses that are already having a demonstrably larger impact on values of concern. It is essential that the Commission be aware of this risk in its deliberations.

¹ Binu Jeyakumar, *Achieving a Net-Zero Canadian Electricity Grid by 2035* (Pembina Institute, July 2022), online: <<https://www.pembina.org/pub/achieving-net-zero-canadian-electricity-grid-2035>>.

² Will Noel and Binu Jeyakumar, *Zeroing In* (Pembina Institute, June 2023), online: <<https://www.pembina.org/pub/zeroing-in>> [Zeroing In].

³ OIC/2023-172.

For example, renewable energy causes far less loss of agricultural lands than the permanent loss and conversion that has occurred as a result of urban, acreage, and oil and gas development. Rules to protect wildlife that preclude renewable energy development are typically already far stricter for solar and wind development than for forestry, oil and gas, and mining.

The unaddressed liability of oil and gas development is many orders of magnitude greater in both scale and impact than potential liabilities from renewable energy development – including water and soil contamination, sour gas and fugitive methane emissions, and becoming economically stranded. Oil and gas liability management needs substantial reform over and above what has been proposed⁴ and urgently needs to be subject to same level of scrutiny as the renewables pause.

As directed by the Commission, inquiry Module A addresses the first four of the five “matters” listed in the inquiry’s Terms of Reference.⁵ In the Terms of Reference, each of those four Module A “matters” refers generally to “power plants.” In contrast, the Terms’ Preamble focuses on renewable energy power plants. Similarly, Pembina’s submission focuses on the renewable power sector (except in discussions of fair treatment of that sector relative to other sectors).

Pembina also stresses the general nature of the views and recommendations in this submission. Each power plant application is somewhat unique and therefore involves unique considerations which may warrant unique results. By expressing the *general* views and recommendations below, Pembina does not take a position here on the outcome of the Commission’s decision on any specific past or future power plant application.

Part II below proposes and explains a set of overarching or guiding principles for the Module A issues. Part III below addresses the reclamation security issues. Parts IV-VII address the Module A land use issues - namely, agricultural land, Crown land, environmental land, and pristine viewscapes.

Much of the discussion in Parts II and IV-VII are based on the accompanying Big Spruce Law Briefing Note on the Commission’s current approach (and its legislative foundations) for addressing the land use issues (“*Briefing Note: Land Use Issues*”), attached as Appendix A. Similarly, the discussion in Part III is based on the accompanying Ecojustice Briefing Note on Considerations for Implementing Mandatory Reclamation Security Requirements on Renewable Energy Power Plants (“*Briefing Note: Reclamation Security*”), attached as Appendix B.

⁴ Auditor General of Alberta, *Liability Management of (Non-Oil Sands) Oil and Gas Infrastructure* (March 2023), online: <<https://www.oag.ab.ca/reports/oag-liability-management-of-non-oil-sands-oil-and-gas-infrastructure/>>.

⁵ OIC/2023-171, Schedule – Terms of Reference, clause 1(a)-(d).

II. Guiding principles

The principles below are *not* set out in a ranking of importance. They are meant to be read and applied together, so that each one is subject to the others (where more than one applies).

Principle 1 – Climate change: Because of its critical role in decarbonizing the grid, renewable energy is presumptively in the public interest.

All global greenhouse gas emissions must be rapidly and significantly reduced to avoid the catastrophic impacts of climate change. Between wildfires, flooding, and many other impacts worsened by climate change, Canada's climate damages are already set to equal half of economic growth.⁶ Alberta and Canada have both committed to a net-zero economy goal by 2050, and decarbonizing the electricity system is the most cost-effective backbone to emissions reduction in all sectors.^{7,8}

Incumbent and emerging industries, such as manufacturing and data centres, all rely on electricity as a key input and are increasingly looking to clean electricity to power their own emission reduction goals. Canada is seeking to align itself with its peers like the U.S, the U.K., and Germany, who have all committed to net-zero grid by 2035 – a key milestone for advanced economies noted by the International Energy Agency.⁹

In the University of Alberta and Pembina Institute's joint analysis of the most cost-effective and reliable pathways for Alberta's grid to reach net-zero, there needs to be a 4-7 fold increase in wind and solar energy capacity.¹⁰ This analysis is in line with similar studies. In Pembina's assessment, a net-zero grid could also save Albertan households up to \$600 per year in electricity costs.¹¹

⁶ D. Sawyer, "Cooperation and conflict: The geopolitical push and pull of climate change," (Canadian Climate Institute, 2023), online: <<https://climateinstitute.ca/cooperation-and-conflict-the-geopolitical-push-and-pull-of-climate-change/>>.

⁷ Net Zero Advisory Board, *Compete and Succeed in a Net-Zero Future* (2023), pg. 55, online: <<https://www.nzab2050.ca/publications/compete-and-succeed-in-a-net-zero-future>>.

⁸ Canadian Climate Institute, *The Big Switch: Power Canada's Net Zero Future* (2022), online: <<https://climateinstitute.ca/reports/big-switch/>>.

⁹ International Energy Agency *Net Zero by 2050: A roadmap for the global energy sector* (2021), pg. 20, PDF online: <https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroBy2050-ARoadmapfortheGlobalEnergySector_CORR.pdf>.

¹⁰ *Zeroing In*, supra note 2 at pg. 46.

¹¹ *Zeroing In*, supra note 2 at pg. 41.

Given these imperatives, accelerating the deployment of renewable energy power plants is *presumptively* in the public interest and the AUC should give considerable weight to the urgent need to decarbonize the grid. However, this is just a presumption - it may be negated in a given circumstance by other overriding public interest factors that may warrant either denying a power plant application or requiring changes to the plant's design or other special conditions.

Principle 2 – Regional planning: ALSA regional plans should be viewed as primary tools for resolving land use issues.

The 2008 Land Use Framework (LUF) was a landmark policy, in recognizing that then-existing land management tools and environmental regulations were not sufficiently addressing cumulative effects and were failing to integrate local and provincial decisions affecting the same landscapes. The LUF called for regional planning to fix these problems and thus laid the policy foundation for the province's adoption of the *Alberta Land Stewardship Act* (ALSA) in 2009.

ALSA regional plans are generally binding on government decision-makers, including the Commission. (However, regional plans can designate non-binding portions. These are essentially policy-level provisions which, as such, must be considered by decision-makers but are not binding on them.)¹²

Because of their legal status and broad regional focus, and their integration of multi-governmental and stakeholder perspectives, ALSA regional plans should be the chief if not the most important tool for addressing the land use issues raised in this inquiry.

Unfortunately, that tool has not been used to its full potential. To date, the province has adopted regional plans for only two of the seven planning regions: the South Saskatchewan and Lower Athabasca regions. The government has not started developing the Red Deer regional plan. This planning region covers most of the province's highest-quality agricultural land, which is in the Calgary-Edmonton corridor.

There is a plan for the South Saskatchewan region, where much of Alberta's renewable energy plants have been located. The South Saskatchewan Regional Plan (SSRP) includes a grab bag of broadly worded, non-binding objectives and strategies with respect to several topics, including renewable energy, agricultural land conservation, and recreation and tourism. Read alone and especially read together, these objectives and strategies lack clear guidance for the Commission in deciding whether a given power plant application is in the public interest.¹³

¹² *Briefing Note: Land Use Issues*, at pgs. 23-24 (Appendix A).

¹³ *Briefing Note: Land Use Issues*, at pgs. 25-26.

This lack of guidance may be frustrating to some, but it is still a reflection of government policy.¹⁴ If the government believes this policy should be revisited for the South Saskatchewan region, the government should do so through its upcoming review of the SSRP and in a manner that applies to all land uses. (If the government believes that a province-wide policy is needed, that policy should follow the other principles noted in this part.)

Principle 3 - Fairness and non-discrimination: Government policies and Commission decisions should treat the renewable energy sector fairly - renewables should not be subject to land use and reclamation security policies that are inapplicable to other sectors that pose comparable or greater risks.

The principles of fairness and non-discrimination are foundations of Alberta's electricity system¹⁵ and underpin our society more generally. The Commission and GoA should apply these principles when developing any new land use policies to address concerns about loss of agricultural or environmental lands or pristine viewscapes, or use of Crown land, or about reclamation security.

Renewable wind and solar plants are already subject to more stringent environmental restrictions, in the wildlife directives, as discussed in part VI below. And the concern about solar plants' impacts on agricultural lands seems to be without regard to the larger impact of agricultural land fragmentation and conversions resulting from other trends, particularly urban sprawl and conventional oil and gas development. Similarly, the call for stringent reclamation security requirements for renewables seems to be disproportionately stricter than Alberta's historical and ongoing lax approach toward security for oil and gas operations. The current province-wide moratorium on new renewable power plant approvals is also unprecedented and fundamentally unfair, compared to the historic treatment of other land uses.

Principle 4 – Conservation: The government should address gaps in Alberta's conservation network and commit to protecting 30% of Alberta's land base from all developments, including power plants.

Biodiversity loss is occurring across southern Alberta as a result of multiple land use changes. There is a global consensus that enhanced protection of nature is necessary to address biodiversity loss. The Grasslands and Parklands are the two Alberta natural regions where renewable energy development is most likely to expand. These two regions are already highly underrepresented in protected areas—only 1.25% and 0.93% of Alberta's Grasslands and

¹⁴ Alberta Land Stewardship Act, SA 2009, c A-26.8, s 13, <<https://canlii.ca/t/8h1q#sec13>>. Section 13(1) states that a regional plan is an “expression of the public policy of the Government...”.

¹⁵ For example, Electric Utilities Act, SA 2003, c E-5.1, s 5(b), <<https://canlii.ca/t/827s#sec5>>.

Parkland natural regions, respectively, are in legislatively protected areas. These are the lowest percentages of conserved land in the province.¹⁶

In 2022, the Government of Canada agreed to an international commitment to preserve 30% of land and water, and to restore 30% of degraded lands and waters, by 2030.¹⁷

Consistent with the federal government's commitment, British Columbia, Yukon, Manitoba, and Quebec have all committed to protect 30% of their land area by 2030. Nova Scotia has agreed to conserve 20% of that province by 2030.¹⁸¹⁹²⁰

Alberta has made no similar commitment. Meanwhile, only around 15% of Alberta's lands are protected, with over 8% in National Parks.²¹ Progress on establishing protected areas appears to have stalled in Alberta and is out of step with Albertans' expectations for protecting nature.²²

Alberta will not be seen as a leader in responsible energy development without addressing these gaps and embracing the global trend that recognizes the importance of protecting habitat for nature. This can be achieved as part of effective land use planning which needs to be completed and accelerated.

¹⁶ Ministry of Forestry and Parks, *Progress Summary of Ecological Representation (Natural Landscape Types) by Natural Region and Subregion within Protected Areas in Alberta* (August 2022), online: <<https://www.albertaparks.ca/media/6262166/alberta-s-network-of-protected-areas-progress-toward-achieving-natural-landscape-targets.pdf>>.

¹⁷ Canada agreed to this commitment at the 15th Conference of the Parties (COP15) to the U.N. Convention on Biological Diversity. See UN Environment Program, Convention on Biological Diversity – Decision Adopted by the Conference of the Parties, CBD/COP/DEC/15/4 (Dec. 19, 2022), at pg. 9 (Annex, Targets 2 and 3), online: <<https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf>>.

¹⁸ Government of Canada, *Nature agreements in Canada*, online: <<https://www.canada.ca/en/environment-climate-change/services/integrated-nature-initiatives/nature-agreements.html>>.

¹⁹ Julia-Simone Rutgers, "What the NDP win in Manitoba means for the environment," *The Narwhal* (October 3 2023), online: <<https://thenarwhal.ca/manitoba-election-results-kinew-2023/>>.

²⁰ Government of Québec, *Protection de la biodiversité - Québec annonce 650 M\$ en vue d'un ambitieux Plan Nature pour 2030* (2022), online : <<https://www.quebec.ca/nouvelles/actualites/details/protection-de-la-biodiversite-quebec-annonce-650-m-en-vue-dun-ambitieux-plan-nature-pour-2030-44554>>.

²¹ Alberta Wilderness Association, *National Parks*, online: <<https://albertawilderness.ca/issues/wildlands/national-parks/>>.

²² Canadian Parks and Wilderness Society Southern Alberta Chapter, *New poll reveals Albertan's attitudes towards parks and protected areas in direct opposition to recent ministerial changes* (November 2022), online: <<https://cpaws-southernalberta.org/new-poll-reveals-albertans-attitudes-towards-parks-and-protected-areas-are-in-direct-opposition-to-recent-ministerial-changes/>>.

Principle 5 – Role of municipalities: Municipalities’ land use planning and zoning and permitting decisions should continue to be relevant to the Commission’s public interest decisions, but municipalities should not have veto power over renewable energy developments.

The *Municipal Government Act* (MGA) gives municipalities substantial authority to set land use priorities and to otherwise manage land uses, and to regulate developments. This authority is chiefly through municipalities’ land use planning and zoning, and development permitting functions. (As used here, “zoning” refers to the role of land use bylaws in designating land use districts and identifying permitted and discretionary land uses in each of those districts.)²³

Municipal governments have this authority for several reasons - municipal governments are closest to developments and other land uses within their borders, so these governments have firsthand knowledge of the activities’ local costs and benefits. In addition, municipal governments are arguably the most directly accountable for what occurs within their borders. However, provincial and federal laws can limit municipal authority for a variety of reasons (beyond Constitutionally directed divisions of labour). These reasons include the needs to protect natural resources that cross municipal or larger jurisdictional boundaries or that otherwise have extra-municipal significance, and to manage industries that have province-wide (or broader) significance.

The MGA strikes a balance between municipal and provincial authority over electricity power plants. On the one hand, the Act (section 40) states that Commission approvals under the *Hydro and Electric Energy Act* (HEEA) do not relieve a power plant of its duty to comply with all other legislative requirements including, implicitly, municipal requirements. On the other hand, the Act (sections 13 and 619-620) states essentially that Commission approvals trump municipal requirements that are inconsistent or that conflict with those approvals. In so doing, the act in effect removes municipalities’ ability to veto a power plant approved by the Commission (unless the Commission’s approval is itself conditioned on municipal approval).²⁴

Pembina believes this is an appropriate balance for power plants. This is especially true for renewable energy power plants. Given this sector’s global significance in reducing the global climate change threat, municipalities should not have the final say on the sector’s fate. (By the same token, Pembina also acknowledges municipalities’ substantial role, and in many instances their leadership, in reducing greenhouse gases, and their front-line responsibilities to mitigate climate change impacts.)

²³ *Briefing Note: Land Use Issues*, at pgs. 10-11.

²⁴ *Ibid* at pgs. 11-16.

While municipalities should not have a veto, their planning, zoning, and permitting decisions should be important factors for the Commission's public interest decisions. However, the attached *Briefing Note: Land Use Issues* by Big Spruce Law suggests that many Commission decisions lack transparency as to whether proposed power plants are consistent with municipal planning and zoning and development permitting requirements and, if not, whether and how the Commission addressed the inconsistency. There also appears to be some ambiguity as to what municipal requirements were still in effect after the Commission approved a power plant.²⁵

Pembina believes that the Commission should consider ways to improve this transparency and clarity, to fully respect and properly account for municipalities' views, within the overall legislative balance discussed above. The Commission should also consider adopting a presumption that local municipalities are "directly affected" by a local power plant application and therefore are presumptively entitled to intervene in the application proceeding.²⁶

Principle 6 – Property rights: The government and Commission should continue to give due respect to landowners' choices to use their land for renewable energy developments, subject to overriding public interest factors.

Private property is a fundamental legal concept in Canada and other Western democracies. While fundamental, property rights are far from absolute - they are generally bounded by applicable municipal zoning restrictions and by common law doctrines, and more often by provincial or national regulatory regimes, which limit uses of private land that might injure others or public resources.

Pembina's understanding is that, out of respect for landowners' rights, the Commission typically defers to a private landowners' choice to use crop or (non-native) grazing land for a power plant, subject to any other overriding public interest considerations.²⁷

Pembina generally agrees with this deferential approach, subject to any overriding provisions in an ALSA regional plan and where a power plant is not a listed permitted or discretionary land use in a municipal land use bylaw. (However, under Principle 5 above, the land use bylaw inconsistency is an important factor in the Commission's public interest assessment but does not warrant the Commission's automatic denial of an approval application.)

²⁵ *Ibid* at pgs. 17-19.

²⁶ *Ibid* at pgs. 20-21.

²⁷ *Ibid* at pgs. 31-33.

Principle 7 – Incentives: The government should encourage renewable energy developments on those Crown, private, and municipal lands that pose the fewest trade-offs with agriculture, conservation and other important land uses.

Agricultural and environmental (private and public) lands, and pristine viewsapes, all have important values that are worth trying to maintain. However, positive incentives are better tools than negative regulatory restrictions for minimizing agricultural and environmental land loss and impacts to pristine viewsapes.

The 2008 Land Use Framework (LUF) refers to market-based incentives and transfer of development credits to reduce the fragmentation and conversion of agricultural land.²⁸ The GoA has not made adequate progress on advancing these approaches since 2008.

After completing land use and conservation planning (Principle 2), the government should inventory and identify Crown lands (outside of parks and other protected areas and threatened species habitat) suitable for renewable energy power plants and then offer incentives for renewable energy developers to use those Crown lands.

Renewable energy development on Crown land could thus offer mutually beneficial opportunities for economic reconciliation and partnership with Indigenous nations, communities, and businesses (e.g. through shared-equity stakes with rightsholders).

As part of that inventory, the government should work with municipalities to identify and promote “Renewable Energy Heartlands,” analogous to the Industrial Heartland northeast of Edmonton. (These Heartland regions should not be limited to Crown land and should not be the only areas where renewable power plants can be developed.)

III. Reclamation security

As Pembina believes all energy and land developments must appropriately manage their impacts, we believe that proper reclamation for renewable energy development is important. However, Pembina is foremost concerned about the nature and magnitude of liabilities and insufficient security in other land uses, especially in conventional oil and gas development.²⁹ These extractive industry developments have known and serious reclamation costs that are not

²⁸ Government of Alberta, *Land-use Framework Final Report*, at pgs. 20, 33, and 44, online: <<https://open.alberta.ca/dataset/30091176-f980-4f36-8f5a-87bc47890aa8/resource/bc4b3fac-5e59-473b-9a99-1a83970c28e7/download/4321768-2008-land-use-framework-2008-12.pdf>>.

²⁹ Drew Yewchuk, Shaun Fluker, and Martin Olszynski, *Polluter Pays Principle at Risk: Auditor General Finds Alberta’s Oil and Gas Liability Regime Still Badly Deficient* (31 March 2023), online: <<https://ablawg.ca/2023/03/31/polluter-pays-principle-at-risk-auditor-general-finds-albertas-oil-and-gas-liability-regime-still-badly-deficient/>>.

comparable to the potential reclamation liabilities of renewable energy. As noted below in part III, conventional oil and gas development covers 125 times the land area covered by current wind and solar power plants.

Furthermore, oil and gas are finite resources, meaning the need for surface reclamation and mitigating subsurface risks is guaranteed. However, the same is not true for renewables, where the energy resource does not extinguish and a site may be recommissioned with new equipment. Moreover, oil and gas development has greater potential to cause irreparable environmental harms, such as permanent damage to soil composition, water contamination, and sour gas and fugitive methane leaks.³⁰ The risk of stranded oil and gas assets - and the potential that firms will default on their security payments - also increases in the oil and gas sector under existing liability management practices and as the energy transition accelerates and global demand for fossil fuels declines. In contrast to these stranded assets, the Ecoventure report noted that minimum reclamation cost for solar power plants was negative, meaning that the salvage material value is greater than the cost of decommissioning.³¹

Pembina emphasizes that government policies and Commission decisions should treat the renewable energy sector fairly and proportionately. Renewable energy projects should not be subject to land use and reclamation security policies that are inapplicable to other sectors that pose comparable or greater risks. While this inquiry proceeds, Pembina also recommends that the GoA undertake similar public inquiries into those sectors with greater land use and security risks, such as in conventional oil and gas development.

A. Alberta Reclamation Securities Comparison Chart

The table below compares reclamation security policies for different types of industries, both extractive and non-extractive. Comparing these policies shows what types of security would allow the renewable energy industry to be treated consistently with other industries.

This table is a summary – further details and research supporting our submissions are available in the attached *Briefing Note, Reclamation Security*, (**Appendix B**).

³⁰ Sharon J. Riley, “Stonewalled: Alberta ignored warnings about oil and gas cleanup, ex-government scientist says” (The Narwhal, March 20 2022), online: <<https://thenarwhal.ca/alberta-oil-gas-wells-reclamation-scientist/>>.

³¹ Ecoventure Inc., *Consideration of Implementing Mandatory Reclamation Security Requirements for Power Plants*, pg. 86.

Component of reclamation security policy in Alberta	Renewables under current policies in Alberta ³²	Other Non-Extractive Industries in Alberta ³³	Extractive Industries and Waste in Alberta ³⁴
Mandatory reclamation security requirements?	No mandatory requirements. ³⁵	No mandatory requirements for transmission lines, provincial pipelines, or commercial development projects. ³⁶	<p>No mandatory requirements for conventional oil and gas well sites.³⁷</p> <p>Required for coal and oil sands mining, quarry activities, and sand and gravel operations.³⁸</p> <p>Required for hazardous waste and recyclable projects, landfills, metal production plants, and waste management facilities.³⁹</p>

³² Briefing Note: Reclamation Security, pg. 4.

³³ *Ibid*, pg. 9.

³⁴ *Ibid*, pgs. 5-9.

³⁵ *Ibid*, pg. 4.

³⁶ *Ibid*, pgs. 5-6, citing Government of Alberta, “Financial security for land reclamation”, online: <<https://www.alberta.ca/financial-security-for-land-reclamation>>.

³⁷ *Ibid*.

³⁸ *Ibid*.

³⁹ *Ibid*.

Component of reclamation security policy in Alberta	Renewables under current policies in Alberta³²	Other Non-Extractive Industries in Alberta³³	Extractive Industries and Waste in Alberta³⁴
Private contracts between project owners and landowners? Standardization of private contracts?	No provincial requirements. Commonly in the form of private contracts, not standardized. ⁴⁰	No provincial requirements or standardization. ⁴¹	No provincial requirements or standardization.
How is the amount of security determined?	Depends on private contracts and the nature of the project, often offset by salvage value. ⁴²	No provincial requirements. ⁴³	For oil and coal mines: With a calculation based on an asset-to-liability ratio under the Mine Financial Security Program (MFSP) ⁴⁴ Sand/gravel/quarries: \$250/acre for disturbed lands with approvals, otherwise maximum reclamation and

⁴⁰ *Ibid*, pg. 4.

⁴¹ *Ibid*, pgs. 5-6, citing Government of Alberta, “Financial security for land reclamation”, online: <<https://www.alberta.ca/financial-security-for-land-reclamation>>.

⁴² *Ibid*, pg. 4.

⁴³ *Ibid*, pgs. 5-6, citing Government of Alberta, “Financial security for land reclamation”, online: <<https://www.alberta.ca/financial-security-for-land-reclamation>>.

⁴⁴ *Ibid*, pg. 7, citing Alberta Energy Regulator, “Mine Financial Security Program”, online: <<https://www.aer.ca/regulating-development/project-closure/liability-management-programs-and-processes/mine-financial-security-program>>.

Component of reclamation security policy in Alberta	Renewables under current policies in Alberta³²	Other Non-Extractive Industries in Alberta³³	Extractive Industries and Waste in Alberta³⁴
			<p>conservation costs to reclaim land.⁴⁵</p> <p>Waste facilities: Based on estimated costs of conservation and reclamation, not standardized.⁴⁶</p>
When in the project lifespan is the security required?	Depends on private contracts and the nature of the project.	No provincial requirements. ⁴⁷	<p>For oil, coal, and gas mines: companies pay a security deposit based on estimated liabilities at the start of the project. When the project is close to operating, they can elect to pay four security deposits, which focus on potential risk throughout the life of the mine.⁴⁸</p> <p>Sand and gravel pits/quarries: Required in</p>

⁴⁵ *Ibid*, pg. 9, citing Government of Alberta, *Code of Practice for Pits*, (1 September 2004), online: <https://kings-printer.alberta.ca/1266.cfm?page=PITS.cfm&leg_type=Codes&isbncln=9780779765560>.

⁴⁶ *Ibid*, pgs. 5-6, citing Government of Alberta Environment and Parks, “Financial Security for Waste Facilities” (26 January 2022), online: <<https://open.alberta.ca/dataset/5a12f2db-3eb6-40e5-b82f-813fbf0a92/resource/7ecaf024-0f10-4daa-934c-9049feaf0419/download/aep-financial-security-for-waste-facilities-2022.pdf>>.

⁴⁷ *Ibid*, pgs. 5-6, citing Government of Alberta, “Financial security for land reclamation”, online: <<https://www.alberta.ca/financial-security-for-land-reclamation>>.

⁴⁸ *Ibid*, pg. 7, citing Alberta Energy Regulator, “Mine Financial Security Program”, online: <<https://www.aer.ca/regulating-development/project-closure/liability-management-programs-and-processes/mine-financial-security-program>>.

Component of reclamation security policy in Alberta	Renewables under current policies in Alberta ³²	Other Non-Extractive Industries in Alberta ³³	Extractive Industries and Waste in Alberta ³⁴
			full when activity is commenced, and updated every five years if amount changes. ⁴⁹ Waste facilities: Security must be posted in full before registration or approval is issued. ⁵⁰
Estimated liability	Wind and solar: estimated \$523 million ⁵¹	-	Oil sands and coal mines: \$47.3 billion ⁵² Conventional oil and gas: \$60 billion ⁵³
Estimated security	-	-	Oil sands: \$913 million

⁴⁹ *Ibid*, pg. 9, citing Government of Alberta, *Code of Practice for Pits*, (1 September 2004), online: <https://kings-printer.alberta.ca/1266.cfm?page=PITS.cfm&leg_type=Codes&isbncln=9780779765560>.

⁵⁰ Government of Alberta Environment and Parks, “Financial Security for Waste Facilities” (26 January 2022), online: <<https://open.alberta.ca/dataset/5a12f2db-3eb6-40e5-b82f-813fbfbe0a92/resource/7ecaf024-0f10-4daa-934c-9049feaf0419/download/aep-financial-security-for-waste-facilities-2022.pdf>>.

⁵¹ Ecoventure Inc., *Consideration of Implementing Mandatory Reclamation Security Requirements for Power Plants*, Appendix C, pg. 86, and Alberta Electric System Operator (AESO), “Current Supply Demand Report” (accessed 22 November 2023). The Ecoventure Expert report estimates decommissioning costs of \$70,000 per MW of solar and \$95,000 per MW of wind. The AESO reports 1,470 MW of solar capacity and 4,420 MW of wind capacity in Alberta at the time of writing.

⁵² Alberta Energy Regulator, *Mine Financial Security Program – Security and Liability*, online: <https://static.aer.ca/prd/documents/liability/MFSP_Liability.pdf>.

⁵³ Auditor General of Alberta, *Liability Management of (Non-Oil Sands) Oil and Gas Infrastructure* (March 2023), online: <<https://oag.ab.ca/reports/oag-liability-management-of-non-oil-sands-oil-and-gas-infrastructure/>>.

Component of reclamation security policy in Alberta	Renewables under current policies in Alberta ³²	Other Non-Extractive Industries in Alberta ³³	Extractive Industries and Waste in Alberta ³⁴
			Conventional oil and gas: \$284 million
How much land area is used by these projects? ⁵⁴	Wind: 765 ha ⁵⁵ Solar: 2,483 ha ⁵⁶	Electricity transmission: 26,000 km ⁵⁷ Oil and gas pipelines: more than 440,000 km ⁵⁸	Oil sands: 89,957 ha ⁵⁹ Conventional oil and gas: 406,643 ha ⁶⁰ Sand and gravel pits: 51,091 ha ⁶¹

B. Key Elements for Renewable Energy Reclamation Securities

Pembina urges the Commission to consider three main elements when developing a policy on security for renewable energy reclamation.

1. Security for renewable energy projects should be consistent with, and not more stringent than, reclamation securities for other non-extractive land uses

⁵⁴ Wind, oil sands, conventional oil and gas, and sand and gravel pits data from Alberta Biodiversity Monitoring Institute, *2021 Wall-to-Wall Human Footprint Inventory*, online: <<https://abmi.ca/home/data-analytics/da-top/da-product-overview/Human-Footprint-Products/HF-inventory.html>> [ABMI].

⁵⁵ *Ibid.*

⁵⁶ Solar area digitized from Copernicus Sentinel Data 2023, Sentinel Imagery 2023, Retrieved from Copernicus Data Space Ecosystem, online: <<https://dataspace.copernicus.eu/>> [Copernicus Sentinel Data 2023].

⁵⁷ AESO, *About the Grid*, online: <<https://www.aeso.ca/grid/about-the-grid/>>.

⁵⁸ Ian Urquhart, “Renewable Energy Is No Threat to Alberta Farming. The Facts” (The Tyee 11 Oct 2023), online: <<https://thetyee.ca/Analysis/2023/10/11/Renewable-Energy-No-Threat-Agricultural-Land-Farming/>>.

⁵⁹ ABMI, *supra* note 54.

⁶⁰ *Ibid.*

⁶¹ ABMI, *supra* note 54.

As illustrated by the table above, non-extractive industries (such as renewable energy) are rarely subject to mandatory reclamation security programs. Such a program would be unwarranted because the total land area for renewables, the potential of damage to the environment from the projects, and the cost of reclamation are significantly less than in the other industries where Alberta has imposed such requirements. However, if a reclamation security program is instituted for renewable power production it should be less onerous (or at the least, not more onerous) than that imposed on extractive development projects, otherwise the security program would arbitrarily and unfairly disadvantage clean energy over other kinds of power generation and land use.

2. *Reclamation securities should not impose an insurmountable capital cost requirement and should provide flexibility to developers and landowners*

A government-led security program is not necessary. Instead, the GoA should strive to provide flexibility to both developers and landowners in mandating reclamation security. The form of the security, amount and payment timing should be encouraged to be negotiated between the developer and the landowner, with reasonable guidance provided to all parties. A risk of requiring large reclamation securities for renewable energy projects upfront is that the additional capital cost requirement would create an onerous barrier to development of projects that are in the public good. Solar and wind projects often have high up-front capital costs but low operating costs later in their lives. As a result, a reclamation security program could easily become overly onerous.

3. *Private landowners are best suited to make contracts for reclamations security with companies; standardized language and transparency would improve these agreements*

Currently, renewable energy developers in Alberta often provide reclamation security through private contracts with landowners. Introducing a top-down system prescribing the details of every security could threaten the rights and interests of landowners and may cause operators to provide double securities (one in contract and another in a Commission approval condition). However, more oversight of reclamation security contracts would be useful to protect landowners and ensure they achieve the objects of ecological reclamation of the land. This oversight could include standardized or suggested security provisions for private contracts and a transparency requirement for these security provisions. As these provisions are commonly part of confidential contracts, it is difficult to know what their contents are and whether they are sufficient. In some applications, this has been a barrier to the Commission's ability to determine whether reclamation plans are sufficient.⁶²

⁶² For example, this was discussion in *Foothills Solar GP Inc.*, (20 April 2023) Alberta Utilities Commission, 27486-D01-2023, at para 82.

IV. Agricultural lands

Sources and rates of agricultural land loss in Alberta

The Pembina Institute recognizes the importance of agricultural land in Alberta. However, this issue needs to be considered in a broad context rather than just in terms of renewable energy. Unfortunately, the Tanner Conservation Services (TCS) expert report does not contextualize the nature of challenges faced by the agricultural sector in Alberta. It did not quantify a) the rate of agricultural land change in Alberta, b) the current and future expected use by agriculture and the renewable energy industry, or c) that industry's cause of agricultural land loss and conversion relative to those of other land uses.

Pembina again notes that generally, the impacts of other forms of land use should be reviewed. The TCS expert report notes lifecycle land use impacts by all forms of electricity generation, including natural gas at three times that of wind power.⁶³ Yet, there has never been an inquiry into the impacts of gas production and the land use impacts of that sector. Pembina also notes that the TCS report mistakenly notes that because wind and solar energy are variable, its land use may be greater than listed.⁶⁴ Variability is a factor already included in these calculations, as the cited Lovering et al. (2022) study used actual electricity generation from facilities – not total solar irradiative potential.⁶⁵

For comparison, **according to the Alberta Biodiversity Monitoring Institute,⁶⁶ current land use footprints in Alberta by the energy sector are:**

- *Conventional oil and gas wells – 406,643 ha*
- *Solar⁶⁷ and wind – 3,248 ha*

⁶³ Tannas Conservation Services Ltd., *Agricultural Land Evaluation Report for Energy Projects* (Alberta Utilities Commission, 2023), pg. 33 [Tannas].

⁶⁴ *Ibid* at pg. 34.

⁶⁵ Lovering, J., et al, “Land-use intensity of electricity production and tomorrow’s energy landscape” (7 July 2022) PLoS ONE, online: <<https://doi.org/10.1371/journal.pone.0270155>>.

⁶⁶ ABMI, *supra* note 54.

⁶⁷ Copernicus Sentinel Data 2023, *supra* note 56.

While there are many pathways to a low-carbon electricity future for Alberta, the Alberta Electric System Operator's modelling estimated the highest quantity of land use **by wind and solar by 2041 is 15,378 ha⁶⁸ – 1/26 of the current oil and gas well footprint.**

According to the GoA,⁶⁹ **since 2010, other notable land uses changes from class 1-7 agricultural land include:**

- *Urban residential* – 43,997 ha
- *Rural residential* – 28,965 ha

Mine sites, feedlots, and roads are also a notable source of land use change in Alberta.

Lastly, the TCS expert report states incorrectly that agricultural land used for renewable energy “is typically no longer available for agriculture.”⁷⁰ However, the two academic articles cited both specifically refer to the impacts of hydroelectricity dams, where land needs to be flooded. The primary technologies that can reduce emissions in Alberta's grid, solar and wind, can co-exist with agriculture as noted by the TCS report. Solar power modules generally sit on frames, where the soil quality is restorable and wind power plants can be grazed or farmed around.

The status quo

Currently, there are several ways in which concerns about agricultural land loss can arise in the Commission's power plant approval proceedings.⁷¹ Pembina generally supports these processes, including their underlying legislative foundations and the Commission's current approaches to considering these concerns.

⁶⁸ Sara Hastings-Simon, Hanan Ishaque, Guillaume L'hermie, *Energy and Environmental Policy Trends*, (University of Calgary School of Public Policy Oct 2023), online: <<https://www.policyschool.ca/wp-content/uploads/2023/10/EE-TRENDS-SOLAR-OCT.pdf>>.

⁶⁹ Alberta Government, *Annual report land use changes in Alberta*, online: <<https://open.alberta.ca/publications/annual-report-land-use-changes-in-alberta>>.

⁷⁰ Tannas, *supra* note 63 at pg. 32.

⁷¹ Discussed in *Briefing Note: Land Use Issues*, Part III.

Municipal land use plans and land use bylaws

Chief among the means for raising agricultural land concerns are municipal land use plans and land use bylaws. Among the former, Municipal Development Plans (MDPs) “must contain policies respecting the protection of agricultural operations.”⁷²⁷³

Land use bylaws (LUBs) for rural municipalities generally have an “agricultural” zoning district that lists “permitted” and “discretionary” land uses within that district. In fact, the MGA expressly allows municipal LUBs to “provid[e] for the protection of agricultural land...”⁷⁴

Land use plans and LUBs are key tools for municipalities to develop and implement policies for protecting agricultural lands within their borders.

The Commission generally factors municipal plans and LUBs into its public interest calculations. However, under the MGA, those tools do not give municipalities a veto over Commission approvals of renewable energy projects on agricultural lands. Rather, municipal plans and LUBs are among the factors bearing on the Commission’s assessment of whether a given power plant is in the overall public interest.⁷⁵

Interveners’ submissions in individual Commission approval proceedings

Municipalities and other interveners can raise concerns about agricultural land loss in their submissions to the Commission in individual approval proceedings.

The Commission must and generally does consider interveners’ input in making its approval decisions. However, Pembina’s understanding is that the Commission typically defers to the

⁷² Municipal Government Act, RSA 2000, c M-26, s 632(3)(f), <<https://canlii.ca/t/8239#sec632>> [MGA].

⁷³ For example, the MDP of the Foothills Municipal District starts with a “vision” that “supports stewardship of *natural capital* for future generations” and treats the “agricultural lands” in the MD’s east, south and southwest as part of this “natural capital.” Foothills MD, MDP 2010 (July 8, 2010, amended Oct 11, 2017) at pg. 5, online: <https://www.foothillscountyab.ca/sites/default/files/2022-05/MDP2010_ADOPTED_Nov2017.pdf>. The MDP also lists the goal of “[c]onserv[ing] and protect[ing] the maximum amount of land in the MD as natural capital for use by the agricultural industry...” at pg. 11. The MDP then lists numerous objectives and policies for meeting this goal, at pgs. 11-13.

⁷⁴ MGA, *supra* note 72, at s.640(1.1)(d).

⁷⁵ *Briefing Note: Land Use Issues*, at pg. 27.

private landowners' choice to use crop or grazing land for a power plant, subject to any overriding public interest considerations.⁷⁶

Here again, Pembina generally supports the Commission's existing approach (absent any contrary direction from a regional plan). However, if a renewable energy development was contrary to a municipal land use plan or LUB, then the Commission should not defer to a landowner's choice to host a power plant.

In Bulletin 2023-25 (items 1-5), the Commission added several Rule 007 requirements for power plants to provide more information on the agricultural value of soils at the power plant site. If the Commission decides to retain these requirements, Pembina believes that they should apply only for power plants proposed for land within an "agricultural district," as designated in a LUB, or in land identified in a municipal land use plan as being prioritized for agricultural land protection.

The TCS report suggests that the Commission should invite the Ministries of Agriculture and Irrigation and Municipal Affairs to provide input on agricultural land loss concerns raised by individual power plant applications.⁷⁷ This approach is inconsistent with any other land use plan. Pembina is concerned that this would add unnecessary red tape to the already robust consultation and participation opportunities in approval proceedings. Those Ministries are free to adopt generic policies which, when relevant, the Commission would consider even without the Ministries' participation in specific approvals. And municipalities can adequately speak to their own priorities and policies for agricultural land protection within their boundaries.

ALSA Regional plans

ALSA regional plans can provide clear directions for agricultural land protection. The Commission is required to abide by the parts of those plans that are specified in the plans as binding, and the Commission must at least consider the other, non-binding parts of those plans.⁷⁸ ALSA specifically allows regional plans to include conservation "directives" to "permanently protect, conserve, manage and enhance ... agricultural values."⁷⁹

While regional plans can potentially be used to conserve agricultural land, they arguably have not lived up to this potential, in part, because the province has adopted only two regional plans for the seven Alberta regions. One of these two plans - the South Saskatchewan Regional Plan

⁷⁶ *Briefing Note: Land Use Issues*, at pgs. 31-33. The Commission also favours power plants' use of crop land over their use of native grasslands, and the Commission encourages agrovoltic proposals—that is, power plant designs that enable some form of continued agricultural production.

⁷⁷ Tannas, *supra* note 63 at pg. 62.

⁷⁸ *Briefing Note: Land Use Issues*, at pgs. 23-24.

⁷⁹ Alberta Land Stewardship Act, SA 2009, c A-26.8, s 37 (1), <<https://canlii.ca/t/8h1q#sec37>> [ALSA].

(SSRP)—includes a “strategy” to “[m]aintain an agricultural land base by reducing the fragmentation and conversion of agricultural land.”⁸⁰ However, rather than including binding targets for agricultural land conservation or binding limits on agricultural land conversions, the SSRP essentially relies on municipalities to implement the strategy (which itself is in the SSRP’s non-binding part) through “municipal land-use policies that expect municipalities to identify their agricultural lands and to limit their fragmentation and conversion to non-agricultural uses.”⁸¹ The SSRP also refers to “voluntary actions by landowners” to conserve agricultural lands as another way to implement this strategy.⁸²

While aiming to “reduce” fragmentation and loss of agricultural land, the SSRP is also clear that it does not profess to “alter private property rights” (subject to provincial laws and municipal land use restrictions)⁸³ and the plan also aims to promote renewable energy development in the South Saskatchewan region by, among other things, adopting a strategy to “[e]nsure policies are in place to promote and remove barriers to **new investments in renewable energy**....”⁸⁴

Pembina supports these general objectives and strategies, but Pembina also agrees with the Commission that, taken together, these SSRP provisions do not give the Commission clear direction for its power plant approval decisions.⁸⁵

Pembina supports the use of positive incentives to minimize agricultural land loss, but Pembina takes no position on whether the SSRP should be revised to provide clear, binding limits on conversion of privately owned agricultural land.⁸⁶ However, if the government is considering any such revisions, they should be applied fairly - that is, to all kinds of developments rather than only to renewable energy projects. (This same principle should apply if the GoA is considering developing a provincial policy on agricultural land conservation.)

The TCS report recommends several other tools for limiting agricultural land loss from renewable energy developments - namely, an “agricultural directive” for wind and solar plants

⁸⁰ Alberta Government, South Saskatchewan regional plan 2014-2024, at pg. 44, online: <<https://open.alberta.ca/publications/2817-4224>>.

⁸¹ *Ibid.*

⁸² *Ibid* at 45.

⁸³ *Ibid* at 3.

⁸⁴ *Ibid* at pgs. 47-48 (emphasis in original).

⁸⁵ *Briefing Note: Land Use Issues*, at pg. 25.

⁸⁶ The GoA’s 2008 “Land Use Framework” acknowledged the problem of agricultural land fragmentation but focused, not on regulatory restrictions, but on the use of market-based mechanisms, and on provincial funding of municipal programs, to incentivize private landowners to conserve their agricultural land. GoA, *Land Use Framework* at 13 and 33 (discussed in *Briefing Note: Land Use Issues*, at 22).

(like the wildlife directive for those sectors) and a tiered approach to siting wind and solar plants, with minimum targets for agricultural production required for each tier.⁸⁷

Pembina believes that these tools are best considered as possible components of ALSA regional plans, because those plans should be the primary tool for ranking and achieving priorities for agricultural land protection. And, following the fairness principle discussed in part II above, if a regional plan adopts either of those tools, the tool should apply to all sectors including oil and gas, residential, commercial, and industrial development, not just renewable energy.

V. Crown lands

Under section 40 of the *Hydro and Electric Energy Act*, if a power plant's owner receives a Commission approval for the plant, the owner still must comply with applicable requirements under all other provincial and federal laws (except inconsistent or conflicting municipal requirements).

Numerous provincial laws already provide a robust system for Crown land managers to decide whether to allow and to otherwise regulate activities on Crown lands in Alberta.⁸⁸

This system has several shortcomings. Most importantly, as discussed in part II above, due to inadequate land use planning, the GoA has not conserved sufficient amounts of Crown land in the Grassland and Parkland regions for the protection of nature. Alberta has not committed to the global best practice of conserving 30% of its habitats by 2030 or made any other meaningful commitment for future land conservation.

Another shortcoming with Crown land management is the lack of ALSA regional plans for five of the seven Alberta land use regions, which plans can provide important guidance and direction for Crown land managers.

Still another shortcoming is with respect to the GoA's policy on whether renewable energy development can occur on any provincial Crown lands. This policy should be clarified.

In fact, the GoA should go even farther and inventory its unprotected Crown lands to identify those that might be suitable for renewable energy development. (Pembina agrees with TCS report's suggestion that the government consider allowing renewable energy development on Crown grazing leases on non-native pastures, at least, when those developments are compatible with grazing.⁸⁹) The GoA should then offer incentives for renewable energy developers to site

⁸⁷ Tannas, *supra* note 63 at pgs. 56 (Table 7.1), 61, and 62.

⁸⁸ *Briefing Note: Land Use Issues*

⁸⁹ Tannas, *supra* note 63 at pg. 50.

their projects on those lands. Various international jurisdictions, including Texas, have balanced accelerating the deployment of renewable energy projects and impact assessments through similar approaches, especially by building transmission infrastructure to a region where a cluster of renewable energy projects are encouraged to develop.⁹⁰

Allowing renewable energy development on Crown land also provides an opportunity for the GoA for further reconciliation with Indigenous rightsholders. Under the numbered Treaties, the Crown is responsible for shared governance of land, and thus the benefits of energy development should be shared. As could be pursued in all sectors, the GoA should encourage projects to include meaningful consultation with Indigenous rightsholders and through partnerships and shared-equity stakes.

The GoA should also ensure that it is treating renewable energy fairly, vis a vis oil and gas or other industrial activities that are allowed on some Crown lands. For example, Alberta's wildlife directives for wind and solar already direct solar and wind projects to avoid areas of native grasslands, native parklands, old growth forest stands, "the eastern slopes region," and woodland caribou habitat even though these strict rules do not apply to other land uses.⁹¹ If these strict rules apply to renewable energy projects they should also equally apply to other land uses.

There are other shortcomings with Alberta's management of its Crown lands.⁹² However, these problems should generally be addressed, not by the Commission through its power plant approval proceedings, but by the land managers and their supervisors, or by cabinet or the Legislature, all working within the context of the land management systems.

⁹⁰ Warren Lasher, *The Competitive Renewable Energy Zones Process* (ERCOT 11 August 2014) pg. 2, online: <https://www.energy.gov/sites/prod/files/2014/08/f18/c_lasher_qer_santafe_presentation.pdf>.

⁹¹ The guidelines and directives for renewable energy development are far more restrictive than for all other land uses. See: Government of Alberta, *Wildlife land use guidelines – Overview*, online: <<https://www.alberta.ca/wildlife-land-use-guidelines-overview>>, also Government of Alberta, *Master Schedule of Standards and Conditions*, online: <<https://open.alberta.ca/publications/master-schedule-of-standards-and-conditions>>.

⁹² For example, the Environmental Law Centre (ELC) has noted the lack of opportunities for public participation in decisions to grant tenures to use public lands. Environmental Law Centre, *Set-up for Conflict: Albertans' Values vs Alberta's Resources*, online: <<https://elc.ab.ca/wp-content/uploads/2022/05/What-is-Tenure-ELC-BACKGROUNDER-May-16-2022.pdf>> The ELC among others has also commented on the lack of an ecosystem-based framework for managing Alberta's public forests. Brenda Heelan Powell, *Managing Forests not Forestry: Land and Policy Recommendations for Ecosystem-Based Management of Alberta's Forests* (Environmental Law Centre, December 2021). online: <<https://elc.ab.ca/wp-content/uploads/2022/01/Managing-Forests-not-Forestry-December-2021.pdf>>.

VI. Environmental lands

This part discusses the Commission’s consideration of “environmental lands” (and water bodies) other than lands (and water bodies) that are on Crown land (or that cross through Crown land, for water bodies). Crown lands are discussed in part V above.

For this discussion, Pembina presumes that the term “environmental lands” is meant to refer to lands (and waters) that have been officially *designated* as environmentally significant or important.⁹³

Lands (and waters) can be designated as environmentally significant by several different sources. One source is municipalities, who may designate those lands, and provide for their protection, in their land use plans and land use bylaws. The Commission currently accounts for these municipal designations through the Commission’s approval application process and approval decisions. In Pembina’s view, this accounting is adequate, subject to Pembina’s recommendations in part II above to improve the transparency of the Commission’s consideration of municipal planning, zoning, and permitting decisions.

ALSA regional plans (and integrated resource plans adopted by reference in ALSA plans) may also designate and provide for protections of environmentally significant lands. In addition, ALSA specifically allows regional plans to include conservation “directives” to “permanently protect, conserve, manage and enhance environmental ... values”.⁹⁴

The Commission is bound by the (binding parts of) ALSA regional plans so there is an adequate existing mechanism to enforce them. As part of its overall public interest assessment, the Commission should also consider any relevant non-binding parts of ALSA regional plans that identify environmentally significant lands.

Some lands (and waters) are effectively “designated” as environmentally significant in the sense that they are given special protection under provincial or federal environmental laws. For example, activities that may affect water supplies or water bodies are protected under the *Alberta Water Act* and *Environmental Protection and Enhancement Act*, and fish habitat is protected under the federal *Fisheries Act*. In addition, habitats for some endangered species may be protected under federal or provincial species protection laws.

⁹³ For any non-designated lands that a municipality or other intervener identifies as environmentally significant, in a specific approval proceeding, the Commission can account for those views through its current public interest decision framework.

⁹⁴ ALSA, *supra* note 79, at s 37(1).

Under section 40 of the HEEA, renewable energy developers who receive a Commission approval must still comply with all these other environmental laws. That HEEA requirement, and the other laws themselves, are generally adequate for ensuring that renewable energy developments do not harm the resources those laws are meant to protect. As with provincial land management regimes, those environmental laws have shortcomings (e.g., failure to adequately account for cumulative effects). However, the Commission lacks the expertise and authority to try to resolve those problems.

Finally, the government’s wildlife “directives” for solar energy and wind energy projects provide another source of important guidance with respect to some lands that are officially designated or classified for their high habitat or other environmental values. Pembina’s understanding is that the Commission gives these directives substantial weight in its public interest decisions and again notes that these directives are far more restrictive for wind and solar than other land uses. This discriminatory approach is unfair to the renewables sector, especially since that sector’s impacts are generally lower than resource extraction activities. (To be clear, Pembina is not questioning the Directives’ restrictions, just their application only to the renewables sector.)

Other than the discriminatory wildlife directives, the system for protecting environmentally significant lands is sufficient for addressing concerns about renewable energy impacts.

VII. Pristine viewscales

In the discussion below, Pembina uses the term “pristine viewscales” to mean a landscape-level view toward or within a landscape that is provincially recognized as having a high value for its scenic beauty in an undeveloped state.⁹⁵ This term is distinguished from a “local visual” sightline, which is the view of a small area that is available only to one or several immediately adjacent neighbours.

Using these definitions, Pembina presumes that this inquiry’s concern about “pristine viewscales” relates only to wind power plants, which are tall and can be spread out over a large area. (By contrast, solar plants are generally low to the ground and confined to relatively small areas, so they can have local visual impacts but generally do not raise concerns about landscape-level viewscale impacts. Pembina’s understanding is that the Commission has been diligently assessing concerns about local visual impacts of solar plants and requiring solar developers to

⁹⁵ Alberta Utilities Commission, *Bulletin 2023-25*, pg.3, online: <<https://media.www.auc.ab.ca/prd-wp-uploads/News/2023/Bulletin%202023-05.pdf>>. The Commission added a Rule 007 application requirement with respect to pristine viewscales. If the Commission retains that requirement, the Commission should consider using this definition in that context.

take reasonable steps to mitigate those impacts, where appropriate.⁹⁶ Pembina generally supports the Commission’s approach in addressing concerns about local visual impacts.)

In Pembina’s view, regional plans should be the primary tool for addressing impacts to pristine viewsapes. The 2008 Land Use Framework (LUF) referred to pristine viewsapes in discussing the need for a South Saskatchewan regional plan. According to the LUF (p. 44), the breathtaking beauty of the landscapes for which southern Alberta is famous - especially along Highway 22, the “Cowboy Trail” - is ... at risk from new oil and gas development, new power lines and pipelines, the demand for more acreages and country residential housing, and the fragmentation of traditional ranch and farm properties.

In addition, ALSA specifically allows regional plans to include conservation “directives” to “permanently protect, conserve, manage and enhance ... natural scenic values.”⁹⁷

However, the SSRP does not map or provide any clear and concrete protections for pristine viewsapes.⁹⁸ Nor does the SSRP provide clear guidance or direction on how to balance interests in viewscape protection with other interests, which the SSRP supports, in promoting economic development and growth in the renewable energy sector, and in respecting the rights and choices of private landowners.⁹⁹

Pembina takes no position on what more, if anything, the SSRP should say about protecting pristine viewsapes. The point is simply that the SSRP is the best tool for addressing this topic, if the province and other planning stakeholders believe it needs more attention. If the GoA formally designates a protected pristine viewscape zone, then it should apply to decision-making for all land uses in the zone that have the ability to change the view, including forestry, mining, oil and gas, and industrial development.

In addition, the Commission should consider revising its new interim Rule 07 requirement with respect to pristine viewsapes, so that the requirement applies only in those instances where a proposed power plant is inconsistent with viewscape-related protections in a municipal development plan or land use bylaw.

Pembina is unaware of any Commission decision denying a wind farm approval based on concerns about impacts to pristine viewsapes. Rather, the Commission typically acknowledges

⁹⁶ *Briefing Note: Land Use Issues*, at pgs. 33-34.

⁹⁷ ALSA, *supra* note 79 at s. 37(1).

⁹⁸ *Briefing Note: Land Use Issues*, at pg. 25.

⁹⁹ *Ibid.*

those impacts but concludes that they (and other negative impacts) are outweighed by the projects' benefits.¹⁰⁰

Without question, pristine viewsapes - particularly the viewscape along the southeastern slopes of the Rockies - are valuable public assets and wind farms can change the character of those viewsapes. However, Pembina generally agrees with the Commission's conclusions that assessments of the magnitude and nature of viewscape impacts are largely subjective, and generally do not outweigh wind farms' public benefits.¹⁰¹ That said, Pembina welcomes any regional planning effort to clarify the importance of specific viewsapes and to provide clear rules - for all types of developments - as to how and whether those viewsapes can be affected.

Lastly, Pembina believes that it is important to distinguish between considerations of pristine viewsapes' natural heritage and other *public* values, from their bearing on local property values. In Pembina's view, the Nichols Applied Management Inc. report misses this distinction by focusing on property value impacts as the key benchmark for assessing the value of pristine viewsapes. That said, Pembina agrees with that report's discussion of the challenges of measuring how property values are affected by effects on viewsapes. Given these challenges, and municipalities' important role in assessing property value concerns, Pembina believes that the Commission's best way to consider the viewscape/property value linkage is to do so indirectly, through its consideration of municipal land use plans and LUBs, and regional plans.¹⁰²

¹⁰⁰ *Ibid* at pg. 33.

¹⁰¹ *Ibid* at pgs.33-34.

¹⁰² The Natural Resources Conservation Board takes a similar approach to considering concerns about property values, when considering whether to approve confined feeding operations under the *Agricultural Operation Practices Act*. See, e.g. *Hutterian Brethren of Parkland*, RFR 2022-10 (NRCB), online, <<https://www.nrcb.ca/public/download/files/218107>>, at pg. 8 (noting that "concerns about property values are a land use issue that is best addressed by municipalities through land use provisions in municipal development plans and land use bylaws").

VIII. Attachments

Appendix A –Briefing Note: Land Use Issues

Appendix B – Briefing Note: Reclamation Security

Appendix A

BRIEFING NOTE:

**HOW LAND USE ISSUES FACTOR INTO AUC REVIEWS OF
RENEWABLE ENERGY POWER PLANTS**

By: Michael M. Wenig

November 21, 2023

Big Spruce Law (www.bigsprucelaw.ca)

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I. Introduction¹

In August 2023, the Government of Alberta (GoA) put temporary brakes on further expansion of the province's booming renewable energy power industry. This boom had been good news not only for the renewables industry, but for municipal tax bases, and for citizens and groups interested in decarbonizing the Alberta grid and enabling the grid to meet the likely future growth in electricity demand. Decarbonization and grid electrification are themselves outgrowths of efforts to reduce greenhouse gas emissions, in the face of the increasingly common and severe impacts of climate change.²

The GoA carried out this “pause” or moratorium by issuing a new regulation directing the Alberta Utilities Commission to hold off granting any approvals for renewable electric power plants over one megawatt (and hydro power developments) until February 29, 2024.³ According to the GoA, this pause was justified because the “rapid growth” in renewable electricity production in Alberta had “created issues relating to land use, electricity system reliability and concerns from rural municipalities and landowners.”⁴ To better address these issues and concerns, the GoA directed the Commission to conduct an inquiry on five topics and to issue a report with “findings” or “observations or considerations for options,” as the Commission “deems appropriate,” with respect to these five topics.⁵

¹ Thanks to Prof. Nigel Bankes for his review and comments.

² See generally, e.g. Pembina Institute, *Factsheet – Investment Impact of Alberta's Renewable Energy Moratorium*, online: <https://www.pembina.org/reports/2023-08-24-albertas-renewable-energy-moratorium-factsheet.pdf>; and Pembina Institute, *Energy policy leadership in Alberta* (March 2019), online: <https://www.pembina.org/pub/energy-policy-leadership-alberta>.

³ See Order in Council 108/2023 (Aug. 3, 2023), enacting the *Generation Approvals Pause Regulation*, under the *Alberta Utilities Commission Act* (AUCA), SA 2007, c. A-37.2. Section 2 of that regulation provides for a pause in Commission approvals “during the period in which” the regulation is “in force”. Under section 4, the regulation expires on February 29, 2024.

⁴ GoA, *Backgrounder: AUC pause and inquiry* (Aug. 3, 2023), online: <https://www.alberta.ca/external/news/2023-08-02-auc-pause-backgrounder.pdf>; see also GoA, *News Release – Creating certainty for renewable projects* (Aug. 3, 2023), online: <https://www.alberta.ca/release.cfm?xID=887605547987E-EABF-5E23-DFF2C9F72DB845E6>.

⁵ Order in Council 171/2023 (Aug. 2, 2023), Schedule – Terms of Reference, ss 1 and 3(a). In more general terms, the GoA instructed the Commission to “review policies and procedures for

The timing and critiques of the moratorium

Numerous commentators have criticized the moratorium on several grounds, including fairness. The GoA has not imposed similar moratoria on other industries in the face of similar or more deep-seated concerns about those industries' impacts.⁶ Another criticism is that the moratorium will place a significant chill on renewable power investors and developers' willingness to participate in Alberta's energy market.⁷

This chill may be exacerbated by uncertainty about how long the moratorium will last. Section 3(b) of the inquiry's Terms of Reference directs the Commission to submit its report to the Minister of Affordability and Utilities by March 29, 2024. Presumably, the Minister (and provincial cabinet) will then need substantial more time to absorb the report's findings, decide which of the report's recommendations to adopt, and develop and implement them and any other policies that government deems to be necessary. This process will presumably take months, which raises the question whether the GoA expects—but is not being transparent about its intent—to extend the moratorium past the above-noted official end date of February 29, 2024.

Even if the GoA is really committed to ending the moratorium on February 29, 2024, the government's motive for adopting the moratorium may still leave a lingering chill during the remaining months of policymaking.⁸

the development of renewable electricity generation"⁵ and to "identify criteria for a reasonable, robust regulatory framework that is efficient and predictable while being protective of the long-term public interest of all Albertans." *Backgrounder*, *supra* note 3.

⁶ See, e.g. Rob Breakenridge, "Alberta's pause on renewables makes no sense," *Calgary Herald* (Oct. 2, 2023), p. A2; Nigel Bankes and Martin Olszynski, "An Incredibly Ill-Advised and Unnecessary Decision," (9 August 2023), online: ABlawg, http://ablawg.ca/wp-content/uploads/2023/08/Blog_NB_MO_Ill-Advised_Decision.pdf; Don Braid, "With green energy halt, UCP declares a moratorium on Alberta's reputation," *National Post* (Aug. 4, 2023), online: <https://nationalpost.com/opinion/columnists/braid-with-green-energy-halt-ucp-declares-a-moratorium-on-albertas-reputation/wcm/ed569a84-b6c3-4fc4-83bd-68d4ef902a69#:~:text=When%20did%20an%20Alberta%20conservative,wind%20turbines%20and%20solar%20panels>.

⁷ See, e.g. Jason Wang and Will Noel, *Factsheet – Investment Impact of Alberta's Renewable Energy Moratorium* (Pembina Institute, Aug. 24, 2023), online: <https://www.pembina.org/reports/2023-08-24-albertas-renewable-energy-moratorium-factsheet.pdf>.

⁸ Commentators have questioned the GoA's true motives for imposing the moratorium. See, e.g. Drew Anderson, "Danielle Smith's government made false statements about reasons for Alberta

The Commission's Inquiry

As noted above, the GoA directed the Commission to consider five topics in its inquiry. As set out in the inquiry's Terms of Reference, three of the five topics are:

Considerations on development of power plants on specific types or classes of agricultural or environmental land

Considerations of the impact of power plant development on Alberta's pristine views

Considerations for development of power plants on lands held by the Crown in Right of Alberta

For brevity, this paper refers to these three topics collectively as the "land use issues."

The other two topics listed in the inquiry's Terms of Reference are:

Considerations of implementing mandatory reclamation security requirements for power plants

Considerations of the impact the increasing growth of renewables has to both generation supply mix and electricity system reliability

In response to the Terms of Reference, the Commission decided to set up an inquiry proceeding with two modules. "Module A" will address the three land use issues and the reclamation security issue noted above. "Module B" will address the fifth topic, relating to the effect of renewables growth on the grid's reliability and supply mix.⁹

renewables pause: documents," The Narwhal (Nov. 9, 2023), online: <https://thenarwhal.ca/alberta-renewables-pause-documents>; Emma Graney, "Alberta renewable energy pause leaves companies bewildered, angry, according to hundreds of letters sent to utility agency," The Globe and Mail (Sept. 7, 2023), online: <https://www.theglobeandmail.com/business/article-alberta-renewable-energy-pause-leaves-companies-bewildered-angry/>; Bankes and Olszynski, *supra* note 5.

⁹ AUC Bulletin 2023-06 (Sept. 11, 2023).

The paper's focus and methodology

This paper provides an overview of the Commission's *current* approach to addressing the three land use issues in the inquiry.¹⁰ Understanding the status quo is a logical first step in considering whether new policies, legislation or other tools are needed to improve Alberta's management of these land use issues.

The paper's assessment of the Commission's current approach is based primarily on a review of many approval decisions issued by the Commission, from the numerous renewable energy power plant approval proceedings the Commission has conducted over the last several years. (The decisions chosen were drawn from lists of decisions obtained from various records searches using the Commission's online *eFiling* system.¹¹)

The Commission's current approach is based on (or, in other words, stems from) the underlying legislative framework for power plant development. To understand the Commission's current approach, it is useful to also understand that underlying legislative framework. Therefore, this paper also covers the underlying legislative framework.

This paper is mostly descriptive. It does not opine on whether the current approach is satisfactory or on how to fix any perceived flaws.

Part I below addresses the Commission's overall "public interest" determinations for power plant applications under the *Hydro and Electric Energy Act* (HEEA), RSA 2000, c. H-16. Part II summarizes municipal land use planning and development permitting. Part III summarizes regional planning under the *Alberta Land Stewardship Act* (ALSA), SA 2009, c. A-26.8. And Part IV summarizes the Commission's application requirements and recent Commission decisions on the land use planning issues.

II. The basic legal framework for the Commission's approval decisions for power plants

The Commission's authority with respect to power plants is rooted in section 11 of the HEEA, which prohibits the construction and operation of a power plant except pursuant

¹⁰ This paper is a companion to the accompanying Ecojustice Briefing Note, *Re: Considerations for implementing mandatory reclamation security requirements on renewable energy power plants* (Nov. 17, 2023).

¹¹ Online: https://www2.auc.ab.ca/_layouts/15/auc.efiling.portal/login.aspx.

to a Commission order approving the plant's construction and operation.¹² The Commission has broad discretion to include terms and conditions in power plant approvals, including discretion to change a proposed plant's designs or plans and to change its location.¹³

A. The public interest test

The Commission's power plant approval decisions are based on a broad "public interest" test.¹⁴ The Commission has stated repeatedly that, in its view, this public interest test will be "largely met" if an application "complies with existing regulatory standards, and the project's public benefits outweigh its negative impacts."¹⁵

The Commission has also explained that, when the costs and benefits of a project will not be "evenly allocated across various stakeholder groups," the Commission must "carefully scrutinize" the costs to see if they have been minimized or mitigated to an "acceptable degree"; when costs cannot be completely mitigated, the Commission must decide whether the benefits outweigh the costs.¹⁶

Factors included in the "public interest" calculation

The public interest is a paramount principle because, by its plain meaning, the public interest implicitly subsumes all other legislative principles and provides for a balancing of those principles when they are in conflict. The public interest also subsumes all

¹² Under section 1(1)(k) of HEEA, "power plant" means the "facilities for the generation and gathering of electric energy from any source." The approval requirement in section 11 of the HEEA does not apply to a "small power plant" (less than 1 MW) connected to a transmission line or electric distribution system, if the plant has no environmental impacts, does not directly and adversely affect anyone, and meets the noise control requirements in Commission Rule 012. *Hydro and Electric Energy Regulation*, Alta Reg 409/1983, s 18.1.

¹³ HEEA, s 19.

¹⁴ AUCA, s 17(1). See, e.g. *Capital Power Corporation v Alberta Utilities Commission*, 2018 ABCA 437 at para 52 (in a decision denying a leave to appeal application, noting that the Commission's "first and foremost mandate is to make decisions which are in the public interest").

¹⁵ E.g. *Creekside Solar*, AUC 27652 at para 12; see also *Sollair Solar*, AUC 27582 at para 108 (adding that "negative impacts" include "those [impacts] experienced by more discrete members of the public"). Appendix A attached has full citations to all Commission decisions referenced in this paper.

¹⁶ *Buffalo Plains Wind Farm*, AUC Decision 26214 at paras 351-352.

relevant factors. The scope of relevant factors is itself broad, though not unlimited. As the Alberta Court of Appeal has explained,

[g]iven the amorphous nature of the standard, the public interest will vary with the circumstances and the context in which it arises.... In addition, the shape and contour of the public interest standard is necessarily dependent on the legislative framework in effect.¹⁷

The relevant “circumstances and context” arguably include the Government of Alberta’s legislative policies with respect to climate change and environmental protection in general. The latter are referenced in the broad purpose statements of the *Environmental Protection and Enhancement Act* (EPEA), RSA 2000, c. E-12.¹⁸

These legislative policies also include the Government’s “deep and well established commitment to protect Alberta’s environment for future generations through proactive and responsible stewardship of the environment,” and the Government’s “recogni[tion] that the management of emissions of” greenhouse gases “will serve to protect the Alberta environment.” These policies are expressed in the preamble of the province’s *Emissions Management and Climate Resilience Act* (EMCRA), SA 2002, c. E-7.8.

Section 3(1) of that Act includes a target to reduce GHG emissions, by December 31, 2020, to 50% below 1990 levels (relative to gross domestic product). This is a *standalone* target in the sense that, by its plain terms, it is not contingent on or linked to the implementation of specific emissions reductions programs. The Commission itself seems to have recognized that this target is relevant to the Commission’s planning, beyond the target’s connection to the renewable energy program.¹⁹

¹⁷ *ATCO Electric Limited v. Alberta (Energy and Utilities Board)*, 2004 ABCA 215 at para 134. *Ibid.* at para 141 (noting that the public interest is “redefined to comport with the context in which the interest arises”). See also, e.g. *AltaLink/SNC*, AUC 2014 at para 58 (noting that the public interest is a “multi-faceted concept that will necessarily mean different things in different contexts”).

¹⁸ Section 2 of that Act starts by stating the Act’s aim to “support and promote the protection, enhancement and wise use of the environment while recognizing” several factors listed in that section.

¹⁹ See AUC, *Alberta Electric Distribution System-Connected Generation Inquiry – Final Report* (Dec. 29, 2017) at pp 40, 49-55, 84, 100, and 118.

The HEEA and at least two, and possibly three, other electricity-related statutes provide three more legislative guides to the Commission's choice of relevant "public interest" factors.

- First, the AUCA makes it clear that the Commission's consideration of the overall public interest must "hav[e] regard to" the plant's "social and economic effects" and its "effects ... on the environment."²⁰
- Second, because the Commission's approval authority stems from section 11 of the HEEA, the Commission's approval decisions are implicitly and necessarily guided by that Act's purposes.²¹ Under section 2, the HEEA's purposes, with respect to electric energy generation in Alberta, include to provide for the "economic, orderly and efficient development and operation, in the public interest," to "secure the observance of safe and efficient practices in the public interest," and to "assist the Government in controlling pollution and ensuring environment conservation".

Several other electricity-related statutes are also part of an overall legislative scheme for Alberta's electricity system. The Commission's power plant approval decisions under the HEEA arguably must be guided by that scheme's collective purposes, rather than just by the HEEA's purposes.²² These other purposes include the aim of the *Renewable Electricity Act* (REA), S.A. 2016, c. R-16.5, to "promote" the growth of renewable energy in Alberta, and that Act's "target" of achieving at least 30% of Alberta's annual electric energy production from renewable energy sources.²³

²⁰ AUCA, s17(1).

²¹ *Pattern Wind*, AUC 22736 at para 8. See also, e.g. *Canada v Alta Energy Luxembourg S.A.R.L.*, 2021 SCC 49 at para 29 (majority opinion noting that "all statutes ... must be interpreted by conducting a 'textual, contextual and *purposive* analysis to find a meaning that is harmonious with the Act as a whole'" (emphasis added; citation omitted)).

²² E.g. *Shaw v Alberta (Utilities Commission)*, 2012 ABCA 378 at para 32 (noting that the electricity statutes must be read together because statutes "dealing with the same subject matter should be interpreted in a manner that ensures harmony, coherence and consistency among them"); *ibid* at 10 (¶ 38) (noting that, in a "complex legislative scheme such as this one, it is necessary to have regard to the entire scheme in order to ascertain legislative intent.").

²³ REA, Preamble and s 2(1). *Buffalo Trail Wind*, AUC 27240 at para 26 (citing section 2 of the REA and noting that the public interest in the renewable nature of a power plant is "consistent

In fact, the HEEA makes it clear that the Commission's public interest considerations must also be guided by the purposes of the *Electric Utilities Act* (EUA), SA 2003, c. E-5.1.²⁴ Those purposes are essentially to provide for an efficient and competitive electricity market.²⁵

- Third, the Commission's power plant approval decisions must be "in accordance with" any applicable regional plan adopted under ALSA.²⁶ (Part IV.C below discusses how the Commission has addressed the South Saskatchewan Regional Plan in its renewable power plant decisions.)

Viewed collectively, these three items define factors that the Commission must include in its overall public interest assessment, for power plant approval decisions. However, there are also several factors that the Commission is expressly *precluded* from considering. For the parts of power plants that are "generating units," the Commission shall **not** consider:

- Whether the unit is an "economic source" of electric energy in Alberta
- Whether there is a "need" for the produced electric energy in terms of meeting energy demand within or outside of Alberta
- Whether the unit is covered by a "renewable energy support agreement" (RESA) under the REA.²⁷

with the broader legislative scheme in Alberta that promotes the development of renewable electricity generation").

²⁴ HEEA, s 3(1)(d).

²⁵ EUA, s 5.

²⁶ AUCA, s 8.1 (cross-referencing an "ALSA regional plan") and *Interpretation Act*, RSA 2000, c. I-8, s 28(1)(b.3) (defining an "ALSA regional plan" as a regional plan adopted under ALSA). The Commission may order a person to comply with an ALSA regional plan and the Commission may make rules regarding compliance with and enforcement of an ALSA regional plan. AUCA, ss 23(1)(c) and 76(1)(i).

²⁷ HEEA, ss 3(1)(a), (c), and (c.1). HEEA section 3(1)(a) refers to "generating units" as defined in the EUA. Under section 1(u) of the EUA, a "generating unit" is essentially the part of a power plant the produces electric energy and ancillary services.

The first two of these three exclusions help ensure that energy market risks fall on electricity producers. The third exclusion ensures that there is no automatic pass for a project that has a RESA.

B. Other applicable requirements (excluding municipal requirements)

The Commission's broad, over-arching public interest focus, in its power plant approval decisions, might suggest that those decisions should be the final word on whether power plants can be developed. However, this is not really the case, because the Commission's issuance of an approval "does not relieve" a power plant owner from the need to obtain any other authorization the owner is "required to obtain under any other Act or regulation under any other Act".²⁸

In other words, if a power plant is prohibited under another Act or regulation, a Commission approval does not override that prohibition.

Other relevant Acts requiring approvals may include EPEA, and the *Water Act*, RSA 2000, c. W-3, *Historical Resources Act*, RSA 2000, c. H-9, and *Public Lands Act*, RSA 2000, c. P-40.

In addition, municipal approvals are also needed under the *Municipal Government Act* (MGA), RSA 2000, c. M-26. However, as discussed in part III.B below, these MGA requirements do not enable municipalities to veto power plants approved by the Commission.

III. Municipal requirements under the MGA

Under the Canadian Constitution, municipalities are created by provincial legislatures and therefore can exercise only the powers granted to them by those legislatures.²⁹ The MGA is a lengthy, complex Act that provides for a multi-layered set of tools for Alberta municipalities to regulate land uses within their borders. Chief among these tools are land use plans and land use bylaws, and development permitting. Part III.A below

²⁸ HEEA, s 40.

²⁹ *The Constitution Act*, 1982, Schedule B to the Canada Act 1982 (UK), 1982, c. 11, s 92(8). See also, e.g. *114957 Canada Ltée (Spraytech, Société d'arrosage) v. Hudson (Town)*, 2001 SCC 40 at para 49; and Dr. Judy Stewart, *Do Recent Amendments to Alberta's Municipal Government Act Enable Management of Surface Water Resources and Air Quality* – CIRL Occasional Paper #62 (Dec. 2017) at 5-6 [Stewart, *Recent Amendments*].

summarizes each of these tools; part III.B then discusses how they relate to the Commission's power plant approval decisions under the HEEA.³⁰

A. Municipal planning and permitting

Division 4 of Part 17 of the MGA provides for municipalities' adoption of different kinds of land use plans, known collectively as "statutory plans". Chief among these are "municipal development plans" (MDP), which are required in every municipality.³¹ Other "statutory plans" are inter-municipal development plans, area structure plans, and area redevelopment plans.³²

Under the Act, an MDP generally must address "future land use" and the "manner of and the proposals for future development" in the municipality. An MDP also must "contain policies respecting the protection of agricultural operations".³³

The MGA also requires municipalities to adopt land use bylaws (LUBs). Under the Act, LUBs "may prohibit or regulate and control the use and development of land and buildings ... including ... by ... providing for the protection of agricultural land...."³⁴

LUBs must designate land use "districts." For each district, a LUB must list categories of land uses that are "permitted" in the district (with or without prescribed conditions) and that *may* be permitted "at the discretion" of the municipality's development authority (again, with or without conditions).³⁵ Some LUBs also list categories of land uses that are "prohibited" in a district. (For brevity, this paper refers to these LUB functions as "zoning".)

³⁰ For more detailed discussions of municipalities' authorities under the MGA, see, e.g. Dr. Judy Stewart, *A Guide to the Basics and What's New in Alberta's Municipal Legislation for Environmental Management* – CIRL Occasional Paper #80 (March 31, 2023); and Environmental Law Centre, *Agricultural Lands – Law and Policy in Alberta* (Nov. 2019) at 48-60.

³¹ MGA, s 632(1).

³² *Ibid* ss 631, and 633-635. The Act also provides a hierarchy of authority in case of any inconsistency among these statutory plans. *Ibid* s 638.

³³ *Ibid* s 632(3)(a)(i) and (ii), and (f).

³⁴ *Ibid* s 640(1.1)(d).

³⁵ *Ibid* ss 640(2)(b) and 642.

Finally, the MGA prohibits “developments” without a development permit issued by a municipal development authority (except as provided in a LUB).³⁶ Under the Act, LUBs must provide for a “method” and process for making decisions on development permits, including setting out permit conditions that must or may be included, and the development authority’s scope of discretion in deciding whether to grant a permit application.³⁷

Under the MGA, development permit decisions (including the permitting authority’s failure to decide within a prescribed time) can generally be appealed to a municipal “subdivision development and appeal board”. However, in certain specific circumstances, appeals must be brought before Alberta’s Land and Property Rights Tribunal. One of these circumstances is where a development has received an approval from the Alberta Utilities Commission.³⁸ In either case, the appellate board’s decision in an appeal “must comply with any applicable statutory plans” and, subject to a limited exception, with the land use bylaw.³⁹

As noted above, MDPs must include policies for protecting agricultural operations and LUBs may provide for agricultural land protection. (The MGA also gives municipalities tools to incentivize developments to avoid locating on agricultural lands.) As noted by the Environmental Law Centre, the MGA confers “extensive planning and development powers” on municipalities and this gives them “significant control over urban encroachment onto agricultural lands.”⁴⁰ As discussed in part III.B below, municipalities also have control over power plants’ use of agricultural lands, but that control is subject to the Commission’s approval authority.

B. The hierarchy between municipal requirements and Commission approvals

As noted in part II.B above, section 40 of the HEEA makes it clear that the Commission’s issuance of an approval “does not relieve” a power plant owner from the

³⁶ *Ibid* s 683. The MGA defines “development” broadly, including “buildings” and changes in the use of land or of a building. “Building” in turn is “anything constructed or placed on, in, over or under land,” other than a road or highway. *Ibid* ss 616(a.1) and (b).

³⁷ *Ibid* ss 640(2)(c) – (6).

³⁸ *Ibid* s 685(2.1)(a)(i)(C).

³⁹ *Ibid* s 687(3)(a.2) and (a.3). The exception is where a development “conforms” with the land’s designated use under the LUB but does not meet another LUB requirement and would essentially have minimal impacts on its neighbours. *Ibid* s 687(3)(d).

⁴⁰ ELC, *Agricultural Lands – Law and Policy in Alberta*, *supra* note 30 at 105.

need to obtain any other authorization the owner is “required to obtain under any other Act or regulation under any other Act”. However, three other sections of the MGA effectively alter the municipal/provincial regulatory dynamic for power plants approved by the Commission under the HEEA, by allowing Commission decisions to trump municipal land use decisions to the extent of any inconsistency.

Section 619 – Commission decisions prevail

Section 619 is arguably the most significant of these three MGA sections. Under section 619(1), an approval issued by any of several specified provincial tribunals, including the Commission, “prevails” over any “statutory plan, land use bylaw, subdivision decision or development decision ... or any other authorization” under the Planning and Development provisions (in Part 17) of the MGA. Similarly, under section 619(2), if the Commission has already approved a power plant, a municipality “must” also approve that plant (via a development permit or statutory plan amendment) if the proposed plant is “consistent” with the Commission approval and “to the extent that” the proposed plant “complies” with the Commission approval.⁴¹

These provisions mean that a Commission approval, and approval conditions, “take precedence” over municipal requirements that conflict with or would frustrate the Commission’s approval.⁴² In more practical terms, this means that a municipality cannot in effect veto or block a power plant approved by the Commission.⁴³

The Alberta Court of Appeal recently noted that the purpose of section 619 is to “reduce regulatory burdens and increase administrative efficiency and consistency ... by granting paramountcy to decisions of certain provincial bodies, to ensure projects are not blocked at the municipal level for issues already considered and approved at the provincial level”.⁴⁴

⁴¹ In *Canmore (Town of) v Three Sisters Mountain Village Properties Ltd* [*Canmore v Three Sisters*], the Alberta Court of Appeal noted that the term “consistency” in section 619(2) should be read “broadly and purposively”; it is “not intended to be an exacting standard, but rather approached wholistically and with regard to what was considered and approved at the provincial level to ensure the legislation’s purpose is achieved.” 2023 ABCA 278 at para 88.

⁴² *Creekside Solar Inc.*, AUC 27652 at paras 130-133.

⁴³ *Canmore v Three Sisters*, 2023 ABCA 278 at para 89.

⁴⁴ *Ibid* at para 74 (citing *Borgel v Paintearth (Subdivision and Development Appeal Board)*, 2020 ABCA 192 at para 22).

Under the “paramountcy” principle in section 619, municipalities are not only unable to block a Commission-approved power plant, they also apparently cannot impose *more stringent* conditions than those imposed in a Commission approval. This outcome is implicit in section 619(4) of the MGA, which states that municipal “hearings” on development applications “may not” even “address matters already decided by” the Commission “except as necessary to determine whether an amendment to a statutory plan or land use bylaw is required.”⁴⁵

However, this rule may be hard to apply if the Commission has not clearly stated which matters it has and has not addressed and the Commission has not adopted an approval condition relating to the matter.

In addition, it is uncertain whether this same rule applies when the more stringent municipal conditions are in a permit the municipality issued *before* the Commission issued a power plant approval. (Section 619 is silent with respect to the chronological order of Commission and municipal decision making with respect to a given power plant.⁴⁶)

As noted above, the Land and Property Rights Tribunal (LPRT) (formerly, the Municipal Government Board) can hear appeals of municipal decisions that are alleged to violate section 619.⁴⁷ Unlike municipal permitting staff, the LPRT can consider matters that were addressed by the Commission, but the LPRT’s decision must be “consistent” with the Commission’s approval.⁴⁸

⁴⁵ But see *Fitzpatrick v Starland County*, 2021 ABLPRT 789 at paras 48-51 (Alberta Land and Property Rights Tribunal decision concluding that a Commission decision requiring a reclamation plan doesn’t preclude the municipality from adopting its own reclamation requirement in a development permit).

⁴⁶ *Borgel v Paintearth (Subdivision and Development Appeal Board)*, 2020 ABCA 192 at paras 25-30.

⁴⁷ MGA, ss 619(5-8) and 685(1)-(2.1).

⁴⁸ *Canmore v Three Sisters*, 2023 ABCA 278 at para 37. In one such appeal, the LPRT considered a municipality’s denial of development permits for a wind farm approved by the Commission. The LPRT concluded that municipal setbacks to neighbouring properties were inconsistent with the Commission’s approval, so the development permits should be issued despite the wind farm’s infringement of those setbacks. However, the LPRT accepted the municipality’s proposed conditions relating to electrical lines, road use, safety codes, runoff, garbage, and debris control, weed mitigation, and decommissioning and reclamation. *Buffalo Atlee I Wind LP v Special Areas No. 2*, 2021 ABLPRT 764.

The Commission may be able to avoid a paramountcy showdown under section 619 by:

- Incorporating a municipal condition in the Commission's approval (or including an approval condition requiring a power plant owner to comply with those municipal conditions)
- Stating in its approval decision that it is deferring to a municipality to decide what if any conditions are needed on a given topic, and to enforce those conditions through a development permit⁴⁹
- Stating in its decision that the municipality is welcome to adopt more stringent conditions on the same subject as those adopted by the Commission.⁵⁰

⁴⁹ In one proceeding, a County asked the Commission to either impose numerous conditions requested by the County or make it clear that the specific matters addressed in those conditions "is deferred to be addressed in any County approval." *Creekside Solar*, AUC 27652 at para 129. The Commission's decision appears to provide the requested list of matters deferred to the County. *Ibid* at paras 134-140. According to the Commission, when the Commission believes that a municipality can "sufficiently address issues within its planning authority," the Commission "may defer those issues to the municipality". *Ibid* at para 133.

⁵⁰ The Alberta Court of Appeals' recent decision in *Canmore v Three Sisters* may preclude this last option. In that case, the court held that a Natural Resources Conservation Board approval of a recreation and tourism development precluded the municipality from denying the developer's requests for area structure plans allowing the same development, even though the provincial board had acknowledged that its approval was "not finally determinative" of whether the project could proceed, because the town could withhold its approval for "more detailed plans for development...." 2023 ABCA 278 at paras 11-12, 69, 74-76, and 89 (citation to NRCB decision omitted).

Section 620 – Commission conditions prevail over municipal conditions

Under section 620 of the MGA, a condition of various types of authorizations granted under provincial legislation, including Commission approvals under the HEEA, “prevails over any condition of a development permit that conflicts with it”.⁵¹ This section seems to echo the paramountcy principle in section 619. However, section 620 by itself does not appear to preclude a municipality from denying a development permit altogether, for a power plant that has been approved by the Commission.⁵² Section 620 also does not appear to preclude a municipality from issuing a development permit with a more stringent condition than that in a Commission approval.⁵³

Section 13 – Municipal bylaw consistency with provincial and federal laws

Under section 13 of the MGA, municipal bylaws must be “consistent” with provincial (and federal) “enactments”. (Section 1(1)(j) of the MGA defines “enactments” as provincial “Acts”—that is, statutes—and regulations.) Section 13 is essentially a legislative statement of the constitutional limit on municipal authority.⁵⁴ In this context, there is a two-part test for consistency: (1) can a person comply with the bylaw and the provincial or federal law at the same time; and (2) does the bylaw frustrate the purpose of the provincial or federal law?⁵⁵

Under the first part of this test, a bylaw requirement that is *more stringent* than a provincial (or federal) legislative requirement can still be consistent with the latter if the developer can meet both requirements at the same time. For example, if a bylaw has a setback that is longer than a setback in provincial legislation, the bylaw setback is consistent with the provincial setback because the development will meet the provincial setback if it meets the bylaw setback. Presumably, the more stringent bylaw setback would also pass the second part of the consistency test, because the bylaw setback would not frustrate the purpose of

⁵¹ See, e.g. *Capstone Corp.*, AUC 25100 at para 35 (applying MGA section 620 to Commission approval decisions).

⁵² *Northland Material Handling Inc. v Parkland (County)*, 2012 ABQB 407 at para 57 (section 620 does not preclude a municipal council from denying a permit to extend a sand extraction and dry land fill operation even though that operation was permitted by Alberta Environment).

⁵³ *Ibid* at paras 47-49 and 57-58.

⁵⁴ Stewart, *Recent Amendments*, *supra* note 28 at 6-7.

⁵⁵ E.g. *Canadian Western Bank v Alberta*, 2007 SCC 22 at paras 69-73; *114957 Canada Ltée (Spraytech, Société d'arrosage) v Hudson (Town)*, 2001 SCC 40 at para 38.

the provincial setback in protecting the relevant land use or natural resource from which the setback is measured.

However, a different conclusion might result if the provincial setback's purpose is re-characterized as intending to allow all developments beyond the setback distance. Given the challenges in defining legislative purposes, the application of the second part of the consistency test is hardly certain.⁵⁶

As noted above, the consistency requirement in section 13 applies between a municipal bylaw and a provincial statute or regulation. Presumably, this section also applies by implication to decisions—like municipal and Commission decisions on development permit and approval applications, respectively—that are made *under* (that is, pursuant to authority granted by) a bylaw and provincial statute or regulation. However, the paramouncy provisions of sections 619 and 620 discussed above are likely more restrictive of municipal powers than the consistency requirement in section 13.

C. The Commission's consideration of municipal planning and zoning in power plant approvals

Consistent with the MGA, the Commission maintains that its approval authority generally “prevails” over municipal authority, and its approval conditions “take precedence” over conflicting municipal requirements.⁵⁷ However, the Commission also recognizes that sections 619 and 620 of the MGA “do not ... displace a municipality’s planning and development decision-making authority.” Rather, municipal authority remains when it does not “frustrate or conflict with” a Commission decision.⁵⁸

How the Commission considers municipal views in the Commission's overall public interest assessments

While generally maintaining the paramouncy of its decisions over those of municipalities, the Commission also generally maintains that municipal “land use authority and planning instruments are factors” that the Commission “must ... consider[r]” in deciding whether a power plant application is in the public interest.⁵⁹

⁵⁶ But see *Orphan Well Assn v Grant Thornton*, 2019 SCC 5 at para 111 (noting that a “theoretical possibility” that a provincial law would frustrate the purpose of a federal law does not impugn the former under the constitutional paramouncy principle).

⁵⁷ E.g. *Creekside Solar*, AUC 27652 at paras 130-131.

⁵⁸ E.g. *ibid* at para 133.

⁵⁹ *Ibid* at para 130.

However, Commission decisions do not routinely describe the municipal planning, zoning, or permitting factors, let alone discuss how the Commission weighed them in its public interest assessment. For example, in some proceedings where the local municipalities apparently did not object to the application, the Commission's decisions either did not mention the municipality at all or did not address the planning or zoning status of the project site.⁶⁰

The Commission has also referred to site suitability relative to other nearby land uses, or addressed neighbours' concerns about lowered property values, without discussing whether the proposed plant was consistent with local planning or zoning provisions.⁶¹

In other files, the local municipality did not officially object to the application but still asked the Commission to "consider" the municipality's planning and zoning provisions. However, the Commission's decisions were silent on those provisions.⁶²

In some files there is an apparent conflict with the local planning or zoning provisions. However, even here the Commission's decision did not address the conflict or simply left it to the municipality to resolve the conflict.⁶³

⁶⁰ See, e.g. *Solar Krafte Utilities (Brooks Solar)*, AUC 26435; and *C&B (Jenner Solar)*, AUC 22499. See also, e.g. *Aura Power*, AUC 27918 (Commission approval of a 22.5 MW solar power plant on 130 acres of private, cultivated land near the Town of Provost; applicant's public consultation report notes no objection from the MD of Provost); *Greengate Power (Travers Solar)*, AUC 24502 at paras 1-3, 6 and 10 (noting only that the proponent would apply for a Vulcan County development permit after obtaining a Commission approval and that the County didn't object to that process); *SunEEarth Solar (Yellow Lake)*, AUC 22422 at para 17 (noting that the applicant was in the process of obtaining a municipal development permit);

⁶¹ E.g. *Elemental Energy (Brooks Solar II)*, AUC 24573 at paras 76-81 and 93-95.

⁶² E.g. *Acestes Power (Tilley Solar)*, AUC 27319 at paras 8 and 35. But see, e.g. *Solar Krafte Utilities (Strathmore Solar)*, AUC 25346 at paras 53 and 67 (approving a solar power plant that appeared to be consistent with the Town of Strathmore's land use bylaw, but inconsistent with its municipal development plan, based on Town's apparent support for the project including its issuance of a development permit).

⁶³ In *Capstone Corp.*, AUC 25100, the Commission approved a wind farm notwithstanding evidence that the project was within a municipal setback to neighbouring property lines. The Commission sidestepped this problem by noting that neither the municipality nor the concerned neighbour provided evidence showing how the setback violation would affect them. *Ibid* at paras 17, 33 and 36. However, the Commission's decision then states that it is "entirely" within the municipality's authority to decide whether to grant development permits given this setback infringement. *Ibid* at para 34. (The municipality later denied the requested permits due

The uncertain functional linkages between Commission approvals and municipal permitting decisions

Other than giving Commission decisions precedence over municipal authority, the MGA is silent as to the functional relationship between Commission and municipal decision-making. The Commission has not adopted a Rule or other generic tool to clarify this relationship, but its past decisions provide some guidance.

First, the Commission has stated that, when it believes a municipality can “sufficiently address issues within its planning authority,” the Commission “may defer those issues to the municipality.”⁶⁴

Second, the Commission generally declines municipalities’ requests to include a condition to its approval requiring the applicant to comply with local planning and zoning or to obtain a municipal development permit.⁶⁵ However, the Commission may

to the setback infringement, but the LPRT overruled that denial, in part, because of the paramouncy of the Commission’s approval decision. *Buffalo Atlee 1 Wind LP v Special Areas No 2*, 2021 ABLPRT 764 at paras 6 and 49-56.) See also *Moon Lake Solar*, AUC 27433 at paras 8 and 11-12, and Exhibits 27433_X0019, X0037, and X0043 (concluding that the proposed solar plant was in the public interest notwithstanding evidence of at least uncertainty as to whether the project was allowed under the County’s land use bylaw); *Buffalo Plains Wind Farm*, AUC 26214 at paras 290-294 (concluding that a proposed wind farm was in the public interest notwithstanding that two of its turbines were not an allowable land use in the relevant zoning district, and noting the applicant’s intent to “work with” the county to re-zone the land); *Elemental Energy (Brooks Solar II)*, AUC 24573 at paras 107 and 114 (referring to the site’s “fringe” zoning status but without addressing project’s apparent inconsistency with that status). See also *East Strathmore Solar*, AUC 24266 at pp. 10-12 and 57-69 (concluding that a solar plant is in the public interest notwithstanding the project’s apparent non-compliance with residential property line setback in county’s land use bylaw).

⁶⁴ *Creekside Solar*, AUC 27652 at paras 130-133.

⁶⁵ For example, in *Rocktree Solar Inc.*, the Commission rejected a county’s request, in its statement of intent to participate, that the Commission condition its approval on compliance with the land use bylaw. AUC 27445 at paras 12-13. The Commission found that this condition was “not necessary” based, in part, on the applicant’s statement that it “has or will file” a development permit application and on the Commission’s conclusion the county was in the “best position” to work with the applicant to “ensure” the applicant satisfies the land use bylaw. *Ibid.* See also, e.g. *Moon Lake Solar*, AUC 27433 at paras 11-12 (noting that the County is in the “best position” to work with the applicant, through the development permit process, to ensure that the applicant complies with the county’s land use bylaw, so the Commission did not need to adopt a condition requiring the applicant to meet all land use bylaw requirements).

address and enforce compliance with local emergency response, noise, road use, and road or residence setback requirements.⁶⁶

Fourth, in some instances, the Commission may also allow the municipality to impose requirements with respect to subjects considered by the Commission.⁶⁷

And finally, in other files, the Commission has simply noted that the municipality has directed the applicant to apply for a development permit after it has received a Commission approval,⁶⁸ or that the applicant is not required to apply for a development permit before obtaining a Commission approval.⁶⁹

These decisions suggest that the Commission generally takes a flexible, ad hoc approach toward functionally integrating its approval decisions with municipal decisions. (The Commission's practice of declining to include generic approval conditions requiring compliance with all municipal requirements, is an exception to this flexible, ad hoc approach.)

This flexible approach may be useful for dealing with file specific constraints, but it may be problematic if a Commission's decision is not clear as to which topics are left for municipal regulation.

⁶⁶ E.g. *Capital Power (Halkirk 2 Wind)*, AUC 27691 at para 213 (in considering visual impacts of proposed wind farm re-design, noting applicant's commitment to comply with municipal setbacks for wind turbines); *Creekside Solar*, AUC 27652 at para 40 (noting applicant's commitment to follow the county's noise bylaw and adding conditions to limit noise); *Solar Krafte Utilities (Brooks Solar)*, AUC 26435 at paras 10-11, 120, 148, and 159 (not discussing Newell County's planning and zoning provisions, but requiring the proponent to uphold its commitment to comply with local emergency response requirements and road use agreement with the County); *Sollair Solar*, AUC 27582 at paras 97 (noise). See also *Solar Krafte Utilities (Vauxhall Solar)*, AUC 27077 at paras 42, 45-52, and 53-58 (rejecting a municipal district's request that the Commission impose a security condition in a solar power plant approval, based in part on the lack of a security requirement in the land use bylaw and the municipality's issuance of a development permit without a security requirement).

⁶⁷ E.g. *Creekside Solar*, AUC 27652 at paras 137 (security), 138-39 (road use), and 140 (landscaping).

⁶⁸ *C&B (Jenner Solar)*, AUC 22499 at para 16.

⁶⁹ *Greengate Power (Travers Solar)*, AUC 24502 at para 10 (noting applicant's intent to apply for a development permit after obtaining a Commission approval).

Municipalities' standing to participate in the Commission's approval proceedings

Under section 9(2) of the AUCA, the Commission is required to hold a hearing on a power plant application, if it “appears” to the Commission that its decision on the application “may directly and adversely affect the rights of a person”.⁷⁰ The Commission has clarified that, to qualify for standing under this section, a person’s “rights” have to be “recognized by law.” This type of “right” includes “property rights, constitutional rights or other legally recognized rights, claims or interests.”⁷¹

Municipalities have a bevy of legal interests under the MGA, including powers to set land use priorities (through land use planning), to designate and choose appropriate land uses in different land use districts, and to regulate and manage activities through development permitting. These powers are not absolute, as discussed above, but they are still significant.

One would think that, given these municipal interests under the MGA, the Commission would routinely find that municipalities have passed the AUCA section 9(2) standing test, at least, in instances where municipalities’ concerns are linked to their governmental interests under the MGA. However, this does not appear to be the case.

In at least some renewable energy power plant proceedings, the Commission has denied the local municipality standing to participate in a power plant proceeding, on the ground that the municipality has failed to identify any legal rights that may be adversely affected.⁷² However, in these instances, the Commission has still allowed the

⁷⁰ Under section 9(3) of the AUCA, the Commission is not required to hold a hearing if either no one requests a hearing or if the Commission is satisfied that the applicant has met the Commission’s rules “respecting” each landowner who may be directly and adversely affected by the application.

⁷¹ *Solar Krafte Utilities (Vauxhall Solar)*, Ruling on Standing (May 12, 2022), Exhibit 27077-X0044 at para 11.

⁷² *Nova Solar and AML*, AUC 27589 at para 18; *Rocktree Solar*, AUC 27445 at paras 7-8; *Solar Krafte Utilities (Vauxhall Solar)*, AUC 27077 at paras 12-13; *Moon Lake Solar*, AUC 27433 at paras 6-7. In contrast with these decisions, the Commission found that Foothills County passed the AUCA section 9(2) standing test, in a proceeding involving an application for a solar farm in that county. The Commission’s standing decision “note[d]” that the county owned land within 800 metres of the proposed power plant, but the decision is not clear as to whether that was the basis for the county’s standing. *Foothills Solar*, Ruling on standing (Sept. 16, 2022), Exhibit 27486_X0106 at para 18.

municipality to provide a submission addressing its concerns. And in at least one file the Commission granted the municipality full participation rights.⁷³

IV. ALSA regional planning

A. The Land Use Framework – ALSA’s policy predecessor

The province’s 2008 “Land-Use Framework” (LUF) acknowledged the needs for cumulative effects management and regional planning and laid the policy groundwork for the Legislature’s later adoption of ALSA.

The LUF states that local planning and decision-making is “often criticized for not reflecting higher level provincial policy directions and regional interests.”⁷⁴ The LUF explains that an

effective land management system recognizes that planning and decision-making must take place at different levels and be integrated between levels.

Alberta has a strong tradition of local government control that recognizes the diversity across the province. However, in the face of increasing pressures and conflicts, the Government of Alberta needs to ensure that provincial interests are addressed at a local scale.⁷⁵

The LUF also addresses each of the land use topics of concern in this inquiry. As for Crown land, the LUF states that “[d]irection under regional plans will be defined and delivered on provincial Crown land through integrated land and resource management plans....”⁷⁶ At another point, the LUF states that public lands will continue to be managed “for a variety of purposes and values,” including “conserve[ing] sensitive

⁷³ E.g. *Creekside Solar*, AUC 27652 at para 8 and Exhibit 27652_X0056, Nov. 21, 2022 Ruling on Standing at paras 4 and 13-14.

⁷⁴ GoA, “Land-Use Framework” (December 2008) at 26.

⁷⁵ *Ibid.*

⁷⁶ *Ibid.* See also *ibid* at 27 (noting that the GoA will be “moving forward ... with the Integrated Land Management Program on provincial Crown land”)

lands and natural resources” through a “regulatory framework” and possibly also market-based incentives.⁷⁷

The LUF views agricultural land loss and fragmentation as a major issue. (There do not appear to be any other province-wide policies addressing conservation of agricultural land.) The LUF notes that the total amount of land used for agriculture had been “relatively stable” but that such land had been “increasingly divided into parcels too small to farm or ranch (i.e. fragmentation).”⁷⁸

Among its list of priority actions, the LUF includes a provincial government commitment to filling policy gaps in several areas, including: “Reducing the fragmentation and conversion of agricultural land.” According to the LUF, the province may develop “more effective mechanisms and approaches, such as market-based incentives, transfer of development credits, agricultural and conservation easements, and smart growth planning tools designed to reduce the fragmentation and conversion of agricultural land to other uses.”⁷⁹ In other words, the LUF does not contemplate using negative restrictions or limits to protect privately owned agricultural land.⁸⁰

The LUF also briefly addresses pristine views. In discussing the need for a South Saskatchewan regional plan, the LUF notes that the

breathtaking beauty of the landscapes for which southern Alberta is famous—especially along Highway 22, the “Cowboy Trail”—is also at risk from new oil and gas development, new power lines and pipelines, the demand for more acreages and country residential housing, and the fragmentation of traditional ranch and farm properties.⁸¹

⁷⁷ *Ibid* at 34. See also *ibid* at 20 (referring to market-based tools as “policy instruments” to government will develop to “encourage stewardship and conservation” on both private and public lands).

⁷⁸ *Ibid* at 13.

⁷⁹ *Ibid* at 45.

⁸⁰ Other parts of the LUF echoed this non-regulatory approach. *Ibid* at 33 (referring to market-based mechanisms, and provincial funding of municipal programs, to incentivize private landowners to conserve their agricultural land) and 44 (noting that the LUF’s “immediate priorities” included providing “support for higher-density infill development across the [Calgary and Edmonton] region[s] which ... conserves agricultural land”).

⁸¹ *Ibid* at 44.

Finally, the LUF lists “immediate priorities” for its implementation, including adopting a legislative framework for regional planning.⁸² The central part of that framework is the *Alberta Land Stewardship Act* (ALSA).

B. ALSA’s Purposes

As set out in section 1(2), ALSA has several broad purposes, including:

- Enabling the GoA to “give direction and provide leadership” in identifying provincial “objectives” including “economic, environmental and social objectives”
- Providing a means to “plan for the future,” including meeting the “reasonably foreseeable needs of current and future generations of Albertans”
- Providing for the “co-ordination of decisions” regarding “land, species, human settlement, natural resources and the environment”
- Accounting for and responding to the “cumulative effect of human endeavor and other events”

ALSA also states that, in carrying out these purposes, the GoA must “respect” private property rights and not infringe on those rights “except with due process of law and to the extent necessary for the overall greater public interest”.⁸³

C. Regional planning under ALSA

ALSA’s provisions for regional planning are the primary means for achieving the act’s broad objectives.

The primacy of ALSA regional plans

Regional plans are expressions of provincial “public policy” and are “legislative instruments” in the nature of “regulations.”⁸⁴ Regional plans are binding on the Crown, local government bodies, and “decision-makers”—that is, people and bodies (like the

⁸² *Ibid* at 43.

⁸³ ALSA, s 1(1).

⁸⁴ *Ibid* s 13(1) and (2).

Commission) who have legislative authority to grant a statutory consent.⁸⁵ In particular, when deciding whether to approve a power plant, the Commission “shall act in accordance with any applicable ALSA regional plan.”⁸⁶

While generally binding, regional plans may define which of its parts are legally enforceable and which are non-binding statements of public policy.⁸⁷

To the extent of any conflict or inconsistency: ALSA takes precedence over other acts; regional plans trump regulations and other regulatory instruments; and other Acts and regulations trump regional plans.⁸⁸

The content of regional plans

Under ALSA, regional plans must include certain components and may have other components listed in the act. The mandatory elements include: a vision for the planning region, and planning objectives. Discretionary elements of regional plans include policies, thresholds, indicators, actions, and exemptions.⁸⁹

Regional plans can exert a broad range of regulatory powers⁹⁰ and can include conservation “directives” to “permanently protect, conserve, manage and enhance environmental, natural scenic, esthetic or agricultural values....”⁹¹ (Landowners subject to a conservation directive have a “right” to apply for compensation.⁹²)

⁸⁵ *Ibid* ss 2(1)(e) and 15(1).

⁸⁶ AUCA, s 8.1. See also *Interpretation Act*, s 28(1)(b.3) (defining an “ALSA regional plan” as a regional plan adopted under the Alberta Land Stewardship Act); AUC Rule 007 at 28 (noting that all power plants “must be compliant with any applicable regional land use plans adopted under” ALSA).

⁸⁷ ALSA, s 13(2.1).

⁸⁸ *Ibid* s 17.

⁸⁹ *Ibid* ss 8(1) and (2).

⁹⁰ *Ibid* ss 9-11.

⁹¹ *Ibid* s 37(1).

⁹² *Ibid* s 36.

The status of regional planning

The GoA has divided Alberta up into seven regions, for regional planning purposes under ALSA. The GoA adopted the first regional plan, for the Lower Athabasca Region, in 2012. That plan is currently undergoing a ten-year review.

Alberta adopted its second regional plan, the South Saskatchewan Regional Plan (SSRP), in 2018. The ten-year review for that plan is set to start in September 2024.

Plans have not yet been developed for the Red Deer, Upper and Lower Peace, North Saskatchewan, and Upper Athabasca regions.⁹³

The South Saskatchewan Regional Plan (SSRP)

The SSRP has non-binding Strategic and Implementation Plan sections, and a binding Regulatory Details section.⁹⁴ The Strategic and Implementation Plan sections are a grab bag or kitchen sink approach supporting a wide variety of activities and objectives including promoting renewable energy development, scenic landscapes, and conservation of native prairie and cultivated land.⁹⁵

The Commission has acknowledged the SSRP's mixed objectives in at least one decision.⁹⁶ (In other decisions, the Commission has acknowledged the proponent's submission that the project is SSRP-compliant, but then not made any specific findings about the SSRP.⁹⁷)

⁹³ Government of Alberta, *Land Use Framework – Regional Plans*, online: <https://landuse.alberta.ca/REGIONALPLANS/Pages/default.aspx>.

⁹⁴ For a more detailed description and critiques of the SSRP, see, e.g. Sara L. Jaremko, *A Critical Exploration of the South Saskatchewan Regional Plan in Alberta* – CIRL Occasional Paper # 54 (March 2016).

⁹⁵ SSRP at 11-13, 15-16, 25, 38, 40, and 47-48.

⁹⁶ See *Elemental Energy (Brooks Solar II)*, AUC 24573 at para 115 (in decision approving solar power plant on privately-owned agricultural land, noting that the SSRP “contains goals both to conserve agricultural land and to develop renewable energy”).

⁹⁷ See *East Strathmore Solar*, AUC 24266 at paras 42 (local project opponents' claim of SSRP inconsistency), 46 (proponent's response), 49-52 (Commission findings not addressing SSRP); *Greengate Power (Travers Solar)*, AUC 24502 at paras 12 and 19-27; *SunEEarth Solar (Yellow Lake)*, AUC 22422 at paras 9 (proponent's submission) and 21-32 (Commission findings); *C&B (Jenner Solar)*, AUC 22499 at paras 8 (proponent's submission) and 20-25 (Commission findings).

The SSRP's binding Regulatory Details section includes provisions for managing air and surface water quality, limits on developments in specified protected areas (e.g., designated parks), and limits on motorized access in the Livingstone and Porcupine Hills Land Use Zones.⁹⁸

The SSRP states that it does not change governance of private lands under the MGA and that it is not meant to "alter private property rights".⁹⁹

D. Other tools in the provincial cabinet's toolbox under ALSA

Part III of ALSA gives Alberta's cabinet considerable authority and responsibility to further the LUF's objective of developing positive incentives to promote conservation and stewardship.

Under sections 23 and 24 of the Act, cabinet can promote "instruments, including market-based instruments," as well as "programs and other measures," that will further the purposes of the Act or of regional plans.

Under section 25, cabinet is responsible for developing "funding and cost-sharing initiatives, mechanisms and instruments to support or enhance" conservation easements, and "instruments, including market-based instruments to support, encourage or enhance" the "protection, conservation and enhancement" of the environment, "natural scenic or aesthetic values," and agricultural land.

ALSA Part III also includes numerous provisions setting out the legal parameters for several of these instruments, including conservation easements, conservation offsets, and transfers of development credits.¹⁰⁰

V. The Commission's Implementation of the Legislative Framework

Part II above discusses how the Commission has interpreted and generally applied its public interest decision-making mandate. And Parts III and IV above included

⁹⁸ SSRP at 163 et seq.

⁹⁹ *Ibid* at 3; *Solar Krafte Utilities (Brooks Solar)*, AUC 26435 at paras 54-57 (denying approval to construct part of proposed solar power plant on 536 acres of privately-owned native grassland but noting that the SSRP's grassland protection provisions do not preclude that development, because those provisions only apply to public land).

¹⁰⁰ SSRP, Part 3, Div's. 2-5.

discussions about how the Commission has addressed the Commission-municipality dynamic in the HEEA and MGA, and how the Commission has applied ALSA, respectively. This part provides additional information on how the Commission has applied the legislative framework for its power plant approvals. Part V.A describes the Commission's application requirements in Rule 007. And part V.B discusses how the Commission has considered the land use topics in actual renewable energy power plant approval decisions.

A. The Commission's requirements in Rule 007 for power plant applications

Rule 007 has requirements for applications for various types of facilities including power plants.

The Participant Involvement Program

Rule 007 requires applicants to conduct a "participant involvement program" (PIP) before filing their applications and to report on that program in their applications.¹⁰¹ Each PIP must follow guidelines set out in Appendix A of Rule 007. Under these guidelines, applicants generally must provide notice to local communities and to conduct information sessions and consultations. (The required geographic reach of notice varies depending on the size of the proposed power plant.)

The guidelines do not expressly require applicants to consult the local municipalities, but that requirement is likely implied. (In addition, as discussed below, the application forms require applicants to report on consultations with municipalities.)

The Commission's September 2023 bulletin adds to these provisions by requiring applications to describe how the applicants engaged with the local municipalities (before submitting the applications) to modify plant or mitigate potential adverse impacts to the municipalities. The bulletin also requires applications to: confirm "whether the proposed power plant complies" with applicable "municipal planning documents" including MDPs and LUBs, and other municipal by-laws; identify any non-compliance with those documents; and explain any such non-compliance.¹⁰²

¹⁰¹ AUC Rule 007, part 2.1.

¹⁰² AUC Bulletin 2023-05 (p. 2, items 1-3)

Checklist application for small power plants (1-<10 MW)

Rule 007 requires applications for power plants whose capability is between 1-10 MW to complete a “checklist form”.¹⁰³ The form requires applicants to provide the project location and legal land description but does not require applicants to identify local planning and zoning districts or local environmental special areas.

The form includes check boxes confirming that:

- There are no adversely affected persons and no outstanding objections;
- There are no adverse environmental effects; and
- The applicant will “fulfill the requirements of all other agencies with jurisdiction over the project”.

Wind and solar plants (between 1-10 MW) must also include a signed “renewable energy referral report” from Alberta Environment’s Fish and Wildlife Stewardship division.

Large wind and solar power plants (10 MW or greater)

The Commission has developed special application forms for solar power and wind power plants with 10 MW or more capacity.¹⁰⁴

The forms have no express requirement to specify local land use planning and zoning districts and development rules within those districts. However, as noted above, Bulletin 2023-05 requires applicants to at least note any inconsistencies with municipal land use plans or bylaws.

The required contents for wind and solar applications include:

- Maps showing power plant site boundaries, “[n]eighbouring” municipalities, and “[i]mportant environmental features and sensitive areas in the local study area”.¹⁰⁵

¹⁰³ AUC Rule 007, part 4.2; AUC, *Checklist application for new power plants equal to or greater than one MW and less than 10 MW*.

¹⁰⁴ AUC, *Solar power plant application* and *Wind power plant application*. These applications’ conditions will be referenced below by “SP” and “WP,” respectively, followed by the condition numbers.

¹⁰⁵ WP6/SP6.

- An environmental evaluation (or federal evaluation, if required) describing environmental and land use conditions, expected effects, mitigation measures, and monitoring.¹⁰⁶
- An environmental protection plan listing all committed mitigation measures and monitoring activities.¹⁰⁷
- A conservation and reclamation plan and an “overview” of how the operator will “ensure” sufficient funds are available to cover the cost of decommissioning and reclamation.¹⁰⁸
- An identification of other Acts that may apply and other approvals that may be needed and the status of these approvals.¹⁰⁹
- A signed renewable energy referral report from Alberta Environment’s Fish & Wildlife Stewardship.¹¹⁰ AEP referral reports are based in part on compliance with various AEP guidelines and standards, including the *Wildlife Directives for Alberta Solar and Wind Energy Projects*.¹¹¹
- A summary of the pre-application participant involvement program.¹¹²
- For solar plants, confirmation that the local municipality was consulted and a summary of “any outstanding objections”.¹¹³

¹⁰⁶ WP15/SP15.

¹⁰⁷ WP17/SP17.

¹⁰⁸ WP18-19/SP18-19. AUC Bulletin 2023-05 (p. 3) has additional application requirements regarding reclamation security, as discussed in the accompanying Ecojustice Briefing Note on reclamation security.

¹⁰⁹ WP21/SP21.

¹¹⁰ WP22/SP22.

¹¹¹ The solar Directive is discussed at length in part 3 of *Solar Kraft Utilities (Brooks Solar)*, AUC 26435.

¹¹² WP25/SP25.

¹¹³ SP26.

- A summary of the applicant’s “consultation with local jurisdictions (e.g. municipal districts, counties)”.¹¹⁴
- An identification of persons who expressed concerns, the nature of the concerns, and whether the concerns were resolved.¹¹⁵

Commission Bulletin 2023-25 adds several application requirements (in addition to those already noted above), including the following:

- A list and description of “pristine viewsapes (including national parks, provincial parks, culturally significant areas, and areas used for recreation and tourism) on which the project will be imposed” and a description of measures to mitigate project impacts on the listed viewsapes.¹¹⁶
- A description of the agricultural capability of the soils intersecting the project footprint and within the project area (using specified soil inventory and rating systems); a table showing the extent of impacted area for each land rating class; a description of “potential material impacts” to soils within the project area and measures to mitigate those impacts; and a description of the “potential for co-locating agricultural activities ... into the project design”.¹¹⁷
- A description of all planned stripping and grading, measures to mitigate impacts to the quality, quantity, and hydrology of impacted soils, plans to protect quality of stockpiled soils, and to describe soil replacement.¹¹⁸

¹¹⁴ WP28/SP29.

¹¹⁵ WP31/SP30.

¹¹⁶ Bulletin 2023-25 at p. 3.

¹¹⁷ *Ibid* at 1-2 (items 1-5).

¹¹⁸ *Ibid* at 2 (item 3).

B. The Commission’s consideration of power plants on specific types of land and with respect to pristine viewsheds

Crown lands and other officially designated environmental lands (and waters)

Under section 40 of the HEEA proposed power plants located within provincial parks or other legislatively protected areas must meet the legislative requirements applicable to those areas (e.g., under the *Public Lands Act*, *Provincial Parks Act*, RSA 2000, c. P-35, and *Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act*, RSA 2000, c. W-9). As noted in part V.A above, wind and solar power plant applications must identify these other legislative requirements and the status of any approvals needed to meet those requirements.

The Commission generally closely scrutinizes potential power plant impacts to *adjacent* or nearby environmentally sensitive areas, at least, when Alberta Environment or another government or private party raises a concern about those impacts.¹¹⁹

Privately-owned agricultural land

The Commission generally defers to a private landowner’s choice to convert crop or grazing land for use by a power plant (or to reduce agricultural production by constructing and operating a renewable energy plant on agricultural land). For example, in its recent decision approving a solar power plant on 127 acres of privately owned cultivated land, the Commission concluded that, absent legal or policy restrictions on the landowner’s use of the land for non-agricultural purposes, the Commission gives “significant weight” to the landowner’s “discretion over land use.” According to the Commission, “the initial decision to host a project is for the landowner alone.”¹²⁰ However, the Commission has also cautioned that the landowner’s

¹¹⁹ See, e.g. *Creekside Solar*, AUC 27652 at paras 109-120 (consideration of proposed solar power plant’s impact to neighbouring Conjuring Creek, which is an environmentally significant area under Leduc County’s land use bylaw); *Foothills Solar*, AUC 27486 at para 85 (denying approval application for a solar power plant based in part on potential impacts to neighbouring Frank Lake Important Migratory Bird and Biodiversity Area); and *Solar Krafte Utilities (Brooks Solar)*, AUC 26435 at paras 70-76 (consideration of potential impacts to nearby wetlands).

¹²⁰ *Creekside Solar*, AUC 27652 at para 95. See also *Solar Krafte Utilities (Brooks Solar)*, AUC 26435 at para 89 (deferring to irrigation district’s choice to lease 4620 acres of its grazing land for a proposed solar power plant).

discretion is “not absolute; it is still subject to potentially overriding public interest considerations.”¹²¹

The Commission also typically does not assess loss of agricultural land from the standpoint of whether the proposed power plant is allowed under the local municipality’s land use bylaw (or under a municipal land use plan).¹²² In one file, the Commission concluded that a proposed solar project was in the public interest, even though the County had raised a question about whether the subject lands had Class I or II soils or were in “Prime Agricultural Areas” either of which may have precluded a power plant under the County’s land use bylaw.¹²³

In several recent files, the Commission considered power plant siting on cultivated land as environmentally preferable to power plant siting on native grassland or on other undeveloped lands.¹²⁴ Likewise, the Commission has looked unfavourably on solar

¹²¹ E.g. *East Strathmore Solar*, AUC 24266 at para 49 (noting that the Commission will not “upset” a landowner’s choice to take agricultural land out of production “unless it is clearly demonstrated that the public interest requires the Commission to intervene in the [landowner’s] decision”); *Elemental Energy (Brooks Solar II)*, AUC 24573 at para 115 (same).

¹²² See, e.g. *Creekside Solar*, AUC 27652 at para 95; *Sollair Solar*, AUC 27582 at paras 20-23; *East Strathmore Solar*, AUC 24266 at para 49; *Solar Krafte Utilities (Brooks Solar)*, AUC 26435 at paras 86-92; *Greengate Power (Travers Solar)*, AUC 24502 at para 12; *SunEEarth Solar (Yellow Lake)*, AUC 22422 at paras 12 and 25; *C&B (Jenner Solar)*, AUC 22499 at para 22. But see *Elemental Energy (Brooks Solar II)*, AUC 24573 at para 114 (noting that the subject land is zoned fringe, not agricultural, as a factor in the overall public interest calculation).

¹²³ *Moon Lake Solar*, AUC 27433 at paras 8, and 11-12 (and Exhibits 27433_X0043 and X0047); see also *Ibid* paras 11-12 (refusing County’s request to include a condition in the Commission approval requiring the project to satisfy all land use bylaw requirements).

¹²⁴ *Elemental Energy (Brooks Solar II)*, AUC 24573 at para 105 (noting applicant’s position that siting the proposed plant on previously cultivated land “reduces environmental risk”) and 116 (accepting applicant’s evidence that the site selection limits environmental impacts); *East Strathmore Solar*, AUC 24266 at para 45 (noting applicant’s efforts to avoid siting facilities on “native habitat” by locating them on cultivated land); *Greengate Power (Travers Solar)*, AUC 24502 at para 12 (referring to applicant’s position that the project’s siting on primarily cultivated land was preferable because of the land’s “lower quality wildlife habitat and lower environmental constraints”); *SunEEarth Solar (Yellow Lake)*, AUC 22422 at paras 12 (noting that the project was consistent with AEP’s “recommendations that the project be sited on cultivated land”) and 25 (finding that the project’s environmental impacts are “limited” because it is sited on cultivated land “and does not impact native prairie”); and *C&B (Jenner Solar)*, AUC 22499 at

power plant siting on native grassland.¹²⁵ The Commission has also looked favourably on applicants' efforts to continue using crop land as such with a solar power plant operating on the land.¹²⁶

The Commission also considers concerns about the impacts of renewable power plants on neighbouring agricultural lands.¹²⁷

Scenic viewsheds

The Commission does not appear to have ever denied a proposed wind farm based on concerns about landscape scale visual impacts. The Commission typically acknowledges concerns about those impacts but concludes that they (and other negative impacts) are outweighed by the projects' benefits.¹²⁸

para 22 (finding that the project's environmental impacts are "minimal because the project is located on agricultural lands").

¹²⁵ *Solar Krafte Utilities (Brooks Solar)*, AUC 26435, part 3 (approving part of proposed 400 MW solar plant but disapproving facilities proposed to be located on 217.4 hectares of native grassland).

¹²⁶ For example, in *Sollair Solar*, AUC 27582, the Commission approved a 75 MW solar power plant on 476 acres of cultivated land in Rocky View County. The applicant proposed to use an experimental "agrivoltaic" research program to fit various agricultural uses into the same site. The Commission noted that this program "could provide valuable research that may inform how agricultural crops and grazing can be incorporated into future solar project sites." *Ibid* at paras 20-23.

¹²⁷ See, e.g. *Buffalo Plains Wind Farm*, AUC 26214 (addressing proposed wind farm's restrictions on aerial spraying, weeds, crop disease, and water wells used for agriculture).

¹²⁸ *Buffalo Trail Wind*, AUC 27240 at paras 122-129 (acknowledging impacts to residents' viewscape, but noting that the viewscape is already impacted by other wind farms and industrial development, and impacts don't outweigh project benefits); *Buffalo Plains Wind Farm*, AUC 26214 at paras 132 and 347 (in considering public concern about landscape impacts on property values, acknowledging that the wind farm will "undoubtedly alter the landscape" and noting the negative public perception of the project's viewscape effects, but accepting those effects in light of the project's benefits) and paras 51-54 and 155-165 (acknowledging that large wind projects "alter the landscape" and cause "visually unattractive impacts," but concluding that these and other negative impacts are outweighed by the project's benefits); *Pattern Wind*, AUC 22736 at para 191 (acknowledging that "introducing animated objects into a rural landscape would significantly affect the viewscape" but finding that that impact is not "prohibitive in and of itself" and is outweighed by the project's benefits); *Capital Power (Halkirk 2 Wind)*, AUC 22563 at para 113 (noting that visual impacts are subjective but that the proposed

When prompted by concerned neighbours, the Commission generally conducts a rigorous assessment of a project's local or short range, visual impacts.¹²⁹

wind turbines are large and “will change the landscape of the project area,” but that the applicant has mitigated those impacts “as much as possible”).

¹²⁹ E.g. *Capital Power (Halkirk 2 Wind)*, AUC 27691 at paras 210-213 (concluding that visual impacts to neighbours from proposed revised wind farm would not increase from original project design); *Creekside Solar*, AUC 27652 at paras 51 and 79 (accepting applicant's proposed measures to limit visual impacts); *Sollair Solar*, AUC Decision 27582 at paras 88-90 (including conditions to mitigate visual impacts and noting applicant's commitments to address those impacts); *Solar Krafte Utilities (Brooks Solar)*, AUC 26435 at para 141 (finding the visual impacts will be “minimal” and don't warrant additional mitigation); *Elemental Energy (Brooks Solar II)*, AUC 24573 at paras 41-43 (concluding that visual impacts to neighbours are acceptable but requiring applicant to fulfill commitment to install and maintain a vegetation buffer).

APPENDIX A – SHORTHAND CITATIONS TO AUC DECISIONS

Shorthand cites	Full AUC Decision cite
<i>Acestes Power (Tilley Solar)</i> , AUC 27319	<i>Acestes Power ULC (Tilley Solar Project)</i> , AUC Decision 27319-D01-2022 (July 12, 2022)
<i>AltaLink/SNC</i> , AUC 2014	<i>AltaLink Investment Management Ltd. and SNC Lavalin Transmission Ltd. et al.</i> , AUC Decision 2014-326 (Nov. 28, 2014)
<i>Aura Power</i> , AUC 27918	<i>Aura Power Renewables Ltd. (Provost Solar Project)</i> , AUC Decision 27918-D01-2023 (June 14, 2023)
<i>Buffalo Plains Wind Farm</i> , AUC 26214	<i>Buffalo Plains Wind Farm Inc.</i> , AUC Decision 26214-D01-2022 (Feb. 10, 2022)
<i>Buffalo Trail Wind</i> , AUC 27240	<i>ENGIE Development Canada GP Inc. (Buffalo Trail Wind Power Project)</i> , AUC Decision 27240-D01-2023 (February 8, 2023)
<i>Capital Power (Halkirk 2 Wind)</i> , AUC 27691	<i>Capital Power Generation Services Inc. (Halkirk 2 Wind Power Project Amendment)</i> , AUC Decision 27691-D01-2023 (July 27, 2023)
<i>Capital Power (Halkirk 2 Wind)</i> , AUC 22563	<i>Capital Power Generation Services Inc. (Halkirk 2 Wind Power Project)</i> , AUC Decision 22563-D01-2018 (April 11, 2018)
<i>Capstone Corp.</i> , AUC 25100	<i>Capstone Infrastructure Corp. (Buffalo Atlee Wind Farm)</i> , AUC Decision 25100-D01-2021 (June 28, 2021)
<i>C&B (Jenner Solar)</i> , AUC 22499	<i>C&B Alberta Solar Development ULC (Jenner Solar Power Plant)</i> , AUC Decision 22499-D01-2017 (June 7, 2017)

<i>Creekside Solar</i> , AUC 27652	<i>Creekside Solar Inc.</i> , AUC Decision 27652-D01-2023 (July 14, 2023)
<i>East Strathmore Solar</i> , AUC 24266	<i>East Strathmore Solar Project Inc.</i> , AUC Decision 24266-D01-2020 (Sept. 25, 2020)
<i>Elemental Energy (Brooks Solar II)</i> , AUC 24573	<i>Elemental Energy Renewables Inc. (Brooks Solar II Power Plant)</i> , AUC Decision 24573-D01-2020 (Jan. 16, 2020)
<i>Foothills Solar</i> , AUC 27486	<i>Foothills Solar GP Inc.</i> , AUC Decision 27486-D01-2023 (April 20, 2023)
<i>Greengate Power (Travers Solar)</i> , AUC 24502	<i>Greengate Power Corp. (Travers Solar Project)</i> , AUC Decision 24502-D01-2019 (Aug. 26, 2019)
<i>Moon Lake Solar</i> , AUC 27433	<i>Moon Lake Solar Inc.</i> , AUC Decision 27433-D01-2022 (Nov. 18, 2022)
<i>Nova Solar and AML</i> , AUC 27589	<i>Nova Solar G.P. Inc. and AltaLink Management Ltd.</i> , AUC Decision 27589-D01-2023 (July 19, 2023)
<i>Pattern Wind</i> , AUC 22736	<i>Pattern Development Lanfine Wind ULC</i> , AUC Decision 22736-D01-2020 (January 27, 2020)
<i>Rocktree Solar</i> , AUC 27445	<i>Rocktree Solar Inc.</i> , AUC Decision 27445-D01-2022 (Dec. 15, 2022)
<i>Solar Krafte Utilities (Brooks Solar)</i> , AUC 26435	<i>Solar Krafte Utilities Inc. (Brooks Solar Farm)</i> , AUC Decision 26435-D01-2022 (May 18, 2022)

<i>Solar Krafte Utilities (Strathmore Solar), AUC 25346</i>	<i>Solar Krafte Utilities Inc. (Strathmore Solar Project), AUC Decision 25346-D01-2020 (Nov. 27, 2020)</i>
<i>Solar Krafte Utilities (Vauxhall Solar), AUC 27077</i>	<i>Solar Krafte Utilities Inc. (Vauxhall Solar Farm), AUC Decision 27077-D01-2022 (Dec. 16, 2022)</i>
<i>Sollair Solar, AUC 27582</i>	<i>General Land & Power corp. and AltaLink Management Ltd. (Sollair Solar Energy Project and Connection), AUC Decision 27582-D01-2023 (May 2, 2023)</i>
<i>SunEEarth Solar (Yellow Lake), AUC 22422</i>	<i>SunEEarth Alberta Solar Development Inc. (Yellow Lake Solar Project), AUC Decision 22422-D01-2017 (Sept. 26, 2017)</i>

Appendix B

BRIEFING NOTE

Re: Considerations for implementing mandatory reclamation security requirements on renewable energy power plants

Date: November 22, 2023

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ISSUES

- i) How did the AUC treat Reclamation security requirements prior to the approvals pause?
- ii) How did the AUC amend the requirements during the pause period?
- iii) How are other industries in Alberta required to post security for reclamation?
- iv) How do other jurisdictions treat reclamation for solar and wind farms?

BACKGROUND

This briefing note summarizes the key considerations in implementing mandatory reclamation security requirements for renewable energy power plants, by comparing existing reclamation security requirements in other industries and other jurisdictions. The Alberta Utilities Commission (AUC) issued a Terms of Reference to guide its inquiry into ongoing economic, orderly and efficient development of electricity generation in Alberta¹. These Terms of Reference include five considerations that the AUC has been directed to inquire into and report on. Item 1c, which states “Considerations of implementing mandatory reclamation security requirements for power plants,” is the subject of this memo.

AUC inquiry chronology

The AUC was directed to conduct an inquiry into renewable energy development on August 2, 2023. At the same time, the government announced a seven month pause on approvals of power plants and hydro developments that produce renewable energy and are greater than one megawatt². The Government of Alberta cited the rapid growth and development of renewable energy as creating issues related to land use, electricity system reliability, and concerns from rural municipalities and landowners. The government says that they have instituted the pause to allow the AUC to hear from interested parties, analyze the issue, and make inquiries without being “obligated to review a high number of renewable project applications, putting further strain on the issues identified.”³

On August 22, 2023, the AUC announced that it would continue to process applications up until the approval stage for new renewable energy developments.⁴ During this period, it would supplement its regulations on renewable energy power plant approvals with additional interim

¹ OIC/2023-171.

² OIC/2023-172.

³ Government of Alberta, *Backgrounder: AUC pause and inquiry*, (3 August 2023).

⁴ Alberta Utilities Commission, “Update to AUC application review process during approval pause period” (22 August 2023), online: <<https://media.www.auc.ab.ca/prd-wp-uploads/News/2023/2023-08-22-Announcement.pdf>>.

information requirements on issues such as agricultural land, viewscales, and reclamation security.

The reclamation process

The reclamation process for renewable energy facilities is different from the reclamation process for conventional energy. Commentary on how to deal with end-of-life for renewable energy projects generally discusses recycling as the main element in the process, and not land or surface reclamation.

For example, a wind turbine is almost completely recyclable - from the steel tower to the composite blades. However, it can be difficult to transport massive turbine blades and other materials over long distances to recycling facilities, so logistics are an important consideration in planning for recycling.⁵ Likewise, most components of solar energy projects can be recycled, including racking systems for solar panels. To recycle racking systems, posts must be pulled from the ground or cut at a depth and covered in soil. Other components such as wires, inverters and transformers can be recycled as well.⁶

SHORT ANSWER

Before the renewables pause, there were no requirements by the AUC for renewable energy developers—or for any type of “power plant”—to provide reclamation security as a pre-condition for an approval to construct and operate their projects. Shortly after the renewables pause, the AUC’s interim information requirements included a request for renewable energy developers to submit information on how reclamation security would be posted.

Reclamation security is required for some other industries in Alberta, including for waste facilities, quarries, and coal and oil-sands mines. These industries usually involve extracting natural resources or the deposit of waste – activities with a high potential for pollution. In contrast, many industries that involve building infrastructure or utilities do not require reclamation securities. Correctly comparing industries by their features is important context for considering these frameworks.

Typically, the process for setting the amount of security involves calculations of remediation costs. In the case of coal and oil-sands mines, the calculation starts with remediation costs, but reduces the security amount based on the estimated value of materials in the mine – considering those materials to be essentially a form of guarantee against the reclamation costs. This process

⁵ Bob Woods, “Recycling ‘end-of-life’ solar panels, wind turbines, is about to be climate tech’s big waste business”, *CNBC* (13 May 2023), online: <<https://www.cnn.com/2023/05/13/recycling-end-of-life-solar-panel-wind-turbine-is-big-waste-business.html>>.

⁶ American Clean Power Association, “What happens when a solar facility is decommissioned?” online: <https://cleanpower.org/wp-content/uploads/2021/12/Final_What-happens-when-a-solar-project-is-decommissioned_Fact-Sheet.pdf>.

has been criticized as potentially inadequate for covering true remediation costs for those kinds of projects.

Renewable energy reclamation frameworks throughout North America, Europe, and Australia have different characteristics. Where frameworks are standardized and set out reclamation security requirements, they usually consider when the security is paid, how the security is calculated, and how local governments are involved.

ANALYSIS

i) **How did the AUC treat Reclamation security requirements prior to the approvals pause?**

The development of electricity projects in Alberta is governed by AUC Rule 007. Rule 007 sets out application requirements for the construction, alteration, operation, discontinuation, dismantling and removal of electricity and gas infrastructure in Alberta.⁷ Rule 007 includes provisions about end-of-life management, with two related requirements for renewable energy operators:

WP18) & SP18) Submit a copy of the initial renewable energy operations conservation and reclamation plan (REO C&R Plan) as set out in the Conservation and Reclamation Directive for Renewable Energy Operations.⁸

WP19) & SP19) Provide an overview of how the operator will ensure sufficient funds are available at the project end of life to cover the cost of decommissioning and reclamation.⁹

The *Conservation and Reclamation Directive for Renewable Energy Operations* was released in 2018. The requirement was that the AUC had to be satisfied that the renewable energy operator had sufficient funds to cover estimated decommissioning and reclamation costs.¹⁰

In some renewable energy applications under Rule 007, operators have put forward that the salvage value will likely equal the cost of decommissioning.¹¹ The AUC has often been satisfied that an upfront security is not necessary, in some cases based on the company's reputation and

⁷ Alberta Utilities Commission, "Rule 007: Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines," online: <<https://www.auc.ab.ca/rules/rule007/>>.

⁸ This directive was adopted by Alberta Environment and Parks and can be found here: <<https://open.alberta.ca/dataset/8c4e8ed9-a9bb-4a1e-8683-8136b33f8dff/resource/f1704d4c-78af-4de3-91da-d9873e9f50a4/download/direct-renewenerop-sep14-2018.pdf>>

⁹ WP is the rule for wind power plants and SP is for solar power plants, though the rules are the same.

¹⁰ Rural Municipalities of Alberta, *Renewable Energy Project Reclamation Requirements*, Resolution 9-22F (9 November 2022), online: <<https://rmalberta.com/resolutions/9-22s-renewable-energy-project-reclamation-requirements/>>.

¹¹ For example: *Buffalo Plains Wind Farm*, Alberta Utilities Commission (10 February 2022), 6214-D01-2022, at para 286.

reclamation plan.¹² In some cases, companies have set aside reclamation guarantees in private with landowners, which has been satisfactory to the AUC.¹³

If the AUC does not have enough information on the decommissioning plan (often when these are set out privately with a landowner), it has stated that it can find it difficult to make a determination on its adequacy. In a recent decision the AUC more generally addressed the issue, writing that “the more information that a proponent can share with the AUC and stakeholders regarding the ultimate reclamation liability for a project, and the means by which it intends to address that liability, the better.”¹⁴ It found the information it had in that case to be inadequate.

ii) How did the AUC amend the requirements during the pause period?

On September 6, 2023, the AUC introduced new, interim information requirements for proposed renewable energy power plants, in addition to Rule 007.¹⁵ These rules came into effect immediately.

Among these rules is a requirement for a description of the reclamation security program for the proposed power plant. The description must provide details on:

- The standard to which the project site will be reclaimed upon decommissioning.
- How the amount of the reclamation security will be calculated.
- The frequency with which the reclamation security amount will be updated or reassessed.
- When the reclamation security will be in place to be drawn upon, if needed.
- What form the reclamation security will take (for example, a letter of credit, surety bond, or other form).
- The security beneficiaries to whom the reclamation security will be committed.
- How the beneficiary can access the security and any constraints on that access.

Although the interim information requirements suggest the AUC is seeking more transparency on reclamation security, the AUC’s guidance has been criticized for lacking specificity, details, definitions, and clarity on how answers will be weighed.¹⁶

iii) How are other industries in Alberta required to post security for reclamation?

¹² Ibid.

¹³ For example: *Acestes Power ULC Tilley Solar Project*, Alberta Utilities Commission (12 July 2022), 27319-D01-2022, at para 30.

¹⁴ *Foothills Solar GP Inc.*, (20 April 2023) Alberta Utilities Commission, 27486-D01-2023, at para 82.

¹⁵ Alberta Utilities Commission, “Interim Rule 007 information requirements”, Bulletin 2023-05 (6 September 2023), online: <<https://media.auc.ab.ca/prd-wp-uploads/News/2023/Bulletin%202023-05.pdf>>.

¹⁶ For example: Business Renewables Centre, “Business Renewables Centre-Canada reacts to AUC interim information requirements” (7 September 2023), online: <<https://businessrenewables.ca/news/business-renewables-centre-canada-reacts-auc-interim-information-requirements>>, Bob Weber, “New questions for wind, solar in Alberta create more confusion for industry: advocate,” *BNN Bloomberg* (7 September 2023), online: <<https://www.bnnbloomberg.ca/new-questions-for-wind-solar-in-alberta-create-more-confusion-for-industry-advocate-1.1968595>>.

Generally

In many industries regulated in Alberta, operators need to set aside funds to ensure reclamation after operations have been completed. As the section below will discuss, these industries are generally extractive in nature, highly polluting, or waste facilities. In contrast, many of the industries for which Alberta does not require securities are those with fixed infrastructure. It is important to consider the context of different industries and their capacity for environmental damage in designing an appropriate reclamation security regime.

These industries include permit and approval holders regulated by the Environmental Protection and Enhancement Act and the Public Lands Act:

- Coal and oil-sands mining
- Hazardous waste and recyclable projects
- Landfills
- Metal production plants
- Quarries
- Sand and gravel operations
- Waste management facilities.¹⁷

As well, the Canada Energy Regulator requires reclamation funding for pipelines they regulate.

Security is not required by the Alberta government for:

- Transmission lines
- Pipelines
- Well sites.¹⁸
- Housing developments.¹⁹

The Alberta Energy Regulator states that it has authority through the *Oil and Gas Conservation Rules* to collect financial securities for well sites. It has discretion to request this based on the risk of the project and a holistic assessment.²⁰ However, the Government of Alberta suggests that financial securities are not required for well sites.²¹

The Government of Alberta states that for all types of projects requiring security discussed above, the amount of funds collected should be sufficient to ensure completion of conservation and reclamation if the operator cannot do so themselves.²² The funds are paid in cash, security or a letter of credit to the Environment Protection and Enhancement Fund, formerly called the

¹⁷ Government of Alberta, “Financial security for land reclamation”, online: <<https://www.alberta.ca/financial-security-for-land-reclamation>>.

¹⁸ Ibid.

¹⁹ Government of Alberta, “Residential builder licensing”, online: <https://www.alberta.ca/builder-licensing#jumplinks-4>>.

²⁰ Alberta Energy Regulator, “Liability Management Programs and Processes,” online: <<https://www.aer.ca/regulating-development/project-closure/liability-management-programs-and-processes/security-deposits>>.

²¹ Government of Alberta, *supra* note 17.

²² Ibid.

Surface Reclamation Fund.²³ The Minister of Environment and Protected Areas holds and administers the fund.²⁴ Once a site is remediated and reclaimed, the financial security is returned to the operator. If the site is not fully reclaimed, a portion of the funds may be kept. If the site is not reclaimed, the security is forfeited and the funds are used to reclaim the site.²⁵

Waste Facilities

Landfills, composting facilities, waste to energy facilities, and hazardous waste or hazardous recycling facilities are required to post reclamation security, the guidelines for which are outlined by the Alberta Government.²⁶ Generally, the amount of security is based on the estimated costs of conservation/reclamation, the probable difficulty of conservation/reclamation, the nature, complexity and extend of the operations, existing site assessment and monitoring results, proposed closing costs, and estimated post-closure monitoring costs.²⁷ The security must be posted in full before registration or approval is issued.²⁸

Specific costs considered in the calculations include:

- Building and structure decommissioning, including dismantling costs, transportation and disposal rates.
- Alternative receiving waste facilities for designated waste disposal or treatment.
- Reclamation costs and environmental site assessment.
- Disposal rate.
- Testing for recyclables or final compost.
- Storage tank disposal and cleaning costs.
- Transportation costs, based on real time transportation rates.²⁹

Calculations are based on the most recent contract rates or published information. On-site equipment and manpower cannot be used to reduce the rates. Costs are reviewed, calculated and updated every year, even if there are no changes to the facility.³⁰

For landfills, additional information is considered. This includes the footprint and surface area of the landfill, whether any of the areas of the landfill have completed closure (which can reduce the amount of security), closure costs, stockpiled soil already available on site (which can also reduce the amount of security), the volume of materials needed for closure, current leachate generation rates, and the leachate treatment or disposal costs.³¹

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Government of Alberta Environment and Parks, “Financial Security for Waste Facilities” (26 January 2022), online: <<https://open.alberta.ca/dataset/5a12f2db-3eb6-40e5-b82f-813fbfbc0a92/resource/7ecaf024-0f10-4daa-934c-9049feaf0419/download/aep-financial-security-for-waste-facilities-2022.pdf>>.

²⁷ Ibid at page 1.

²⁸ Ibid at page 2.

²⁹ Ibid at page 2.

³⁰ Ibid at page 2.

³¹ Ibid at page 2.

The government also provides detailed list for different items to include in the calculations, as well as unit rates, to calculate overall costs.³²

Oil sands mines and coal mines

Oil sand mine and coal mine securities are regulated through the Mine Financial Security Program (MFSP). Mining companies must submit a security deposit based on the estimated liabilities of its mine, including the costs to abandon, remediate and reclaim the site. There are four security deposits that companies must pay:³³

- Base Security deposit – Used primarily to maintain the security and safety of the site until another operator assumes responsibility for the project or until all infrastructure is removed and the site is reclaimed.
- Operating life deposit – Covers project risks that coincide with the end of a mine's operations. This must start being posted when there are less than 15 years of reserves remaining, with an aim of securing all abandonment, remediation and surface reclamation costs within 6 years of reserves remaining.
- Asset Safety Factor deposit – Ensures that MFSP liabilities are fully funded if a company's assets fall below an acceptable level. The asset-to-liability ratio must remain above 3.0.³⁴
- Outstanding Reclamation Deposit – Addresses risks posted by a deferral of reclamation of a site until the end of operations. It must be posted if the company fails to meet approved reclamation plan targets.

This approach constitutes an asset-to-liability approach rather than a full security approach. The liability of a project is compared against its assets. A 2015 report from the Auditor General of Alberta found that this leaves Albertans with a degree of risk that reclamation will not be completed by the mine operator.³⁵

The Auditor General also found that the method of asset calculation used in the MFSP overstates the economic value of mining assets.³⁶ The formula for asset calculation is:

$$\text{MFSP Assets} = N * R * F$$

³² Ibid at pages 3 to 7.

³³ Alberta Energy Regulator, "Mine Financial Security Program", online: <<https://www.aer.ca/regulating-development/project-closure/liability-management-programs-and-processes/mine-financial-security-program>>.

³⁴ Assets are calculated as net cash flow subtracted from the remaining reserves of the mine.

³⁵ Auditor General of Alberta, *Environment and Parks and the Alberta Energy Regulator— Systems to Ensure Sufficient Financial Security for Land Disturbances from Mining*, (July 2015) at page 27, online: <https://www.oag.ab.ca/wp-content/uploads/2020/05/EP_PA_July2015_AER_Systems_Ensure_Fin_Security_Land_Disturb.pdf>.

³⁶ Ibid at page 29.

Where N = 3-Year Average of Annual Netbacks ('Annual Netbacks' is the revenue from oil and gas generated minus costs of bringing it to market)

R = Gross Proven and Probable Reserves

F = Forward Price Factor ('Forward Price Factor' is a predetermined delivery price of the oil and gas).³⁷

The Auditor General has suggested that changes to asset calculation may be necessary due to overestimation of asset values in the methodology.³⁸ Reasons for this include the reserve estimate including both probable (50% likely to be realized) and proven reserves (90% likely to be realized), the formula underestimating the impact of future price declines on the valuation of a mine's resource assets, and a lack of accounting for risks associated with the future economic value of reserves.³⁹ The Auditor General also recommended an improvement to monitoring.

Sand and gravel quarry activities

Sand and gravel quarry activities reclamation are governed by the Alberta Code of Practice for Pits.⁴⁰ Security is required before activity is commenced and must be updated every five years.⁴¹ The requirements for a security estimate are set out in Schedule 3,⁴² and require that the following information be provided to the Director:

- a) The area of land disturbed pursuant to an approval issued under the *Land Surface Conservation and Reclamation Act* for which security will be submitted at \$250/acre.
- b) A detailed calculation of security that would represent the maximum conservation and reclamation cost incurred by a third party to reclaim the disturbed land, except those described by (a), to equivalent land capability within 5 years.
- c) The area of land included in the estimate in (b) and a calculation of the average cost over that area.
- d) A proposal for the total amount of (a) plus (b) and the form of the security to be paid.

Pipelines

While the Alberta government does not require reclamation security for pipelines, pipelines regulated by the Canada Energy Regulator are required to have funding for abandonment.⁴³ The

³⁷ Ibid at page 28.

³⁸ Ibid at page 29.

³⁹ Ibid at page 29.

⁴⁰ Government of Alberta, *Code of Practice for Pits*, (1 September 2004), online: <https://kings-printer.alberta.ca/1266.cfm?page=PITS.cfm&leg_type=Codes&isbncln=9780779765560>.

⁴¹ Ibid at page 7, section 3.3.

⁴² Ibid at page 21.

⁴³ Canada Energy Regulator, "Filing Manual – Guide B – Abandonment", online: <https://www.cer-rec.gc.ca/en/applications-hearings/submit-applications-documents/filing-manuals/filing-manual/filing-manual-guide-b-abandonment.html#sb_1>.

objective of the regulation is to ensure that companies have a process and mechanisms in place to pay for pipeline reclamation. The security provided must take the form of either a trust, a letter of credit from a bank, or a surety bond.⁴⁴

The requirements for these securities include a standardized calculation of abandonment costs, which is reviewed every five years.⁴⁵ The costs of reclamation are based on a standardized “Base Case” which directs the calculation through a series of standardized tables. If a company does not use the standardized tables for cost estimates, they must justify why.⁴⁶ Companies must provide annual updates about their abandonment funding.⁴⁷

The “Base Case” assumptions outline expected abandonment outcomes, including leaving the majority of the pipeline abandoned in place, often without maintenance.⁴⁸ It also assumes no salvage value.⁴⁹ These assumptions are specific to the industry and other industries (such as renewables) would have different assumptions about reclamation procedures.

iv) How do other jurisdictions treat reclamation for solar and wind farms?

Below is a summary of how other countries treat reclamation securities in solar and wind farms.

US Department of the Interior

In the US, the Department of the Interior has a reclamation security framework for renewable energy projects on federal lands. The Bureau of Land Management (BLM) requires renewable energy developers building on public land to post bonds to cover potential future expenses. These bonds must cover an amount that the agency has determined will be adequate to cover the potential costs for hazardous liability, decommissioning and reclamation of the project site.⁵⁰

While costs are sometimes more, the minimum bond for wind projects is US\$10,000 per wind turbine with less than a 1-megawatt capacity, US\$20,000 per turbine with a 1-megawatt or greater capacity, and US\$10,000 per acre of solar energy development.⁵¹

⁴⁴ Ibid at B.1.2.

⁴⁵ Ibid at B.1.1.

⁴⁶ Ibid at B.1.1.

⁴⁷ Ibid at B.1.3.

⁴⁸ National Energy Board. “Revisions to Preliminary Base Case Assumptions”, online: < https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90463/501473/501196/566018/602633/A24600%2D1_NEB_%2D_Decision_%2D_LMCI_Stream_3_%2D_Pipeline_Abandonment_%2D_Revisions_to_Preliminary_Base_Case_Assumptions_%2D_RH%2D2%2D2008.pdf?nodeid=602356&vernum=-2> at page 4.

⁴⁹ Ibid at page 9.

⁵⁰ US Department of the Interior, Office of Congressional and Legislative Affairs, *Renewable Energy Bonding Statement of Stever Ellis*, (24 June 2015), online: <<https://www.doi.gov/ocl/renewable-energy-bonding>>.

⁵¹ Ibid, also at US Government Accountability Office, *Financial Assurances for Reclamation: Federal Regulations and Policies for Selected Mining and Energy Development Activities*, (16 December 2016) at page 6, online: <<https://www.gao.gov/assets/gao-17-207r.pdf>>.

US State-Level Solar Decommissioning Policies

Six US states have state-level solar decommissioning policies that involve a decommissioning plan and financial assurance. The National Renewable Energy Laboratory's report provides an overview of these requirements. They note that these state-level decommissioning policies are often inclusive of other technologies, including non-renewables, and may not be narrowly tailored to renewable energy facilities.⁵² They also examine a number of hybrid state/local decommissioning policies, in which the state government generally legislates that developers must comply with local decommissioning and financial security requirements.⁵³ While the section below focus on states that have full frameworks to analyze, a hybrid state/local scheme also appears to be a common choice.

In Louisiana, a reclamation financial assurance bond is required prior to a power plant receiving an approval. The amount of the bond is determined by the Louisiana Department of Natural Resource, which can be no less than \$500,000. The bond is based on the estimated costs of decommissioning, past due rent and payments incurred by the owner, and any other monetary obligations, like insurance.⁵⁴

In Minnesota, financial assurance is required before issuance of a license. There is no specification about the type of instrument, calculation methods or amounts.⁵⁵

In Montana, a financial assurance is required any time prior to the 15th year of the operation of a facility, in the form of a surety bond or a collateral bond.⁵⁶ The amount is determined by the Montana Department of Environmental Quality and is based on the cost estimate submitted by the owner, the character and nature of the site, the costs of managing, maintaining, or decommissioning the site in the event of abandonment, and the current salvage value of the infrastructure.⁵⁷ It is reviewed every five years.

New Hampshire requires financial assurance prior to issuance of a site license and the construction of the project, in the form of a letter of credit, a performance bond, a surety bond, or a guarantee.⁵⁸ It does not specify calculation methods.

North Dakota requires financial assurance in two installments – one before construction, and one after construction but before operation. The first installment is equal to 5% of the estimated costs of construction, and the second installment must be sufficient to cover the costs of decommissioning.⁵⁹ The first installment is returned once the second installment is paid. The assurance can be paid in the form of a letter of credit, a performance bond, a surety bond, a

⁵² Ibid at page 9.

⁵³ Ibid at pages 18 to 25.

⁵⁴ Ibid at page 14, citing La. Admin. Code tit. 43:V, §§ 953, 955.

⁵⁵ Ibid at page 14, citing Minn. R. 7854.0500.

⁵⁶ Ibid at page 15, citing Mont. Admin. R. 17.86.102, 106, 115.

⁵⁷ Ibid at page 15, citing Mont. Admin. R. 17.86.102, 106, 115.

⁵⁸ Ibid at page 15, citing 3 N.H. Admin. R. Site 301.08(d)(2).

⁵⁹ Ibid at page 15, citing N.D. Admin. Code § 69-09-10-08.

guarantee, cash escrow, or an incremental bond schedule.⁶⁰ While the calculation method is not specified, a facility owner must include a description of the cost calculation method used.⁶¹ Cost estimates must exclude anticipated salvage value and be updated 10 years after approval and every 5 years until decommissioning is complete.⁶²

Vermont requires financial assurance before project construction and the issuance of required permits.⁶³ It must be provided as a letter of credit and cover the costs of decommissioning and site restoration as set forth in the cost estimate submitted by the owner.⁶⁴ This cost estimate must include labor, equipment, transportation, and disposal costs, costs of site reclamation to prior preconstruction condition, costs of permits, and costs associated with decommissioning activity management, supervision and safety.⁶⁵ It must be adjusted for inflation every three years.

Denmark

In Denmark, conditions for end-of-life management of wind turbines are usually set by municipalities. These conditions are set in the building permit and decommissioning must start one year after the operation of the wind farm.⁶⁶ Municipalities must adopt regulations for sorting waste.⁶⁷ The municipality also sets the conditions for site restoration – commonly a requirement is to remove all equipment, including the foundation, as deep as one meters beneath the surface, as well as rehabilitation of the area.⁶⁸

Germany

In Germany, the owner of a wind farm bears responsibility for decommissioning and dismantling. Details are typically specified as part of a permit containing a requirement for dealing with decommissioning.⁶⁹ An industry guidance document on decommissioning by WindEurope suggests that one typical provision of such an agreement is “a deconstruction guarantee must be deposited with the permitting authority at the time of approval.”⁷⁰ This industry guidance document also states that there is no general deconstruction obligation for permanently abandoned structural facilities in building law, but that local authorities are in charge of monitoring compliance with permits issued.⁷¹ The German government’s environmental agency (the UBA) has expressed concerns about potential problems in the future

⁶⁰ Ibid at page 15 to 16, citing N.D. Admin. Code § 69-09-10-08.

⁶¹ Ibid at page 13, citing N.D. Admin. Code §§ 69-09-10-01, 69-09-10-06.

⁶² Ibid at page 13, citing N.D. Admin. Code §§ 69-09-10-01, 69-09-10-06.

⁶³ Ibid at page 16, citing Vt. PUC Rule 5.904.

⁶⁴ Ibid at page 16, citing Vt. PUC Rule 5.904.

⁶⁵ Ibid at page 13, citing Vt. PUC Rule 5.904.

⁶⁶ WindEurope, “Decommissioning of Onshore Wind Turbines Industry Guidance Document,” (November 2020), online (PDF): <<https://reglobal.org/wp-content/uploads/2020/11/WindEurope-decommissioning-of-onshore-wind-turbines.pdf>>.

⁶⁷ Ibid at page 12, citing Article 2(2) of Denmark’s Environmental Protection Act, 2016.

⁶⁸ Ibid at page 15.

⁶⁹ Ibid at page 28.

⁷⁰ Ibid at page 28.

⁷¹ Ibid at page 28.

with a bottleneck of materials to recycle, and calls for proper guidance on dismantling procedures and clear regulations on end of life for renewable energy.⁷²

Australia

In Australia, decommissioning plans are made between a landowner and an operator prior to construction, as part of a lease. The conditions for decommissioning are made as part of Development Approvals in consultation with a landowner and often set out that in the final years of a lease, the wind farm company should provide funds for a financial security, to the satisfaction of the landowner.⁷³

CONCLUSION

The frameworks above suggest that jurisdictions have taken different approaches in ensuring they will have funds for reclamation of renewable energy projects, and that there are a number of characteristics to consider in a framework. The timing of when the security is paid, method of calculation, and the levels of government involved in the decision-making and oversight of the program are characteristics to be considered in structuring a framework.

⁷² Sara Knight, “What to do with turbines after they leave support system”, *Windpower Monthly* (31 January 2020), online: <<https://www.windpowermonthly.com/article/1671616/turbines-leave-support-system>>.

⁷³ Ibid.