

GENERAL INSTRUCTIONS FOR EXCEL TEMPLATE:

1. Do not leave blank rows above or between comments.
2. Do not modify or delete the instructions or the column headings (*i.e.* the grey areas).
3. Each comment must have an associated topic and recommendation.
4. All formatting (*i.e.* bullets) will be lost when this file is uploaded to the Online Comment Table.
5. If necessary, adjust the cell width and height in order to view all text.
6. Cutting and pasting comments from WORD documents cannot include hard returns (spaces between paragraphs).
7. If you would like to create paragraphs within a single cell, please use a proper carriage return (ALT & ENTER).

<u>TOPIC</u>	<u>COMMENT</u>	<u>RECOMMENDATION</u>
<i>Be as specific as you think is appropriate; for example a section or page of the document, a recommendation #, general comment, etc.</i>	<i>Comments should contain all the information needed for the proponent and the Board to understand the rationale for the accompanying recommendation.</i>	<i>Recommendations can be for the proponent or for the Board. Recommendations should be as specific as possible, relating the issues raised in the "comment" column to an action that you believe is necessary.</i>

Item Number	Topic	Comment	Recommendation
1	Alternatives and Mitigation (comment table IEMA 3)	The Agency has reviewed the DDEC responses in the comment table for the original application, particularly IEMA 3 where the issue of possible on-the-ground power line crossings of key caribou crossings. DDEC did not provide any costs for various options or an evaluation of how the on-the-ground crossings might be accomplished using a conduit or burying with crushed rock. This could provide helpful mitigation in a few key areas but without knowing the costs and trade-offs, the company has not provided a proper evaluation.	DDEC should provide further information on the potential alternative and mitigation measure of on-the-ground power cables in key caribou crossing areas.
2	Evaluation of Effects (covering letter and comment table)	The company raised the examples of caribou observed crossing under the LLCF and Grizzly Lake power lines as evidence of no effects on caribou. Ignoring the fact that observation of an event does not prove no effect (if one duck crosses a busy highway, does that mean all duck-crossing attempts will be successful?), those roads and power lines are relatively short (5 km or less) and are close to the built-up parts of the site. The Misery Road is a 30-km-long linear feature in an area of known caribou use and migration, where the partial barrier (filter) effects of the road have already been proven through both track surveys and (less	DDEC should assess the effects of the power line through a balanced review of the literature to examine the potential effects of a power line on barren-ground caribou movements and habitat use on the tundra. DDEC should have used existing data from caribou collaring, aerial surveys and the camera studies associated with the Misery, Grizzly Lake and LLCF roads.

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		<p>reliably) camera studies. With the addition of power lines, that barrier effect can only be increased and at a time when the Bathurst caribou herd is less resilient. The company has also selectively cited some literature to support its conclusion that the Misery power line will have no effects on caribou (note the bulk of these studies occurred in Norway, not Finland as stated on page 2, paragraph 2 of the covering letter), but have not presented other literature that provide evidence for avoidance of areas adjacent to the lines and effects on migration (Nellemann et al. 2003, Vistnes et al. 2004, Vistnes and Nellemann 2008). The relevance of including Flydal et al. (2009), which examines effects of power lines on penned, semi-domesticated reindeer and concludes that human handling is a greater disturbing factor than the power line, is highly questionable. In Table 1, information is presented on a few caribou observations near the Snare power lines without any reference or data on caribou movement deflections. The paragraph describing caribou use of and movement through the Snare power line (citing Deze Energy 2009) is an example of poor science being used to justify an activity. The distribution of groups of caribou in relation to the Snare line during a single survey does not provide proof that the line does not influence habitat use or provide no deflections in attempted crossing. Similarly, the crossing information provided for collared Bathurst cows (with a reference to an unknown Table 1) gives no indication of the study design that would lead to a conclusion that "Bathurst caribou will pass beneath an active power line". The Deze Energy (2009, pg. 12.7.2) document states the data from Snare represents only winter use and that "The effect that this [passing under the transmission line at least once per year] may have on caribou behaviour and movement, particularly on a tundra environment where such features are visible for long distances, is largely uncertain. The rate of habituation to such features is also not well understood". As noted by the WLWB (4 July 2014 directive and reasons for decision), "caribou being identified below a power line is therefore not conclusive evidence of the barrier effects (or lack thereof) of power lines to caribou habitat". The Agency had expected to see a much more thorough effort by the company in assessing the effects of the power line through a balanced</p>	<p>If there are comparable data for caribou movement deflections from the Snare or other northern power lines, that should be compiled by DDEC to support a more rigorous evaluation of effects.</p>

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		assessment of the literature, use of existing data for the Misery Road from caribou collaring, aerial surveys and the camera studies. The Agency had also expected details on a monitoring program if the power line is constructed to determine the additive partial barrier effects on caribou movement and use of habitat.	
3	Construction Monitoring and Adaptive Management (covering letter and Table1)	In the cover letter and at the end of Table 1 the company describes a vague "Construction Monitoring Program" that includes scheduling of work to avoid caribou. It is not clear how many caribou or the location or proximity of caribou would result in a work stoppage or other mitigation. The Aquatic Effects Monitoring Program has a required Response Framework for adaptive management. This wildlife issue needs an equivalent response framework for adaptive management.	DDEC should indicate what the triggers or action levels will be for mitigation (including work stoppages) as part of the Construction Monitoring Program. This is a very important recommendation.
4	Post-Construction Monitoring and Management (covering letter)	In the covering letter there is a vague commitment to monitor caribou movements and potential effects of the power line on caribou through the Wildlife Effects Monitoring Program. It is not clear exactly what DDEC will monitor, how that will take place and how the non-barrier effects of the power line/road will be determined.	DDEC should provide specific details on the post-construction monitoring of the power lines. This should include how deflection of caribou movements and changes in use of habitat will be tested and how the monitoring results will be fed back into improved mitigation. We recommend that there be a condition of the land use permit that requires the submission of a post-construction monitoring plan for the approval of the WLWB. This is our most important recommendation and the Agency is prepared to assist DDEC with the design of such a monitoring program.
5	Reporting of Monitoring Results (comment table IEMA 4, covering letter and Table 1)	In the comment table on the original application, DDEC indicated in response to IEMA 4 that reporting of monitoring results would take place in the WEMP reports. In Table 1 of the additional information, the Annual Water Licence Report appears to be the reporting mechanism.	DDEC should clarify where the reporting of construction and post-construction monitoring will take place. We believe the WEMP is the better location.
6	Dust Mitigation During Construction Drilling (Table 1)	Table 1 states that dust will be generated during drilling operations for pole placement. It would be helpful to know what mitigation measure, if any, DDEC and its contractors would employ such as use of a wetting agent such as water.	DDEC should clarify what dust suppression mitigation will be used during the drilling operations.

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7	Noise from Power Lines (Table 1)	DDEC describes noise levels for an unidentified power line “in rainy conditions” but does not provide any references. In addition, there is no information about potential noise from the power lines caused by wind.	DDEC should properly reference the information presented on noise from power lines and provide information on potential noise caused by wind. Should there be uncertainties, noise monitoring should be a part of the post-construction monitoring program.