



Miistakis
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Survey Report: Large Scale Wind & Solar Decision Support Tools for Rural Municipalities Project

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Document prepared for the Large Scale Wind & Solar
Decision Support Tools for Rural Municipalities Project

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Executive Summary

This survey was distributed as part the Wind and Solar Decision Support Tools for Rural Municipalities in Alberta project, being developed by Miistakis in partnership with Wheatland County and the Alberta Association of Municipal Districts and Counties (AAMDC). The purpose of the survey was to gain a snapshot of what municipalities have in place, where gaps exist, and identification of tools to support municipal decision making relating to wind and solar renewable development.

A summary of key findings:

- 36 people responded representing 19 of the 36 municipalities have been approached by industry about large scale wind and/or solar energy projects;
- 90% of respondents require a development permit for large solar and wind projects;
- 61% of respondents are not aware of the AEP Wind and Solar Directives;
- 51% of respondents are either not aware of the AUC regulations for solar and wind development projects or are unclear on the role of municipalities in the approval process;
- The majority of municipalities, 56% have developed wind by-laws, the most common focus is on setbacks on certain features, grade and drainage, access plans and siting requirements;
- The majority of municipalities, 57% do not currently have solar by-laws in place, the ones that do most commonly focus on siting requirements, setbacks on certain features and systems information;
- The majority of municipalities have areas where they do not want to encourage renewable development including:
 - 54% want to avoid lands of high agricultural value;
 - 50% want to avoid high ecological value; and
 - 42% want to avoid land of high cultural value.
- Each of the potential decision support tools suggested were considered by the majority of respondents to be either “somewhat useful” or “extremely useful.” Tool surveyed included:

- Examples of property tax approaches for large scale wind and solar development;
 - Directory on the agencies involved in the approvals process with contact information (i.e. AUC, AEP, Farmer’s Advocate Office, Industry Organizations – CANSEA, CANWEA);
 - Fact sheet on the impacts of renewable development on wildlife and wildlife habitats and what a municipality can do about it; and,
 - Fact sheet on the regulatory process for large scale renewable development in Alberta and where a municipality fits into the process and has influence;
- 84% of respondents think a least conflicts lands tool would be useful for informing siting of large scale wind and solar development;
 - Respondents indicated they would like more information about renewable wind and solar development over a variety of topics (regulatory, economic, ecological).

The survey results indicate a wide range of knowledge and awareness about the regulatory process at the Provincial level and how municipal level decision making fits into that regime. In addition, survey responses indicate there is a high level of interest in the development and implementation of a least conflict lands tool, and that mitigation and reclamation continue to be a looming question for municipalities.

Upon review of these survey results, discussions with the project advisory committee, and analysis of the current municipal context for renewable energy development in Alberta, the project team will be pursuing the following actions:

- development of a least conflict lands process and tool;
- release of a fact sheet and report on the regulatory process for renewables in Alberta from a municipal perspective (hosted on the AAMDC and Miistakis websites);
- release of a fact sheet and background paper on ecological impacts of renewable development in Alberta (hosted on the AAMDC and Miistakis websites); and,
- In January 2018, Miistakis and AAMDC will be hosting a Renewables Knowledge Workshop for municipalities and other interested stakeholders.

Survey Introduction

The Miistakis Institute is working in partnership with the Alberta Association of Municipal Districts and Counties (AAMDC) and Wheatland County to develop decision support tools to help rural municipalities address large scale (over 1MW energy production, not for personal use) wind and solar development proposals. The project will consider environmental, social, economic and cultural issues and opportunities.

Phase one of the project was designed to gather background research on the regulatory context, ecological considerations, existing decision support tools, and questions or knowledge gaps experienced by rural municipalities in regard to large scale wind and solar proposals. Using the background information and stakeholder engagement, appropriate decision support tools will be identified to aid municipal decision makers when they are considering large scale wind and solar development applications.

As part of stakeholder engagement, the Miistakis Institute surveyed rural municipalities to understand their environmental, social, and economic concerns and opportunities, and what support tools they may need to process applications for large scale (over 1MW), non-personal-use, solar and wind development in their municipality. The survey aimed to better understand the needs of rural municipalities so that tailored support tools can be identified and developed.

Phase two will be the development and testing of the decision support tools identified in phase 1. Phase two is scheduled to begin once funding is secured (estimated to be January 2018).

Survey Overview

Purpose of the Survey

The goal of the survey was to understand the environmental, social, and economic concerns of rural municipalities and to determine if there is a need for decision support tools to inform decisions regarding large scale wind and solar project proposals.

Distribution and Response

The survey was distributed by AAMDC to their membership.

- Survey open from September 13, 2017 – October 18, 2017
- 20 questions total
- 36 respondents (29 different municipalities, 1 special area, 1 municipal organization)
- 69% completion rate
- Average time spent: 10 minutes

Survey

Survey introduction

"By 2030, renewable sources like wind and solar will account for up to 30 per cent of electricity generation," says Alberta's Climate Leadership plan.

In 2016, the Government of Alberta began working to implement the climate plan and develop the details of its renewable electricity policy and relevant regulations. This is causing direct impacts for municipalities, particularly rural jurisdictions that have the land base to support large scale wind and solar development.

The Miistakis Institute is working with rural municipalities to understand their environmental, social, and economic concerns and opportunities, and what support tools they may need to process applications for large scale (over 1MW), non-personal-use, solar and wind development in their municipality. The following survey aims to better understand the needs of rural municipalities so tailored support tools can be identified and developed.

Survey Responses

Figure 1 highlights the location of the 29 municipalities that responded. In total 36 people responded.

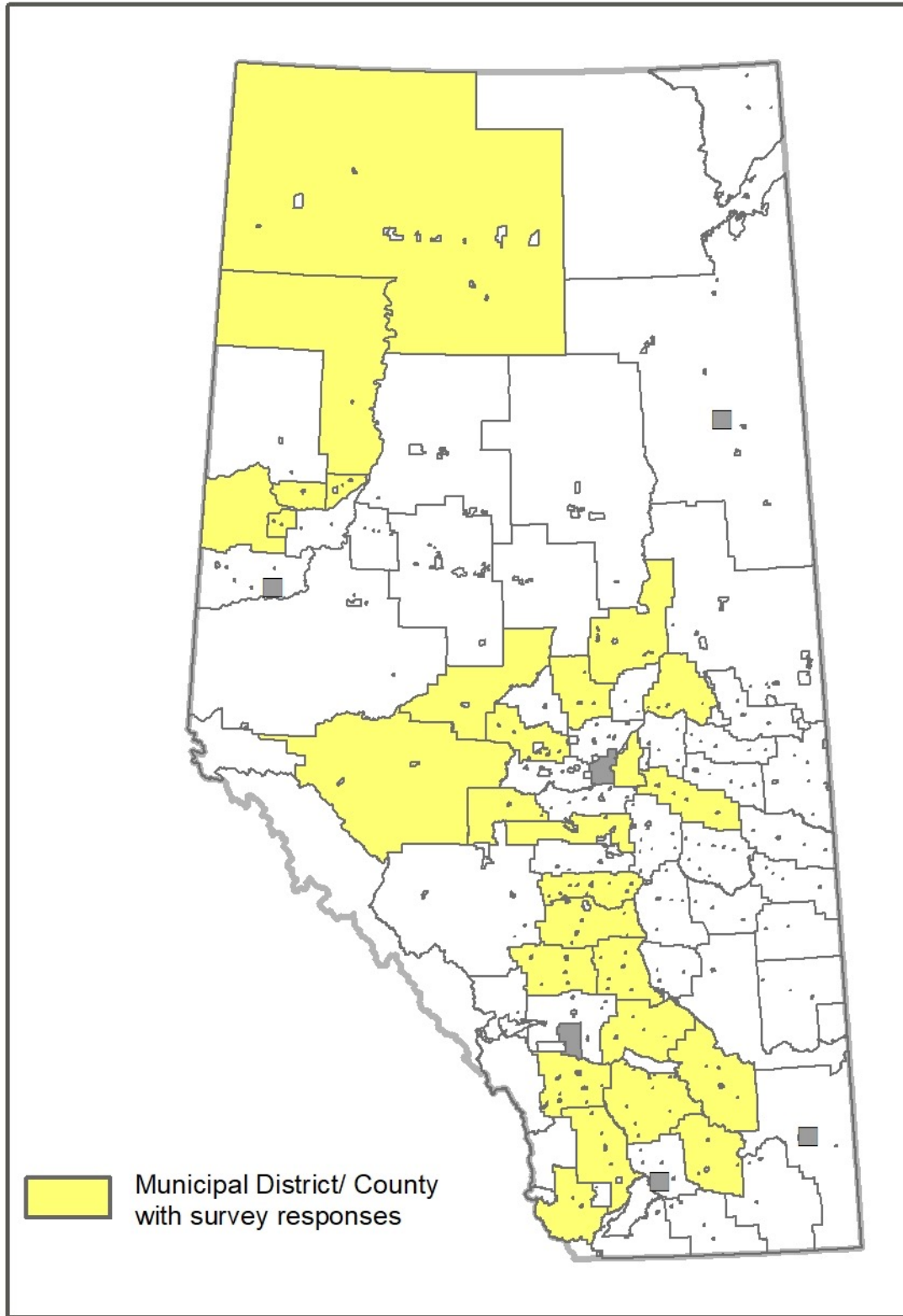


Figure 1: Municipalities whom responded to the survey

1. What is your position at your municipality?

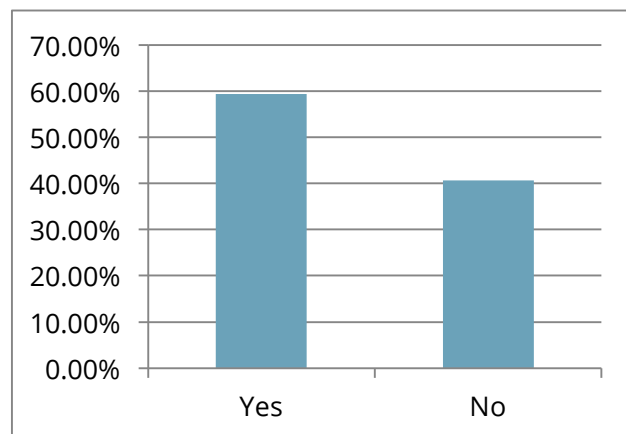
Answer Choices	Responses	
Elected official	11.11%	4
CAO	22.22%	8
Planning	27.78%	10
Agriculture	2.78%	1
Infrastructure/operations	8.33%	3
Other (please specify)	27.78%	10
	Answered	36
	Skipped	0

Additional roles were indicated in the open-ended portion of this question:

- Development
- Director of Corporate Services
- Economic Development
- Director of Planning and Infrastructure
- Administration
- Renewable Project Developer and manufacturing business
- CAO, Development Manager and Agricultural Fieldman completed this survey together
- Facilities Coordinator/Airport Administrator
- Lands

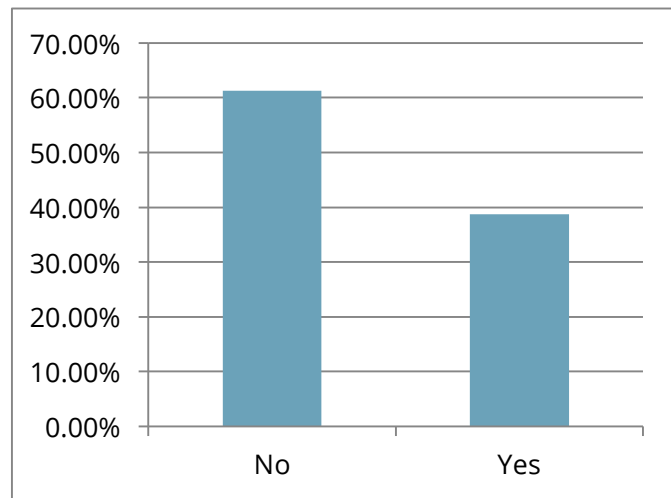
2. Has your municipality been approached about large scale wind or solar developments by private industry?

59% (19 of the 32) respondents say their municipalities have been approached about large scale wind or solar developments by private industry.



3. Are you aware of the Alberta Environment and Parks Wildlife directives and guidelines for wind and solar development?

The majority of respondents (61%, or 19 of the 31 respondents) are not aware of Alberta Environment and Parks Wildlife directives and guidelines for wind and solar development.



If Yes, how has your municipality referred to or used these directives to inform your approvals process?

- To my knowledge they have not been referred to at all.
- Haven't used them up to this point.
- Potentially yes through our Planning & Development Services, but it is most likely limited.
- We used this information when recommending changes to our LUB to address large scale solar development.
- The Development is in its early stages and the referral process will have the Provincial Government involved.
- Trying to avoid project sighting near important wildlife habitats or environmentally significant areas.
- We are aware of the directives but have received no application at this time. There has been interest expressed but never come through to date.
- Please provide.
- As per the AEP documents, our M.D. does not permit large scale solar on native grasslands they own. Citing of wind towers on native grassland will be project specific.

5. Are you familiar with the Alberta Utilities Commission regulations developers must follow related to large scale wind and solar developments in Alberta?

48% of respondents are familiar with the Alberta Utilities Commission (AUC) regulations developers must follow related to large scale wind and solar developments in Alberta and understand how a municipality fits into the process. 32% are not familiar with the Alberta Utilities Commission regulations developers must follow related to large scale wind and solar developments in Alberta but would like to learn more about the AUC approval process and requirements related to municipal decision making. In total 51% of respondents need more information as they are either not aware of the AUC regulations or are unclear on how a municipality fits into the approvals process.

Answer Choices	Responses	
Yes, and we understand how a municipality fits into the process	48%	15
Yes, but we are unclear of the municipality's role in approving wind/solar developments	19%	6
No, we would like to learn more about the AUC approval process and requirements related to municipal decision making	32%	10
Comments		5
	Answered	31
	Skipped	5

Additional comments provided regarding familiarity with the Alberta Utilities Commission regulations:

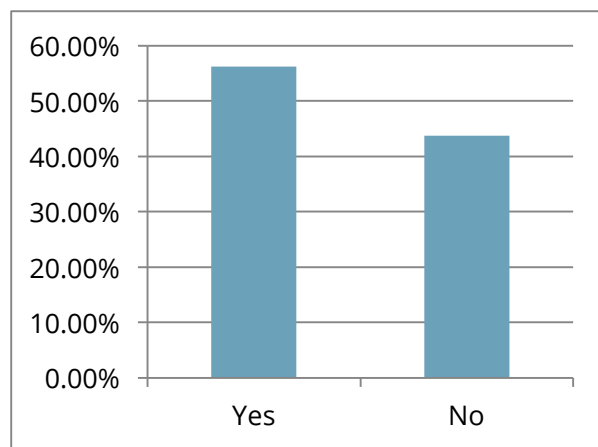
- We understand but we would like the AUC to require a municipal development permit, not just municipal consultation. A municipal DP is not an absolute requirement.
- Do not know anything about this.
- We have included both wind and solar into our Land Use Bylaws
- We understand that the AUC has these regulations and ensure that commercial developers are contacting both the AUC and Owner/Operators of

the systems to ensure that these connections do not negatively affect the systems and specific requirements for connection are met.

- With solar having to be put on roof tops this creates many structural problems on older buildings. There is a need to allow these structures to be placed on open land for snow removal and tilt access to follow the path of the sun in the north for maximum efficiency.

6. Do you have a wind bylaw in place?

56% (18 of 32) respondents have a wind bylaw in place.



7. Does the bylaw incorporate any of the following (please select all that are applicable):

Only those who identified as having a wind bylaw were asked to answer these questions.

The top 4 answers of what the respondent's municipality's wind bylaw incorporates were: siting requirements, setbacks, grading/drainage plans, and access plans. Height requirements, sound levels, viewsheds and decommissioning plans were the next most common elements in municipal bylaws.

Answer Choices	Responses	
Setbacks	94%	15
Siting requirements	88%	14
Access plans	75%	12
Grading/drainage plans	75%	12

Height requirements	63%	10
Sound levels report	63%	10
Viewsheds	63%	10
Decommissioning plans	63%	10
Safety measures	56%	9
Parcel coverage or density	56%	9
System information	56%	9
Environmental assessment	44%	7
Ecological considerations	38%	6
Agricultural lands of high value	38%	6
Security bond	31%	5
Mitigation plans	19%	3
Cleaning supplies and solvents to be used	0%	0
Other (please provide)	44%	7
	Answered	16
	Skipped	20

Additional comments related to existing municipal bylaws for wind:

- At the end of the section on Wind Energy with the LUB it states "any other requirement deemed necessary by the Development Authority.
- Development Agreement that may be applicable to security, access, road construction or other requirement of permit approval.
- Our Land Use Bylaw has provisions for small wind energy conversion system. The development officer has flexibility when approving or refusing a discretionary use application.
- Haul routes during construction and decommission.
- Our wind bylaw mentions specifics to above noted points and further throughout the bylaw grants authority to request any further information required prior to making an informed decision.

Then specific Districts describe where and when they would be considered as well as site specific setbacks that may also require further consideration. Our Land Uses Bylaw is currently up for review as well as the Municipal Development Plan and this topic will be thoroughly covered again with any additional information.

- Mandatory public consultation
- Minimal blade clearance, tower access and safety, colour and finish of towers.

8. Please indicate which statement reflects your municipality’s reason for not currently having a wind bylaw:

50% of respondents choose “other (please explain)” as the statement that reflects their municipality’s reason for not currently having a wind bylaw. Statements made indicate wind development was either covered under their current development process and doesn’t require a wind-specific by-law or that wind was not feasible in their location.

Answer Choices (respondents could choose more than one)	Responses	
Our municipality is in the process of developing a bylaw	33%	4
AUC approvals process regulates large scale wind and solar developments so a municipality does not have to	0%	0
Our current bylaws address these types of applications within existing land use districts and development requirements	33%	4
Other (please explain)	50%	6
	Answered	12
	Skipped	24

Other reasons some municipalities currently do not have a wind bylaw:

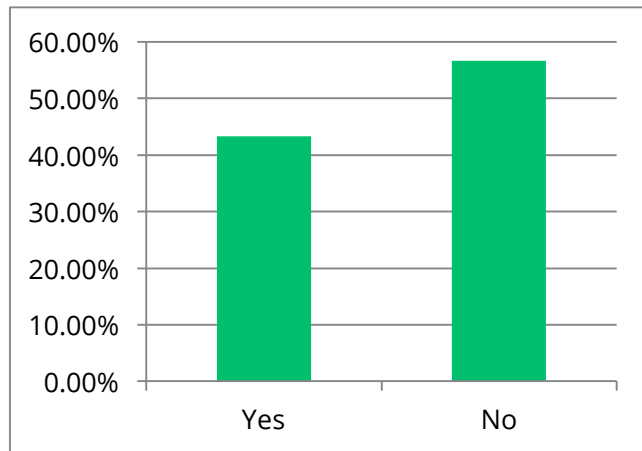
- We do not have a specific Bylaw addressing this, however applications and permits for wind/solar are covered under our Land Use Bylaw
- never thought about it, we do not have enough wind in our County to make it

pay. That is what I feel.

- Renewable Energy is enabled as a Discretionary Use in all of our Land Use Districts.
- We manage the development permits for the specific endeavor but expect that anything affecting the electrical systems and permitting of the electrical connections will be addressed by the AUC and AESO.
- We understood from industry that our County is not a great location for such facilities so development of bylaws is lower priority.
- As a commercial business development, our current bylaw would allow for the development of electrical generating sites as “public utility buildings and installations” within the CR, HB, M1, M2, and UR districts. Within the AU, RU, SR, M3 and M4 districts reference is made to “Institutional and Public Uses” but although there is no definition to Public Uses we would justify it under that category. Any business operation that involved the large scale generating of power and the like would be subject to provincial regulation and we would work with those authorities for the approval.

9. Do you have a solar bylaw in place?

57% (17 of the 30 respondents) do not have a solar bylaw in place.



10. Does the bylaw incorporate any of the following (please select all that are applicable):

The top 3 answers of what the respondent's municipality's solar bylaw incorporates were: setbacks, siting requirements, and system information.

Answer Choices	Responses	
Setbacks	82%	9
Siting requirements	73%	8
System information	64%	7
Height requirements	55%	6
Access plans	55%	6
Decommissioning plans	55%	6
Grading/drainage plans	55%	6
Agricultural lands of high value	45%	5
Parcel coverage or density	45%	5
Environmental assessment	36%	4
Ecological considerations	36%	4
Viewsheds	36%	4
Safety measures	36%	4
Security bond	27%	3
Mitigation plans	9%	1
Sound levels report	9%	1
Cleaning supplies and solvents to be used	0%	0
Other (please provide)	36%	4
	Answered	11
	Skipped	25

Other items municipal solar bylaws include:

- Vegetation and soil management plans may be required.
- Development Agreements for security, access or construction of a road, as provided in the permit approval.
- Haul routes during construction and decommission.
- Permits are required.

11. Please indicate which statement reflects your municipality’s reason for not currently having a solar bylaw:

50% of the 16 respondents choose “Our municipality is in the process of developing a bylaw” as the statement that reflects their municipality’s reason for not currently having a solar bylaw.

Answer Choices (respondents could choose more than one)	Responses	
Our municipality is in the process of developing a bylaw	50%	8
AUC approvals process regulates large scale wind and solar developments so a municipality does not have to	0%	0
Our current bylaws address these types of applications within existing land use districts and development requirements	31%	5
Other (please explain)	38%	6
	Answered	16
	Skipped	20

Additional reasons some municipalities do not have a solar bylaw:

- Although there has been more discussions in relation to solar, this has not yet been explored fully. Again permitted locations and permitting are covered under the Land Use Bylaw. Solar/voltaic systems may fall under energy codes.
- We do not have any.
- Renewable Energy is enabled as a Discretionary Use in all of our Land Use Districts.

- Similar remarks as to wind.
- A section will be added to the Land Use Bylaw & Municipal Development Plan to address the solar energy.
- In 2018.

12. Are development permits required for large scale wind or solar energy projects in your municipality?

The majority of respondents (90%) answered that development permits are required for large scale wind or solar energy projects in their municipality.

Answer Choices	Responses	
Yes	90%	26
No	7%	2
Not applicable	3%	1
	Answered	29
	Skipped	7

13. Are there areas where you do not want to encourage renewable development?

“Agricultural lands of high value” and “Ecological features of high value” were the top two answers for areas where respondents do not want to encourage renewable development.

Answer Choices (respondents could choose more than one)	Responses	
Agricultural lands of high value	54%	13
Ecological features of high value	50%	12
Cultural features of high value	42%	10
Areas with good views (viewsheds)	21%	5
We support renewable development regardless of location	13%	3
Other (please specify)	38%	9

Answered	24
Skipped	12

In addition to the choices indicated above, several other comments were provided regarding where respondents do not want to encourage (site) renewable development.

- I think each case would be looked at on a case by case basis.
- Renewable Energy development is encouraged, however, applications are reviewed on a case by case basis.
- These are discretionary uses so the MPC would determine whether there were site specific issues that would justify refusing or approving the application.
- Highly populated areas.
- At this time the only place it is not proposed to be considered is within the hamlets or settlements. This is a topic of discussion that may change during the review of County Bylaw and Policy.
- You are asking about "renewable development" which could be variety of development types, not just commercial scale wind or solar. Perhaps this question needs to be reworded. we do not have a policy on where we would not support these types of development, but I suspect that near existing residential development would be a challenge.
- Each application is processed on its own merit given location and size.
- Our Council/Public has not been tested. Until we get an application at a specific location we really don't know how the public will react.
- Areas of higher density rural residential.

14. Other jurisdictions have developed models to identify least conflict lands for wind and solar development to help guide placement for renewable energy development. Would this be useful to your municipality?

84% of respondents agree that models to identify least conflict lands for wind and solar development to help guide placement for renewable energy development would be useful to their municipality.

Answer Choices (respondents could choose more than one)	Responses	
Yes	84%	21
No	8%	2
We already have plans that enable us to identify areas where renewable development is more appropriate	8 %	2
Additional Comments:		5
	Answered	25
	Skipped	11

Additional comments:

- This type of model would be useful for other developments besides renewable energy.
- Not sure.
- We had similar plans for areas where intensive livestock operations could not locate.
- We treat each application on a separate basis and try to steer them in a direction away from high value irrigated agricultural land and highly populated areas.
- We understand that some areas may be more desirable than others, however we do not want to extinguish individual land rights.

15. Please rate the following potential tools in terms of usefulness to your municipality in making decisions about renewable energy development:

Bylaw templates ranked lower on the scale while items such as property tax examples, information about the agencies involved and the regulations related to renewables process and a fact sheet on wildlife and wildlife habitat ranked fairly evenly.

	0 Our municipality already has this	1 Not useful	2 Somewhat useful	3 Extremely useful
Examples of property tax approaches for large scale wind and solar development	0%	8%	24%	68%
Directory on the agencies involved in the approvals process with contact information (i.e. AUC, AEP, Farmer's Advocate Office, Industry Organizations – CANSEA, CANWEA)	0%	4%	32%	64%
Fact sheet on the impacts of renewable development on wildlife and wildlife habitats and what a municipality can do about it	0%	0%	48%	52%
Fact sheet on the regulatory process for large scale renewable development in Alberta and where a municipality fits into the process and has influence	0%	4%	48%	48%
Bylaw templates	8%	8%	40%	44%
			Answered	25
			Skipped	11

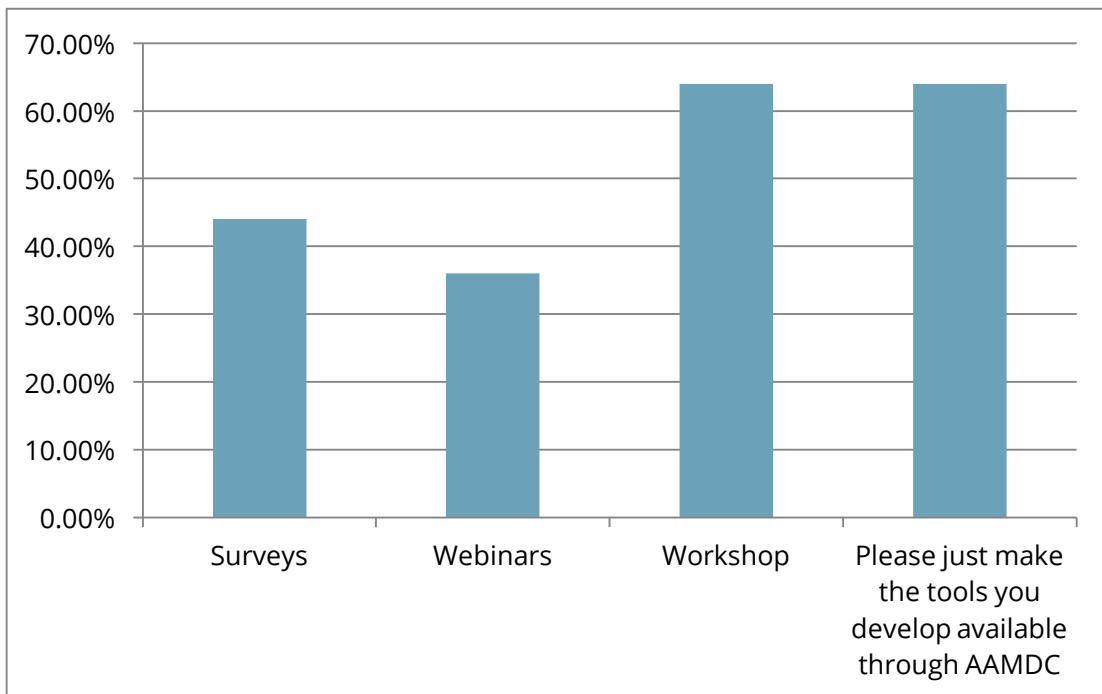
16. Are there other tools you think might be useful in making decisions on large scale renewable energy development in your municipality?

(answers that indicated there were no additional tool suggestions were removed)

- Something regarding end of life of projects and reclamation issues to consider as well as the legalities around making companies post a bond
- What are the costs, that is what it all comes to

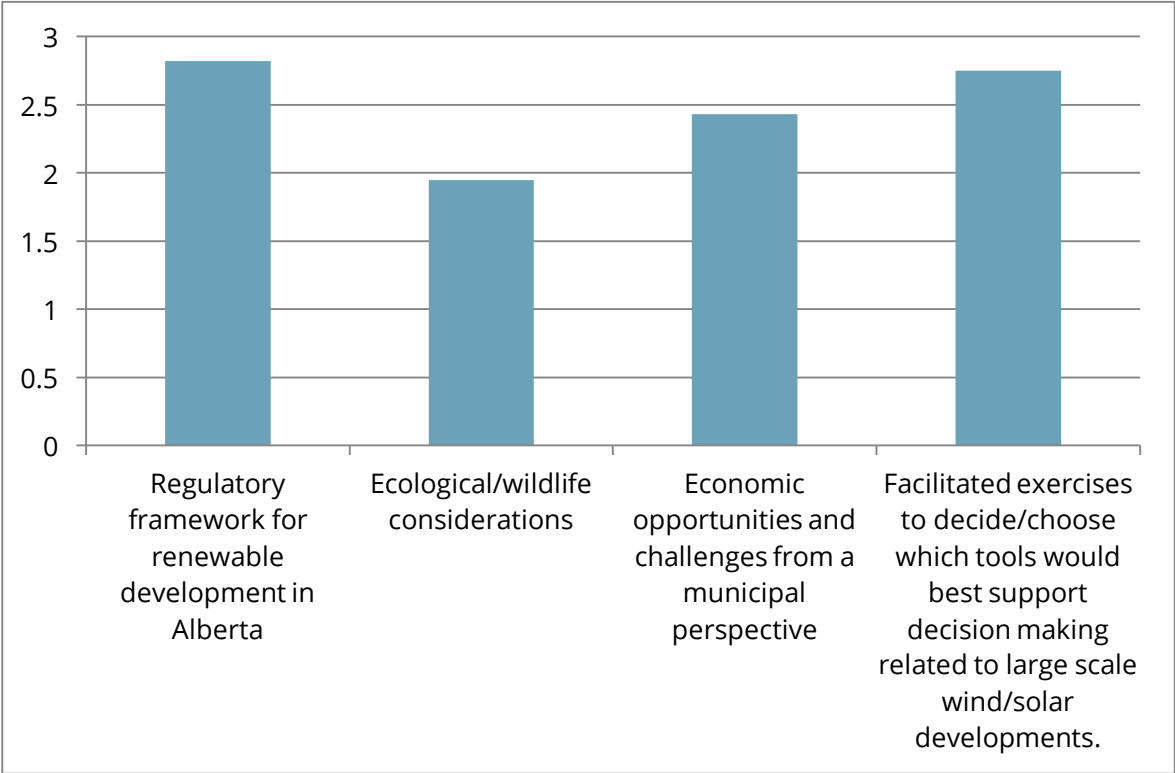
- What information will be required by all the agencies involved and at what point in the process is this required?
- Potential spin off industries, potential job creation, etc..
- Any lessons learned from projects that have been approved and executed in other municipalities. Also creating a partnership with electrical system owners/operators in the province.
- Reclamation and mitigation requirements and enforcement.
- I would like to know if a provincial fund would be set up similar to the orphan well fund in the oil and gas industry.
- Information to assist landowners in negotiating with renewable companies. List of legal firms with experience in renewable energy land negotiations.

17. Please select which method(s) you would prefer for future engagements regarding large scale wind and solar decision support tools for rural municipalities:



18. Please rank your preference for workshop topics:

The top two workshop topics were “regulatory framework for renewable development in Alberta” and “facilitated exercises to decide/choose which tools would best support decision making related to large scale wind/solar developments” “Economic opportunities and challenges from a municipal perspective” was a close third.



19. Please provide any other suggestions for engagement:

- Being present at AAMD&C or Provincial ASB Conferences
- Costs of these systems and who will pay for it?
- Is there a stakeholder committee within Alberta made up of municipal representatives, AAMDC, Government representatives from (AUC, AESO, AEP and AER), as well as, Utility Owners and Operators (both gas and electric utilities)? If not, this should be created.