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Kativik environmental quality commission

Commission de la qualité de l'environnement Kativik

MINUTES

OF THE

279th meeting

November 22, 2023

Montreal

ADOPTED

Meeting summary

The 278th meeting was held in Montreal on November 22, 2023.

Present: Pierre Philie Charlie Arngak
Daniel Berrouard David Annanack
Cynthia Marchildon Joseph Annahatak
Thérèse Spiegele Lisa Koperqualuk
Murielle Vachon

Executive Secretary: Florian Olivier

PROJECTS AND OTHER MATTERS

DISCUSSIONS OR DECISIONS

Project of Infrastructure development in Kuururjuaq National Park, by MELCCFP (3215-18-003)	<ul style="list-style-type: none">The Commission decided to authorize the modification of the CA
Project of deployment of a wind farm at the Raglan mine by Glencore Canada Corporation (3215-10-018)	<ul style="list-style-type: none">The Commission decided that the project was subject to the environmental and social impact assessment procedure and emitted its directives for the latter
Project to build a new thermal power plant on the territory of the northern village of Puvirnituk by Hydro-Québec (3215-10-014)	<ul style="list-style-type: none">The Commission found that the proponent has partially met the requirements of Condition 2 of the January 17, 2023 CA and requested the proponent to answer a question
Project to build a new thermal power plant on the territory of the northern village of Puvirnituk by Hydro-Québec (3215-10-014)	<ul style="list-style-type: none">The Commission concluded that the proponent has met the requirements of Condition 5 of the January 17, 2023 CA
Request for funding of the KEQC – 2024-2025	<ul style="list-style-type: none">The Commission approves the draft of the request for funding 2024-2025
Mining projects	<ul style="list-style-type: none">The President reported on a meeting with Lukasiq Pilurtoot, President of the Kangiqsujuaq Landholding Corporation
Authorization of wind farm projects	<ul style="list-style-type: none">the Commission considers it more reasonable to modulate its directives for the implementation of the impact assessment according to the size of the projects



1. Adoption of the agenda

Adopted

2. Correspondence

Follow-up of the correspondence can be found in Appendix B of this document

3. Adoption of the minutes of the meeting 278

Minutes adopted as proposed

NEW DOSSIERS

4. Project of Infrastructure development in Kuururjuaq National Park, by MELCCFP (3215-18-003)

4.1. Request to amend the certificate of authorization - Preliminary information

Task: For discussion, decision

On April 9, 2008, a certificate of authorization (CA) was issued for the creation of Kuururjuaq National Park, including the construction of a reception centre and warehouse, serviced camps, campsites, emergency shelters, airstrips and any other infrastructure required to support national park activities. Fifteen years later, the park operator (Kativik Regional Government) is requesting amendments to improve the services offered to tourists and to facilitate logistical operations in the park.

The project involves the construction of 11 infrastructural elements divided into 8 sub-projects:

- A shelter and an outhouse, in a service area
- A fuel shed, in a service area
- Two weather stations and a repeater radio tower
- A toilet/storage dome, near the airstrip
- A fuel shelter dome, near the runway
- A shower/toilet dome, at the Mount Iberville base camp
- A manual water pump, at the Mount Iberville base camp
- An emergency shelter, in the Mount Iberville preservation area

The Commission notes that the impact on the environment is low and that the proposed infrastructure aims to significantly improve comfort and safety for park users and workers. In addition, Commission Member David Annanack confirms that most of the elements of the project are supported by the community of Kangiqsualujjuaq, which has been calling for a smaller shelter for years.

Thus, after having analysed all the information submitted to it, the Commission decided to authorise the application for an amendment to the project authorisation certificate.

Action: Send a letter to the Administrator – authorization of modification of the CA

5. Project of deployment of a wind farm at the Raglan mine by Glencore Canada Corporation (3215-10-018)

5.1. Request of a certificate of authorization - Preliminary information

Task: For discussion, decision

The proponent plans to build and operate a wind farm of 30 3 MW wind turbines with a maximum capacity of 90 MW near its mining facilities. This will achieve a total maximum power of 96 MW including the two existing wind turbines. The wind turbines will be deployed in phases. The first two phases could see the installation of 12 wind turbines. Six could be installed in 2025-2026 and six others possibly in 2027-2028. Depending on the combined performance of these 12 wind turbines and the two existing ones, subsequent phases could take place to install another 18 wind turbines.

The wind turbines will be erected on levelled and compacted platforms of approximately 100 x 100 m. the tower is almost 80 m high and is made of recyclable steel. The blades are made of fiberglass with a length of about 40 m with integrated heating to prevent the accumulation of frost and ice. When a blade is oriented vertically, the maximum height of the wind turbine is approximately 120 m. The wind turbines will be anchored with 406 mm piles (16 inches) in diameter until the bedrock is reached. At the center of each pile, a smaller diameter hole will be drilled for approximately 16 m depth and filled with reinforced concrete to counter uplift forces. The base of the wind turbine mast has a diameter of 5 m, while the base of the wind turbine seat has a diameter of 15 m. One (1) building will be installed to house a 35 to 25 kV step-down transformer.

The energy storage system will consist of a bi-directional system of Li-on batteries. For the first twelve (12) wind turbines, the storage system will have a capacity of 10 MW and 10 MWh. The system will have a capacity of 10 MW and 10 MWh. The system will be assembled in 20 ft containers. Storage requirements will be adapted for the subsequent phases of adding wind turbines. These batteries will be used to compensate for the energy fluctuations of the wind turbines. They will be sized so that a sudden loss of the energy produced by the wind turbines does not affect the stability of the network. These batteries do not contain any liquid; the anodes and cathodes are metallic. The analysis of alternative locations for the battery storage system is underway to minimize the creation of new footprints.

The current 25 kV network cannot support adding energy production and storage. Thus, it is planned to build a new 35 kV production network and maintain the 25 kV distribution network to supply active mines and surface facilities. The wind turbines and battery storage system will be connected to the electrical grid through a 35 kV teak-type wiring network installed directly on the ground. The analysis of route variants is currently underway to minimize distances and create new footprints.

The Commission considers that the project is of an unprecedented scale in Nunavik. Therefore, members, like David Annanack and Daniel Berrouard, believe that more communities should be consulted as caribou and birds migrate, and that the impact of wind turbines on their migration could affect villages beyond the two closest villages. Daniel Berrouard adds that for the same reason the Cree communities might be interested in being kept informed of the project.

Commission Member Charlie Arngak adds that members of nearby villages may be concerned about the effect of wind turbine lights on migratory birds, day and night, The Commission takes care to specify this fact in the directives it will issue for the implementation of the impact study.

The Commission, like Lisa Koperqualuk, member, wonders about the number of Inuit employees in the construction of previous wind turbines to compare the level of the local employment program for this project.

Finally, the Commission wonders about the dismantling of wind turbines and although the developer has reached an agreement on this subject with the nearest communities, the Commission wants to ensure that this part of the project is done with respect for communities and the environment.

Thus, considering the size of the project and after analysis and discussion of the information submitted by the proponent, the Commission decided to subject the project to the environmental and social impact assessment procedure. The Commission shall forward its directives for carrying out the impact assessment, the latter being reproduced in Annex C to this report.

Action: Send a letter to the Administrator – submission of the project to the assessment procedure and guidelines for the impact study

MATTERS ARISING FROM PREVIOUS MEETINGS

6. Project to build a new thermal power plant on the territory of the northern village of Puvirnituk by Hydro-Québec (3215-10-014)

6.1. Follow-up to condition 2 of the January 17, 2023 Certificate of Authorization

Task: For discussion, decision

Condition 2 of the January 17, 2023 Certificate of Authorization (CA) states: “No later than six (6) months after the issuance of this Authorization, the Proponent shall file with the Provincial Administrator, for information, additional detailed information regarding the management of hazardous waste, and for the construction and operation phases. This information should include a detailed description of the conditions under which hazardous residual materials are stored, the identification of the locations where the materials are disposed of, and written agreements for the acceptance of the materials at those locations. The proponent will also be required to submit the measures for the contribution of residual materials to the northern landfill of the Village of Puvirnituk and, if applicable, the agreements with the municipality.”

Based on the information received, as part of the project’s environmental and social impact assessment and review procedure, the Commission finds that the proponent has partially met the requirements of Condition 2 of the January 17, 2023 CA and requests the proponent to answer the following question:

QC - 1. In the April 2022 Environmental Impact Study Addendum, in response to questions 6 and 7, the proponent indicated that the final selection of the non-hazardous waste disposal site was not known. It is also indicated that residual materials that can be reused would be offered to the northern village of Puvirnituk and that, during the construction and operation phases, the residual materials for disposal would be sent to the Northern Landfill Site (LEMN) in Puvirnituk, subject to acceptance by site managers.

In addition, the last sentence of condition 2 of the certificate of authorization states that “The proponent will also be required to submit measures regarding the contribution of residual materials to the northern landfill of the Village of Puvirnituk and, if applicable, the agreements with the municipality on the matter.”

In the documents sent on September 9, 2023 and in the additional information sent on September 27, 2023, no information is provided for the latter part of condition 2. Thus, the Commission is asking the proponent to forward the measures concerning the contribution of residual materials to the northern landfill of the Village of Puvirnituk and, where applicable, the agreements with the municipality in this regard.

Action: Send a letter to the Administrator – questions and comments

7. Project to build a new thermal power plant on the territory of the northern village of Puvirnituk by Hydro-Québec (3215-10-014)

7.1. Follow-up to condition 5 of the January 17, 2023 Certificate of Authorization

Task: For discussion, decision

Condition 5 of the January 17, 2023 CA states that "No later than six (6) months after the issuance of this authorization, the Proponent shall file with the Provincial Administrator, for information, the environmental monitoring program that it has committed to producing and that will include all commitments made in the form of mitigation measures, offsets and follow-up programs, including those identified in the conditions of this certificate of authorization."

Based on the information received, as part of the project's environmental and social impact assessment and review procedure, the Commission finds that the proponent has met the requirements of Condition 5 of the January 17, 2023 CA

Action: Send a letter to the Administrator – condition met

8. Request for funding of the KEQC – 2024-2025

Task: For discussion, decision

The Commission discussed the draft request for funding. Like Charlie Arngak, members noted that while the population of Nunavik continues to grow and the number of projects affecting the territory, the resources allocated to the Commission have not changed accordingly, as a result, the Commission has had only one employee and roughly the same funding for many years. The Commission considers that the request for funding prepared by the Executive Secretary accurately reflects the Commission's funding needs, in particular taking into account recent developments in the cost of living.

Action: Send a letter to the Administrator – request for funding of the KEQC 2024-2025

9. Varia

9.1. Meeting

The President reports on a meeting with Lukasiq Pilurtoot, President of the Kangiqsujuaq Landholding Corporation, in which he attended accompanied the Executive Secretary of the Commission, on 2 November 2023 at the Corporation's premises, about community relations with Canadian Royalties Inc. (CRI). Mr Pilurtoot believes that the communities are not entirely satisfied with the relationship with CRI. Despite regular contacts with the latter, the information transmitted seems fragmented, missing, or transmitted with delay. In particular, Mr. Pilurtoot believes that environmental monitoring should be entrusted to a permanent subcommittee with regular meetings, because the communities feel they lack information on this subject. Mr. Pilurtoot reports on the willingness of communities to be better informed and consulted.

9.2. Submitting of the wind farm projects

With the increase in the number of future wind projects, the Commission is wondering whether they need to be subject to the environmental assessment procedure according to the scale of the project. Taking into consideration that wind turbine projects are in a grey area it is thus up to the Commission to decide whether they are subject to the impact assessment procedure, but it appears to the Commission that it would not be reasonable to require the same scope of study for a single turbine community project or for a project with dozens of turbines. However, the option of exempting small projects from any form of impact assessment may deprive the Commission from issuing conditions for the implementation of projects if it considered it necessary despite the limited nature of the projects.

Consequently, the Commission considers it more reasonable to modulate its directives for the implementation of the impact assessment according to the size of the projects in order to maintain a level of requirement that does not exert disproportionate pressure on the communities' resources.

10. Next meetings

Next KEQC meeting will be held in Quebec City on February 7, 2023



APPENDIX A

279th Meeting

November 22, 2023, 9:00 pm to 5:00pm. — Montreal

AGENDA

1. Adoption of the agenda

2. Correspondence

Follow-up of the correspondence can be found in Appendix A of this document

3. Adoption of the minutes of the meeting 278

NEW DOSSIERS

4. Project of Infrastructure development in Kuururjuaq National Park, by MELCCFP (3215-18-003)

4.1. Request to amend the certificate of authorization - Preliminary information

Task: For discussion, decision

5. Project of deployment of a wind farm at the Raglan mine by Glencore Canada Corporation (3215-10-018)

5.1. Request of a certificate of authorization - Preliminary information

Task: For discussion, decision

MATTERS ARISING FROM PREVIOUS MEETINGS

6. Project to build a new thermal power plant on the territory of the northern village of Puvirnituq by Hydro-Québec (3215-10-014)

6.1. Follow-up to condition 2 of the January 17, 2023 Certificate of Authorization

Task: For discussion, decision

7. Project to build a new thermal power plant on the territory of the northern village of Puvirnituq by Hydro-Québec (3215-10-014)

7.1. Follow-up to condition 5 of the January 17, 2023 Certificate of Authorization

Task: For discussion, decision

8. Request for funding of the KEQC – 2024-2025

Task: For discussion, decision

9. Varia

10. Next meetings

DOSSIERS UNDER ANALYSIS

Environmental monitoring report 2021 Raglan Mine Project, phases II and III by Glencore (3215-14-019)

Environmental and social monitoring report 2020, direct shipping ore project, project « 2a » (Goodwood) by Tata Steel Minerals Canada, (3215-14-014)

Raglan Mine Project, phases II and III by Glencore – follow up to conditions 1 and 3 of the certificate of authorization of July 11, 2017 (3215-14-019)

Raglan Mine Project, phases II and III by Glencore - follow up to conditions 4 of the certificate of authorization of July 11, 2017 (3215-14-019)

Nunavik Nickel Project by Canadian Royalties Inc. Annual report (3215-14-007)

Nunavik Nickel Project by Canadian Royalties Inc. Phase 2a (3215-14-007)

Crushing and Reclamation of Waste Rock at the Ivakkak Site - Nunavik nickel project (3215-14-007)

Restauration plan of the Nanaujaq underground mining site - Nunavik Nickel Project (3215-14-007)

Project to build and operate a 3 MW wind turbine on Quaqtq territory, by Tarquti energies inc. (3215-10-019)

Construction of a backup generating station on the territory of the Northern Village of Inukjuak, by Hydro-Québec, follow up of the condition 3 of the May 3, 2023, CA (3215-10-012)

Construction of a backup generating station on the territory of the Northern Village of Inukjuak	KEQC to MELCCFP	follow up of the conditions 2, 4 and 5 of the May 3, 2023, CA	sent Oct. 2, 2023		
Construction of a backup generating station on the territory of the Northern Village of Inukjuak	KEQC to MELCCFP	follow up of the condition 3 of the May 3, 2023, CA	sent Oct. 2, 2023	Q&C	
Project of an access road on the territory of Aupaluk	KEQC to MELCCFP	Attestation of exemption	sent Oct. 5, 2023		
Construction of a backup generating station on the territory of the Northern Village of Inukjuak	MELCCFP to proponent	follow up of the conditions 2, 4 and 5 of the May 3, 2023, CA	sent Oct. 5, 2023		
Construction of a backup generating station on the territory of the Northern Village of Inukjuak	MELCCFP to proponent	follow up of the condition 3 of the May 3, 2023, CA	sent Oct. 5, 2023		
Strange Lake Rare earth Mining Project, by Torngat Metals Ltd.	MELCCFP to proponent	Guidelines for environmental and social impact study	sent Oct. 6, 2023		
Construction of a new thermic power generation station in the northern village of Puvirnituk	MELCCFP to KEQC	follow up on condition 2 of the CA of January 17, 2023	rec'd Oct. 6, 2023		
Raglan Mining Project by Glencore Canada Corporation - development of 120 rooms at the Katinniq camp	MELCCFP to proponent	Modification of the CA	sent Oct. 17, 2023		
Construction of a backup generating station on the territory of the Northern Village of Inukjuak	KEQC to MELCCFP	follow up of the condition 3 of the May 3, 2023, CA	rec'd Oct. 27, 2023		

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I. FOREWORD

Glencore Canada Corporation, Raglan Mine (hereinafter Glencore) plans to build and operate a wind farm of 30 3 MW wind turbines with a maximum capacity of 90 MW near its mining facilities. This will achieve a total maximum power of 96 MW including the two existing wind turbines. The wind turbines will be deployed in phases. The first two phases could see the installation of 12 wind turbines. Six could be installed in 2025-2026 and six others possibly in 2027-2028. Depending on the combined performance of these 12 wind turbines and the two existing ones, subsequent phases could take place to install another 18 wind turbines. Glencore is committed to reducing its overall greenhouse gas (GHG) emissions from its industrial assets. As a business unit of the Glencore Group, Raglan Mine is committed to contributing to the achievement of corporate targets for the decarbonization of its activities. In addition to the turbines and their foundations themselves, the project includes the development of new access roads, a new power transmission network (power line deposited directly on the ground) and an area for the battery storage system. These components are being evaluated and optimized to minimize the creation of new footprints. As a preliminary step, the length of new access roads would be about 13 km (for 30 wind turbines).

This wind farm project is subject to the environmental and social impact assessment and review process under Chapter 23 of the James Bay and Northern Quebec Agreement (JBNQA) and Title II of the Environmental Quality Act (E.Q.A., chapter Q-2). The Kativik Environmental Quality Commission (KEQC), created under Chapter 23 of the JBNQA, is responsible for the assessment and review of the project. Preliminary project information was provided to CQEK on September 11, 2023. Considering the potential impacts of such a project, it is subject to the environmental and social impact assessment and review process.

This document is the guideline for this project. The guidelines indicates to the proponent the nature, scope and extent of the environmental and social impact assessment to be conducted. It presents an approach to provide the necessary information for the environmental and social assessment of the project. This directive should not be considered exhaustive and the proponent is required to include in its impact statement any other relevant element to the analysis of the project.

II. INTRODUCTION

This introduction lays out the basic elements under environmental and social assessment and the requirements for preparing the environmental and social impact assessment.

Environmental and social assessment

Environmental and social assessment is a key instrument in planning the development and use of resources and land. Its aim is to ensure that environmental concerns are taken into account at all stages of a project's development, including in its design, operation and decommissioning. It helps the proponent design a project that is sensitive to the receiving environment without jeopardizing the project's technical and economic feasibility.

The environmental and social assessment takes all components of the biophysical and human environments likely to be affected by the project into account. It makes it possible to analyze and interpret the relationships and interactions between the factors that influence ecosystems, resources and the quality of life of individuals and communities. The comparison and the selection of alternatives for the project's implementation are intrinsic to the environmental and social assessment process. The impact study therefore clearly presents the objectives and the selection criteria for the proponent's preferred alternative.

The environmental and social assessment takes into consideration the opinions, reactions and primary concerns of individuals, groups and communities. In this regard, it reports on how the various relevant parties were involved in the project planning process and considers the results of the consultations and negotiations carried out.

The environmental and social assessment aims to highlight any issues associated with the project and the environmental and social components that will be significantly affected. The relative importance of an impact helps determine the issues on which choices and decisions will be based and, if applicable, under what conditions.

Impact study

- The impact study is the document presenting the proponent's environmental and social assessment approach. It must use scientific methods and meet the requirements of the Ministère as well as the Kativik Environmental Quality Commission (KEQC) regarding the analysis of the project and the consultation of the public and the Indigenous communities concerned. It provides an overall understanding of the project development process. More specifically, it:
- Presents the project's characteristics and explains its purpose, taking into account the context in which the project will be carried out;
- Provides the most accurate picture possible of the environment in which the project will be carried out and the evolution of this environment during and after project implementation;
- Demonstrates how the project fits into the environment by presenting a comparative analysis of the impacts of the various implementation variants;
- Defines the measures designed to minimize or eliminate negative impacts on the environment and to maximize those likely to improve it; when the impacts cannot be sufficiently mitigated, it proposes compensation measures;

- Suggests monitoring and follow-up programs to ensure compliance with government requirements and fulfilment of the proponent's commitments, to monitor the evolution of certain components of the environment affected by the project and to verify the effectiveness of the planned mitigation measures.

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III. BASIC PRINCIPLES

The following sections describe four main basic principles that must guide the proponent in conducting its impact study.

Integration of sustainable development objectives

Sustainable development aims to meet the needs of the present without compromising the ability of future generations to meet their own needs. Its three objectives are to maintain the integrity and characteristics of the environment, to improve social equity and to enhance economic efficiency. A project design must therefore integrate and balance these three goals.

It is the proponent's responsibility to take sustainable development objectives into account when developing its project and to determine how the actions to be implemented must be adapted to the specific environmental and social context north of the 55th parallel. These objectives can be included as much in the planning and management of the project as in the proposed mitigation and compensation measures. The impact study must summarize the sustainable development approach followed by the proponent and explain how the project design takes these measures into account. The proponent is strongly encouraged to implement responsible management programs that include concrete and measurable environmental protection, economic efficiency and social equity objectives.

Taking climate change into account during project development and impact assessment

For the KEQC, and particularly in the northern context, the fight against climate change is a priority and fundamental issue. To reduce greenhouse gas (GHG) emissions and adapt to climate change, the proponent must take climate change into account from the very start of the project development and when conducting the impact study. To this effect, the promoter is invited to consult: *Les changements climatiques et l'évaluation environnementale : Guide à l'intention de l'initiateur de projet* (MELCC, 2021)¹. The analysis of alternatives, the various implementation variants and the impacts of the project must therefore be carried out in the context of climate change. In particular, the proponent must assess the project's contribution to Quebec's overall GHG emissions. The proponent must also assess the potential effects of climate change on the project and the environment in which it is to be implemented, particularly if they are likely to change the nature and significance of the project's impacts on the environment, human safety or the stability and sustainability of infrastructure. Projections for climatic hazards in Nunavik have been made by Ouranos. Regarding these, the proponent can refer to the document *Portrait climatique régional en climat de référence et futur en soutien à l'analyse des impacts et de l'adaptation aux changements climatiques sur le territoire Eeyou Istchee Baie-James, du nord de l'Abitibi-Témiscamingue et du Nunavik*².

¹ <https://www.environnement.gouv.qc.ca/evaluations/directive-etude-impact/guide-intention-initiateur-projet.pdf>

² www.bv.transports.gouv.qc.ca/mono/1279339.pdf

To ensure that the project's GHGs are properly considered for each of the project phases, the proponent must draw different perimeters when delineating the study area. These boundaries must make it possible to consider direct and indirect GHG emissions, which are modulated by the choice of project implementation variants.

Integration of indigenous knowledge and values

The knowledge of the communities affected by the project in regards to their biophysical and human environment is key to adequate assessment of the impacts of a project of this nature. Each cultural group has its own system for perceiving itself, its neighbouring communities and environment, as well as its past and future. Since it partly determines the group's reaction to change, this system of representation and the communities' knowledge of their environment must be both known and integrated into the impact study. This includes their understanding of the temporal and spatial boundaries of the project and its area of influence.

The integration of indigenous knowledge and cultural values into the impact study is necessary and requires the collection of information from the communities concerned and the land users. The analysis of this data also requires the participation of the latter at various levels. As a whole, this exercise promotes the involvement of the communities concerned and their knowledge of the project.

Consultations and communications

The proponent must take advantage of the capacity of the communities concerned and of citizens to express their views and concerns about the project. To this end, it is recommended that a public information and consultation process be implemented as early as possible, involving the parties concerned (e.g.. communities of Salluit and Kangiqsujuaq, various territory users, representatives of the *parc national des Pingualuit*, etc.), in order to consider the opinions of interested parties when making choices and decisions. The earlier in the process leading up to a decision that a consultation takes place, the greater the influence of citizens on the project as a whole and, necessarily, the more likely the project is to be socially acceptable.

A section of the impact study should be devoted to presenting and analysing the public consultations. The proponent must describe its consultation program, the public meetings it has organized and those planned at each stage of the project. The proponent must indicate the dates, locations and duration of the information and consultation sessions. It must have to produce minutes for these meetings, which will include the methodology used, the list of participants, the comments, concerns, opinions and reactions of individuals, groups, organizations north of the 55th parallel and users of the territory. It should be noted that the final version of minutes must be validated by the participants, a third party or an independent observer. The proponent is invited to consult the documents related to public information and consultation published on the MELCCFP website³.

³ <http://www.environnement.gouv.qc.ca/evaluations/documents/guide-initiateur-projet.pdf>

On this subject, the proponent must ensure that any information that is confidential or could harm the environment or persons is excluded; it must submit this information in a separate document, requesting that it not be made public. It is recommended that the proponent place this information and data in a document separate from the impact study and clearly marked as being of a confidential nature.

The proponent must indicate how the views of interested parties have influenced the issues to be considered, the choices, the decision-making and the changes to the project. The proponent will have to explain how it will take into account the concerns raised in its project as well as the economic aspects addressed.

Furthermore, undertaking information and consultation procedures as soon as possible will also enable the promoter to gauge the interest of persons to be part of one or more monitoring committees, which should be considered as early as project planning.

The promoter will have to present the different mechanisms and means he intends to put in place during all phases of the project in order to maintain a dialogue and exchanges with the various stakeholders in order to be able to make the necessary adjustments quickly project, if necessary. Finally, the proponent will implement the necessary means (e.g. video production, radio vignettes, mock-ups, fact sheets) to ensure that the documents essential to the project are understood by the parties concerned, will make these documents public, ensure the dissemination of information to interested persons and groups through the appropriate media and update them.

IV. IMPACT STUDY CONTENT

The following sections describe the elements to be presented in the impact study.

1. BACKGROUND

This section of the impact study should set out the elements motivating the project. It includes a short presentation of the proponent, the context in which the project will be carried out and the rationale for the project. The presentation of the context and purpose of the project must identify the environmental, social, economic and technical issues at the local and regional levels, as well as at the national and international levels, if applicable.

1.1 Presentation of the proponent

The impact study must introduce the project proponent and, if applicable, its consultants. This presentation must include general information on the proponent's history in relation to the proposed project and the sector of activity in which the project is located.

In addition, the study must clearly present the company's administrative structure that will make it possible to provide the required financial guarantees when environmental restoration, decontamination, infrastructure dismantling or other measures must be taken. The shareholders must also be identified and details on the distribution of the profits must be presented.

1.2 Project context

The proponent is required to provide a project description that includes the project's geographic coordinates and key technical and economic characteristics. It will focus on the general context of the project, the goals, the related components, the construction and operation schedule of the project, its cost, as well as the possibility of an expansion of the project, or a development in several phases.

The proponent is asked to provide a history by recalling the main steps that led to the definition of the proposed project and will discuss related preparatory work. It will indicate the physical structures that were then put in place and any environmental or social problems encountered during these operations. It will also outline existing agreements for the use of certain services or partnership efforts with local communities. Where appropriate, it will address, inter alia, current similar projects under assessment, construction or operation in the region and discuss, inter alia, the possibilities of coordination between these projects.

The legal framework within which the project will be inserted should be described, specifying the relevant conventions, laws and regulations at all levels of legislation. In addition, the proponent must not only list the laws, regulations, policies and directives applicable to its project, it must also refer to them in the appropriate sections of its impact study and describe how it plans to comply with them. The project must therefore reflect the main guidelines for the protection of receiving environments and favour the at-source elimination rather than post-project treatment of contaminants.

The proponent and its consultant must ensure and demonstrate the significant participation of Indigenous communities in the development and operation of its project.

1.3 Rationale for the project

The rationale for the project should provide understanding of the need for the project and identify the environmental, social, economic and technical issues involved.

The proponent must situate the project among its business activities and discuss the incentive leading it to go ahead with the project.

The proponent must explain the project's environmental and socioeconomic context in the region and present its local and regional economic benefits, drawing a parallel with the project's lifespan and the presence of other similar projects in the area.

2. 2. SELECTION OF LOCATION AND TECHNOLOGY ALTERNATIVES

2.1 Location variants

The proponent must describe the various locations considered for the implementation of the infrastructure required for its project. This description must be sufficiently detailed and use illustrations to allow a comparison of the various locations under consideration and an assessment of their respective biophysical, social, technical and economic advantages. In all cases, the proponent must demonstrate its concern for reducing the project's environmental footprint. In the event that there is only one physically possible site, the proponent must justify its reasoning.

In addition, the proponent must present the reasoning and criteria that led to the choice of the sites selected, indicating precisely how the criteria were considered. The choices should take into account, among other considerations:

- Land-use planning constraints (municipal, regional or government policies, land tenure, zoning, constraint zones, characteristics of the human and built environment);
- Biological constraints, in particular with regard to threatened or vulnerable floristic species designated as such. Depending on the species encountered, and under section 16 of the Act respecting threatened or vulnerable species (LEMV; chapter E 12.01), avoidance is the only solution envisaged, except for the exceptions provided for in the LEMV and the Regulation respecting threatened or vulnerable plant species and their habitats (REFMVH; chapter E-12.01, r.3);
- Physical, hydrographic and hydrogeological constraints (presence of wildlife habitat or wetland/water environment, topography, level of soil and groundwater contamination, geotechnical capacity, potential for soil movement, potential for subsurface infiltration, sensitivity of the permafrost to thawing , etc.);
- Environmental vulnerability to climate change impacts;
- Technical, operational and financial constraints or opportunities (carrying capacity, presence of buildings or equipment, availability of services or labour, network connection arrangements, possibility of facility layout or expansion, construction schedule, costs, etc.);
- • The extent of certain apprehended impacts, particularly on valued ecosystem or human components (threatened species, sensitive environments, proximity of residences, sites of interest to Indigenous communities, traditional and current community use of the territory, health and safety risks, etc.);
- Social and economic conditions (major concerns, economic spin-offs, sources of employment, etc.).

The proponent must present relevant geographic information to locate these components, as well as variants and temporary infrastructure, if any, including the names of water bodies and their geographic location. The proponent is also expected to provide a map detailing the electrical power facilities, substations and transmission lines to the mine

2.2 Technological variants

The choice of elements to be considered depends largely on the size and nature of the project. All these considerations must be made taking into account the particularity and evolution of the northern environment in a context of climate change. In this regard, the proponent must indicate how it intends to adapt its project to climate change to ensure the integrity and long-term stability of its facilities.

The proponent must identify and describe the variants likely to modulate greenhouse gas (GHG) emissions. For example, the proponent may consider the use of best available technology, alternative energy sources with a low carbon footprint, fuel substitution, and the choice of routes that reduce the distances required for the supply and transportation of materials. The comparison of alternatives should, in particular, be carried out with a view to avoiding, reducing or limiting GHG emissions.

With regard to energy supply and the technologies used, the proponent must present its preferred technologies, demonstrating its rationale and the technical, economic, environmental and social criteria justifying these choices. The proponent must also mention if it has assessed the possibilities of thermal heat valorization and provide justification for its answer. The method used for the selection of the technologies must be clearly explained and include the following elements:

- Effectiveness of the technologies in relation to the most recent technologies for the activity sector
- Ability to meet the demand (objectives, needs, opportunities)
- the life expectancy of the equipment;
- Availability and technical feasibility
- Completion at costs that do not compromise the project's economic viability
- The technology's evolutionary potential (technical and economic ability to upgrade or improve)
- A quantification report of annual GHG emissions attributable to energy supply and technology variants
- The ability to reduce GHG emissions, from the start of operations or as the technology evolves
- The ability to limit the extent of negative impacts on the biophysical and human environments and maximize the benefits

3. PROJECT DESCRIPTION

In this section, the proponent must describe the various infrastructures and technologies selected from among those presented in the previous section. It must also make the required links with its energy supply and use of road, airport and/or port transportation infrastructure, when applicable. It must provide sufficient details so that the issues at stake can be fully understood, in particular by specifying whether certain infrastructure development is expected to affect the water environment or wetlands. The conservation of atmospheric quality and the conservation and protection of water resources must also be considered during project implementation.

The proponent must specify the project's timeline and indicate the dates or periods planned for carrying out the work and the anticipated duration of the work. This timeline must include steps to obtain rights (e.g. leases for commercial purposes, easement application for power line hook-ups and installation, temporary occupancy permits for work and manoeuvring areas for turbine installation, if not within industrial leases) and other approvals prior to the start of construction.

3.1 Project Description

The following items must be included in the impact study:

- Wind farm characteristics:
 - Turbines, access roads, electrical hook-ups, identification of stream crossings and of electrical hook-ups
 - Monitoring and follow-up systems
 - Conditions for the maintenance and operation of the wind farm
 - Nominal power per turbine, number of turbines, nominal power of the farm, expected utilization factor and availability factor of the turbines, expected annual energy production
 - Dimensions of the wind turbines (height, length of the blades, radius of the projection on the ground), dimensions of the planned sites (wind turbines and substations) and surface areas occupied on the site (wind turbines)
- An overall plan of the project components at an appropriate scale and a representation of all the planned developments and works, including the location of existing electrical lines and substations, if any, as well as the wind turbines, the collector system, the substation and the proposed operations and maintenance building (perspective plan, visual simulation, etc.), the access routes to the wind farm for the transportation of materials, components and workers, including, if possible, a recent aerial photograph of the area
- Plans of the substation design elements (voltage, necessary rights-of-way, area of the sites, type of connection to the grid, planned equipment, technical processes, etc.)
- Modalities for maintenance and operation of the wind farm, substation and other equipment
- Modalities for dismantling the wind farm at its life's end and for restoring the site, particularly in relation to the mining site restoration plan.

3.2 Facilities and related projects

3.2.1 Access infrastructure

The proponent will discuss the road accesses to be built and the existing ones in the project area and specify the intended use. It must describe all the activities or works necessary for the construction and use of an access road to the site and other roads, including temporary roads. It will specify whether and to what extent it will be responsible for their maintenance. It will also specify how it intends to maintain, rehabilitate and maintain existing and project-related roads. This description should include, but not be limited to, the installation of stream crossings.

3.2.2 Borrow pits

The proponent must define precisely what it intends to do with respect to the operation of borrow pits required for the project, both for the various stages of construction and for road access or any other aspect of the project.

It will have to locate and map all existing and planned operations (borrow pits, sand pit, quarry) for the needs of the project by specifying their proximity to the location of roads, proposed waterways and protected areas to reflect the regulations, features and opportunities of the environment. The proponent must assess the required areas and volumes and, if necessary, present the survey reports describing the stratigraphy and provide the particle size curves. The proponent will indicate how the optimization of the assessment of the required borrowing materials was performed. Finally, an overview of the redevelopment and decommissioning measures for these sites should be provided.

3.3 Jobs and training

The proponent must make available the corporate policy on the hiring, on-the-job training and integration into the labour pool of Inuit workers. In particular, it must deal with possible measures (transportation, information, work schedules, frequency, etc.) to promote local workers' access to the project-generated employment and business opportunities and the retention of these workers. It must take into account similar experiences, including those related to recent projects carried out on the territory. It must also demonstrate regional hiring targets, particularly for Inuit workers, in a context of collaboration with the communities concerned.

The proponent will have to estimate the number of workers in the construction phase (especially during peak periods) and specify where these workers will be housed. In analyzing this aspect of the project, if it is determined by the proponent that the mine site would not be able to accommodate these additional workers, the proponent shall describe the measures that would be put in place to minimize the potential impacts of the presence of non-Inuit workers from outside the project in the communities of Salluit and/or Kangiqsujuaq or elsewhere.

3.4 Residual materials

The proponent shall apply the 3RV principle for the management of its residual materials, in order of priority: reduction, reuse, recycling, including biological treatment or land application, recovery (any recovery operation by which residual materials are treated for use as a substitute for raw materials), energy recovery and disposal.

Construction and demolition debris consisting of crushed stone, concrete, brick or asphalt may be recovered and must meet the criteria contained in the *Lignes directrices relatives à la valorisation de résidus de béton, de brique, d'enrobé bitumineux, de secteur de la pierre de taille et de la pierre concassée résiduelle*. For non-hazardous inorganic residual materials from industrial sources, the proponent should refer to the *Guide de valorisation des matières résiduelles inorganiques non dangereuses de source industrielle comme matériau de construction*. For other non-hazardous residual materials from construction and demolition activities, they must be transported to a site authorized to receive them for recovery or disposal. A list and categorization⁴ of residual materials generated during the construction, operation and dismantling phases must be provided as well as a management plan for these materials promoting their recovery (including key markets and outlets and list of waste pickers/conditioners). This list must include all materials generated (e.g. metals, plastics, fibres, glass, wood, tires, electronics, etc.), including, if applicable, solids recovered by a domestic water treatment unit (septic sludge) as well as the management methods envisaged. In addition, the proponent will need to assess the potential for the treatment of putrescible organic matter contained in household waste to obtain compost. For this purpose, it could use small thermophilic equipment.

For residual materials that will not be eligible for recovery, the proponent will have to estimate their quantity and determine their disposal method according to their nature (e.g. hazardous and non-hazardous waste, construction or demolition debris, contaminated soil, etc.) for each phase of the project (construction, operation and dismantling). The site(s) authorized to receive this residual material will have to be identified and the agreements with the operators of these sites will have to be provided. In addition, the mode of transportation of residual materials, the distance to travel and the number of shipments of materials to the south of the province must be specified.

The proponent must also plan, as far as possible and in compliance with the requirements, the use of residual materials in replacement of new raw materials for the construction and operation phases.

⁴ This categorization can be done by wind turbine components and/or by specific materials from those components (see Table 6): <https://www.recyc-quebec.gouv.qc.ca/sites/default/files/documents/etude-materiaux-transition.pdf>

3.5 Noise emissions

The proponent shall describe the change in the noise climate of the study area during the construction period, including the identification of the main sources of noise and the mitigation measures envisaged and the timing of their implementation. It must also describe the change in the sound climate caused by the operations of the wind farm during the operating phase in compliance with the instruction standard NI 98-01⁵. Finally, it will have to locate, on a map, the components of the physical and human environments that could be affected by noise.

3.6 GHG emissions and adaptation to climate changes

The proponent must demonstrate that it has considered climate change at all stages of its project, from design to decommissioning, following the approach proposed in the document: *Les changements climatiques et l'évaluation environnementale : Guide à l'intention de l'initiateur de projet* (MELCC, 2021)⁶, particularly sections 3.2 and 4.2 to ensure the resilience of all project components to the current and future climate.

The proponent is required to produce a detailed identification and quantification report of annual GHG emissions from all emission sources of the project and the various phases of the project. To this end, the sponsor is invited to consult the following document: *Guide de quantification des émissions de gaz à effet de serre* (MELCC, 2019)⁷. In addition, it will have to develop an impact mitigation action plan as well as a GHG emissions monitoring plan.

The proponent must consider all climatic hazards⁸ likely to have an impact on the components of its project (wind turbines, foundation platforms and building housing the voltage lowering transformer, buildings for the energy storage system, power transmission and distribution network and access roads. Among the hazards considered, the proponent must include thawing permafrost. It will have to demonstrate that it has taken into account permafrost thawing sensitivity in choosing its location variants for all buildings and infrastructure related to the project. If so, it will also have to demonstrate how they are resilient to thawing permafrost.

⁵<https://www.environnement.gouv.qc.ca/publications/note-instructions/98-01/note-bruit.pdf>

⁶<https://www.environnement.gouv.qc.ca/evaluations/directive-etude-impact/guide-intention-initiateur-projet.pdf>

⁷<https://www.environnement.gouv.qc.ca/changements/ges/guide-quantification/guide-quantification-ges.pdf>

⁸<http://www.bv.transports.gouv.qc.ca/mono/1279339.pdf>

4. DESCRIPTION OF THE ENVIRONMENT

Taking into account Inuit knowledge and cultural values, the proponent will describe the environmental, cultural and socio-economic context of the project in that region and sector. It will delineate its study area to describe the components of the relevant biophysical and human environments related to the project. If the data available from government, Inuit or other organizations are insufficient or no longer representative, the proponent will have to complete the description of the environment with inventories in accordance with the rules of the art.

The proponent must indicate the source of all data used to describe the environment and the purposes for which they are used. In addition, it must comment on the quality and reliability of the data available. For many components of the community, government agencies have developed guides or reference documents to assist proponents and their consultants in the collection and presentation of information. The proponent is encouraged to consult these documents to ensure that they provide basic information.

Where appropriate, information is mapped at appropriate scales and photographs are provided.

4.1 Delimitation of the study area

The proponent will identify a study area and justify its boundaries, taking into account the extent of the anticipated impacts on the environment and the ecological limits appropriate to the different components of the environment. This zone may be composed, if necessary, of different areas delimited according to the impacts apprehended. The proponent will locate its project in relation to the current patterns of land use. The portion of the territory covered by this zone must be large enough to cover all the proposed activities and the variants studied, as well as the activities related to the project, and to identify all direct and indirect effects of the project on biophysical and human environments. The proponent will need to demonstrate that local knowledge is considered in the determination of study area boundaries. He will finally have to provide all the necessary form files for a good understanding.

4.2 Description of the physical environment

The physical environment description should be completed for the entire project, including related activities. Using maps where existing and required infrastructure will be identified, the proponent will identify the following.

4.2.1 Geology, geomorphology and soils

The proponent will identify, using maps at appropriate scales, large geological formations, describe the general topography of the terrain and the presence of permafrost. It will locate areas sensitive to erosion and land movements as well as areas likely to be used for borrow materials. It should characterize the soils and provide a description of their past uses.

4.2.2 Water, wetlands and vegetation

The proponent will describe and, locate on a map, the water and wetland environments present within the study area and impacted by the project and specify the uses of waterways and other

water bodies. He will also have to characterize the environments (ecological study) in order to be able to properly assess the impacts of his project on these environments.

The proponent will map the vegetation cover of aquatic, riparian and terrestrial environments in the study area, indicating the presence of fragile or exceptional stands. The proponent shall identify, threatened or vulnerable plant species or species likely to be so designated and species of specific social, economic, cultural or scientific importance, describe their habitat and take into account the protection status currently granted or considered for these species.

4.2.3 Protected areas, national parks and biological refuges

The proponent will document the presence of protected areas (Kovik River, Tursukattaq Fjord) listed on the *Registre des aires protégées au Québec*⁹ whether permanent, proposed or reserved, the presence of Pingualuit National Park and the presence of biological refuges, under the responsibility of the *ministère des Ressources naturelles et des Forêts*.

4.2.4 meteorological conditions

The proponent will describe local weather conditions (temperatures, precipitation, prevailing winds), including ice and ice risk areas.

4.2.5 Fauna

The proponent shall document the use of the proposed areas for the installation of wind turbines by wildlife, including sensitive species in the territory, including migratory caribou and birds of prey and, detail the influence of all proposed infrastructure (e.g. wind turbines, access roads, power lines, etc.) on them

For migratory caribou, an estimate of population size based on the most recent data will be required. Observation and collision data following the installation of the 2 wind turbines must be presented. The project must also consider caribou calving sites and periods.

For avian wildlife (e.g. birds of prey, migratory birds, ptarmigan) and bats, the proponent will need to verify the validity of the data collected. In addition, it will have to use the standardized protocols of the *Ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs* for up-to-date inventories, pre-project and post-project. The data of the monitoring carried out following the installation of the 2 wind turbines must be presented.

⁹ https://www.environnement.gouv.qc.ca/biodiversite/aires_protegees/registre/

An up-to-date inventory of the spring, summer and fall movements of the avifauna is required to characterize the use by the birds of the proposed areas for the installation of the wind turbines. At these northern latitudes, migration corridors are no longer as clearly defined as the majority of birds have reached their summer breeding range. Thus, inventories will have to be adapted to characterize the use of areas (feeding area, rest area, nesting area) by avifauna rather than wanting to identify migratory movements. Survey dates will need to be adjusted to reflect the latitude of the project to reflect the appropriate periods of species presence and use of the land. More specifically, an update of the inventory of birds of prey nests within 30 km of the areas selected for the wind farm should be carried out, particularly for the golden eagle and peregrine falcon. For these species with status, the presence of a breeding individual, within a radius of 30 km for the golden eagle and 16 km for the peregrine falcon of a wind turbine, could require the installation of a tracking device to delimit its home range. This monitoring will allow to adjust the position of certain wind turbines that may be in the home range of these birds or to determine the mitigation and protection measures that will have to be implemented by the developer during the construction phase and operating.

An inventory for the Short-eared Owl will also have to be carried out within a radius of 2 km around the boundaries of the sectors provided for the installation of wind turbines. The proponent will also need to characterize suitable nesting habitat for the species.. Finally, the proponent will identify threatened or vulnerable wildlife species or species likely to be so designated as such and species of specific social, economic, cultural or scientific importance, describe their habitat and take into account the protection status currently granted or considered for these species.

4.3 Description of the social environment

The description of the human environment should be carried out for the whole project, taking into account the related activities and the different phases of the project. The human environment concerns both Inuit communities in the study area and non-inuit. The main components of the human environment include land use, heritage and archaeology, socio-economic aspects and quality of life and cultural context. If necessary, the proponent may consider other topics considered relevant to the project assessment

4.3.1 Land use

The developer will deal with the tenure of the land under agreement and specify the location and description of the dwellings, constructions and various buildings located near the project.

It will address current land use and occupancy, including the location of water supplies, hunting, fishing and trapping territories in the study area, including associated infrastructure (e.g. road, trail, camp, etc.), traditional travel routes and their periods of use (e.g. type, density, travel, etc.). It must also indicate the presence of outfitters and holiday lease holders.

The proponent will present territories dedicated to protection and conservation whose status is consecrated and other sectors for which different statuses have been considered as protected areas.

4.3.2 Heritage sites and archaeology

The proponent will describe sites of historical or archaeological interest as well as sites with archaeological potential present in the study area and sites of special interest or value to the population for recreational purposes, tourism, cultural or spiritual (burials, sacred or privileged places).

It is also recommended that a preventive archaeology approach be implemented for the work areas impacted by the wind farm. In other terms, it is recommended to mandate an archaeological firm to carry out an update of the archaeological potential studies of all the sites envisaged for the installation of wind turbines.

4.3.3 Socio-economic aspects

The proponent will present the demographic profile and outlook as well as the economic situation (e.g. jobs, industries, sources of income, etc.) of the communities closest to the study area. This aspect should be considered with particular care, taking into account the socio-economic vulnerability of the populations concerned, with a view to developing clear guidelines for workers from outside in order to minimize the impact of their arrival.

It will also describe the pool of qualified Inuit labour and businesses to fill positions or contracts related to the construction, operation and dismantling of the wind farm.

4.3.4 Quality of life and cultural context

The proponent will document the various elements related to the quality of life of the population of the communities in the study area, such as community life (including social relationships), cultural values and biophysical elements of the environment. In addition, it will describe the cultural context specific to these communities; the culture referring to the knowledge, beliefs, values, norms, roles, lifestyles and behaviours acquired by individuals as members of a specific group, community or society.

5. IMPACTS ANALYSIS OF THE PROJECT

The project proponent must identify the impacts of the selected variant during the construction, operation and decommissioning phases, and assess their importance using an appropriate method and suitable criteria. The positive and negative as well as direct and indirect impacts on the natural and social environments, and if applicable the cumulative and irreversible impacts of the project must be taken into consideration.

5.1 Impact identification and assessment

While determining the impacts draws on facts, the assessment of impacts entails value-judgments. This may not only help establish acceptability thresholds or levels, but also make it possible to determine the impact mitigation criteria and monitoring or follow-up needs. The assessment of the importance of an impact depends primarily on the component affected, that is, the intrinsic value to the ecosystem as well as the social, cultural, economic and aesthetic values attributed to these components by the population. Thus, the more a component of the ecosystem is valued by the population, the greater the impact on this component is likely to be. This assessment is also influenced by the fundamental concerns of the population, particularly where elements of the project pose a danger to health or safety or a threat to archaeological or cultural sites.

Assessing the significance of an impact also depends on the intensity of the change experienced by the affected environmental components. Thus, the more widespread, frequent, long-lasting or intense an impact, the greater it will be. Where applicable, the significance of the impact should be localized to the appropriate scale, either the study area, region or province.

The proponent must describe the chosen method, as well as its uncertainties or biases. The techniques and methods used will have to be objective, concrete and reproducible. The reader must be able to easily follow the proponent's reasoning in determining the impacts. At the very least, the study must provide a monitoring tool to link project activities and the presence of structures to environmental components. These can be summary tables, checklists or impact sheets. The implementation of citizen participation mechanisms and the consultation of literature specific to the type of project in question (including impact studies of similar projects) are other means of identifying and evaluating potential impacts according to the different stages of the project.

The proponent will define the criteria and terms used to determine anticipated impacts and to classify them according to various levels of significance. The following criteria can help identify and assess impacts:

- the intensity or magnitude of the impact (degree of environmental disturbance influenced by the sensitivity or vulnerability of the component);
- the extent of impact (spatial dimensions such as length, area);
- the duration of the impact (temporal aspect, irreversibility);
- frequency of impact (intermittent);
- the probability of impact;
- spillover effect (link between affected component and other components)
- the sensitivity or rarity of the component;
- sustainability of the component and ecosystems (sustainability);
- the value of the component to the overall population;

- formal recognition of the component by legislation, policy, regulation or formal decision (e.g., park, ecological reserve, threatened or vulnerable species, wildlife habitat, floristic habitat, known archaeological sites, etc.);
- risks to the health, safety and well-being of the population

5.1.1 Milieu biophysique

The assessment of impacts on the biophysical environment must address, but not be limited to impacts:

- On aquatic and wetland environments, effects on their integrity, water flow and sediment regime
- Of the works on soil and surface water quality
- Of transporting materials, components and workers
- On vegetation, bats, local or migratory wildlife (including on their movements and habitats), on species that are threatened or vulnerable or likely to be so designated, or on species of specific social, economic, cultural or scientific importance (areas affected, number of species affected, population density, etc.)
- Impacts on the Kovik River watershed (its drainage system not being fully protected by the Kovik River Protected Area);
- On the protected areas in the study area, considering their respective conservation objectives.

For the wildlife component, the proponent will need to pay particular attention to the impact of the project (construction and operation phases), the calving period for migratory caribou, the nesting period for birds, and the migration of birds and bats.

5.1.2 Human environment

For all the phases of the project, the assessment of impacts on the human environment must address, but not be limited to the:

- Impacts of transporting materials, components and workers
- Impacts of the project on the operations and infrastructure of Donaldson Airport
- Economic benefits associated with the development and operation of the facilities
- Direct and indirect effects associated with job creation, such as the development of workers' knowledge and skills
- Effects of noise from project construction and operation activities
- Impacts on land users, particularly Inuit communities, including on the practice of traditional activities for food, ritual or social purposes (hunting, fishing, trapping, berry harvesting, collection of medicinal plants, use of sacred sites, etc.); these must be determined by considering the impact on resource abundance and quality, experience and access
- Impacts on the visual environment, due to the addition of new visual elements and changes in the aesthetic quality of the landscape
- Impacts on terrestrial or submerged archaeological heritage: sites (including burials and paleontological sites), sectors and areas of archaeological potential

5.2 Cumulative effects

Cumulative effects are broadly defined as changes to the environment caused by an action in combination with other past, present and future actions. The concept of cumulative effects is based on the idea that each impact, individually and independent of its own magnitude, can represent a high marginal cost to the environment.

The proponent must submit a justification regarding the geographic and temporal delineation of the cumulative impact study. It should be noted that these boundaries may vary depending on the components selected to assess cumulative impacts, depending on their distribution and specific characteristics. The proponent must propose and justify the choice of projects and activities selected for the cumulative impact analysis, which must include past, current and future activities or projects (with a high probability of occurrence). The methods used to predict cumulative environmental impacts must be clearly described in order to better understand the reasoning of the conclusions presented and how the analysis was carried out. The traditional knowledge of the communities concerned has to be integrated into the assessment of the cumulative environmental effects. The assessment of cumulative environmental impacts must:

- Consider the actions and effects in combination with other past actions (including development work that has taken place), present and future actions
- Take natural disturbances into account
- List the valued components¹⁰
- Determine spatial delimitations based on the characteristics of the valued components
- Identify or map out features, impacts and other land uses in reference conditions
- Establish trends or changes in the condition of valued components across time.

Thus, the proponent will need to identify the valued components to be assessed for cumulative effects. The environmental components for this analysis should be those related to the project issues, including the addition of wind turbines for wildlife in an area already under high disturbance pressure. Noise, visual effects and the presence of new paths could add a disruptive element, among other things, for migratory caribou in their calving area.

¹⁰ Valued components are the environment's aspects or characteristics identified as important to Indigenous people, government agencies, the proponent or the public, and that may be affected directly or indirectly by a project.

6.1 Mitigation

The proponent must describe the measures it will put in place to maximize the positive effects on the environment and the social milieu as well as the corrective measures it intends to implement to reduce the project's negative impacts (including cumulative effects). The proponent must give priority to measure that make it possible to avoid negative impacts and reduce the significance of the negative impacts. For residual negative impacts that cannot be mitigated, the proponent must propose compensation or restoration measures.

For all physical and human environments, the proponent will be required to submit mitigation measures that it plans to put in place for the construction and operation phases. In addition, it must describe the requirements that will be imposed on contractors and their subcontractors to ensure that they comply with these commitments and policies

For instance, the following measure could be considered:

- The measures planned to mitigate noise pollution
- The selection of routes for the transportation of materials, components and workers, and the scheduling of the works to avoid accidents and nuisances
- The choice of the best period to carry out the works, in order to avoid sensitive areas and periods for terrestrial, avian and aquatic fauna, and not to compromise the practice of recreational activities (hunting and fishing)
- The modalities and measures for the protection of soil, surface water and flora
- The modalities and measures for the protection of wildlife (taking into account local, migratory and nesting species) and their habitats, including the placement of wind turbines away from caribou nesting areas and calving grounds
- The choice of period for carrying out the various project phases to avoid certain critical periods for fauna (i.e. migration or nesting)
- The means planned to prevent oil or other spills and, if applicable, the means to contain leaks
- The measures and guarantees provided for the restoration of the site after the works (restoration and clean-up of the site, etc.)
- The development of measures to maximize the project's economic benefits in Nunavik, including the awarding of certain contracts to local businesses.

It should be noted that compliance with laws and regulations, as well as the means of compliance, cannot be considered mitigation.

6.2 Residual impacts and compensation measures

Residual impacts are those that remain after mitigation measures have been implemented. The proponent will need to consider the estimated costs associated with each project and the potential for offsetting unavoidable residual impacts to the physical and human environment without compromising the technical and economic feasibility of the project. In particular, habitat loss should be offset by the creation or improvement of equivalent habitats.

6.3 Summary

The proponent must provide a summary of the mitigation measures, impacts and compensation measures planned for the project. This summary will be a reminder of the modalities for carrying out the project and the foreseen mode of operations. It presents the main impacts of the project and the resulting mitigation measures. It illustrates how execution responds to the needs initially raised and accounts for the sustainable development objectives of preserving environmental quality, improving social equity and enhancing economic efficiency. A table showing all mitigation and compensation measures, as well as any other commitments, should also be included in the summary.

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7. 7. RISK MANAGEMENT

Some projects may cause accidents, the consequences of which may extend beyond the boundaries of the project. The project impact study therefore requires a risk analysis for major technological accidents. In all cases, the study must describe the planned safety measures and present a preliminary emergency preparedness plan for the construction and operation phases.

Accidents or damage affecting the project's infrastructure, other components or operations, and that are caused by natural disasters or extreme weather events must be assessed. This assessment will also take climate change into account. The proponent must explain how the remoteness of the project will guide the design of emergency measures.

7.1 Safety measures

The impact study will describe the security measures planned for the operating sites, including related facilities located outside the main site. Among other things, it must describe the following elements:

- Site access limitations (marking of the site)
- Security measures for the transportation of employees, materials and hazardous materials
- Security installations and preventive measures (monitoring systems, emergency shutdown, firefighting systems, sprinklers, emergency generators, leak detectors, high-level alarms, catchment, safety distances, etc.)
- Storage of products according to their dangerousness.

7.2 Preliminary emergency preparedness plan

The impact study must present a preliminary emergency preparedness plan, covering both the construction and operating periods, in order to demonstrate adequate response in the event of an accident. This plan must lay out the main actions planned in response to an incident or accident situations, as well as the transmission mechanisms for alerting the authorities, workers and the public. It must describe the link with the municipal authorities or the Northern Village concerned, the other regional entities involved and, if applicable, the way in which the various emergency measures plans are connected. In this regard, the proponent shall list the consultations it has held with partners external to its project.

The proponent is invited to consult the various publications on the preparation of emergency measures plans, including the *Document d'information à propos de la gestion des risques en sécurité civile*¹¹, the *Guide de gestion des risques d'accidents industriels majeurs*¹² and the *Norme qui s'applique à la planification des mesures et interventions d'urgence*¹³. A final emergency preparedness plan, including scenarios for each type of major potential accident, must be completed by the proponent before the launch of operations.

For its emergency response plan, the proponent shall include:

- A list of risk analyses that support the development of emergency response plans submitted for the construction and operation phases;
- Risk mapping in the vicinity of the project (e.g., flood zone, erosion zone, hazardous materials transportation or storage area, permafrost thaw zone, etc.);
- A schedule of work that takes into account risk periods;
- A warning system, including municipal stakeholders and organizations involved in emergency management in the vicinity of the plant (airport, other nearby projects);
- Relevant information in case of emergency (e.g. contact information of persons in charge, equipment available, plans or maps of preferred routes, all-season access routes, etc.)
- Emergency response structure and modes of communication with the external emergency organization;
- Procedures for updating and reassessing emergency procedures;
- References to other existing emergency plans (e.g. airport, fire pattern, etc.);

Given the project's remoteness, the proponent must be the first to apply emergency measures in the event of a technological accident, spill, etc. In particular, the proponent must provide information on its response capability and handling methods in the following cases:

- Transportation of chemical products (tankers, explosives, etc.) or products deemed potentially dangerous
- Petroleum and/or hazardous product spills at the project site, with emphasis on methods for prompt on-site response
- Storage of chemical, petroleum and hazardous products
- Fire hazards at the project site
- Coordination with relevant regional entities in the event of evacuations or incidents involving a high number of victims
- Risks of wind turbine breakage and ice formation on the blades.

¹¹ <https://www.securitepublique.gouv.qc.ca/index.php?id=1265>

¹² <http://www.craim.ca/produit/guide-de-gestion-risques-daccidents-industriels-majeurs-2017/>

¹³ <https://www.scc.ca/fr/standardsdb/standards/18900>

8. MONITORING AND FOLLOW-UP PROGRAMMES

The following sections are intended to lay out how the monitoring and follow-up programs related to the project will be designed and carried out. The programs will need to be designed with sufficient flexibility to allow for changes to be made in response to new information and unforeseen events.

8.1 Monitoring program

The aim of the environmental monitoring program carried out by the project proponent is to ensure this latter's compliance with:

- Requirements in the relevant laws and regulations
- Measures proposed in the impact study, including the mitigation or compensation measures
- Its commitments foreseen in the Ministerial authorizations
- Conditions set out in the certificate of authorization.

Environmental monitoring must cover the project's construction, operation, closure or decommissioning phases. The proponent must propose a preliminary environmental monitoring program in its impact study. This preliminary program will be improved once all the project's components are better defined. It must be completed, if necessary, following authorization of the project. The program will describe the means and mechanisms put in place to ensure compliance with the legal and environmental requirements. The program will make it possible to verify the smooth operation of the works, the equipment and the facilities, and to supervise any disturbance of the environment caused by the project's implementation, operation, closure or dismantling. The monitoring program may make it possible, if necessary, to redirect the work and possibly improve the progress of construction and implementation of its various components.

In particular, the environmental monitoring program must include:

- A list of elements requiring environmental monitoring
- All of the measures and means foreseen to protect the environment
- The characteristics of the monitoring program (for each environment: surface water, atmosphere, soil, etc.), when these are foreseeable (e.g., location of interventions, planned protocols, list of measured parameters, analytical methods used, implementation schedule, human and financial resources allocated to the program, participation of the Inuit and other target communities, if applicable);
- An intervention mechanism in case of the observation of non-compliance with the legal and environmental requirements or the proponent's commitments
- The proponent's commitments to file monitoring reports (number, frequency, content and distribution)
- The proponent's commitments regarding the dissemination of environmental monitoring results to the population concerned

- a decommissioning plan including a list of residual materials generated and their management methods by promoting their recovery. The proponent should refer to the most recent version of the *Guide de bonnes pratiques pour la gestion des matériaux de démantèlement*¹⁴.

The monitoring program must also include the project's GHG emissions. In general, the program will cover the elements required in the project design stage to quantify the GHG emissions the project generates and monitor their evolution over time. Given the large number of possible scenarios, there is no model (as each case is unique) for tracking and monitoring GHG emissions. An example of the data to be included is presented in the appendix. The GHG follow-up and monitoring plan is generally very succinct and is primarily intended to facilitate the proponent's work in quantifying GHG emissions. This plan may evolve over the life of the project.

8.2 Social and Environmental monitoring program

The purpose of the environmental monitoring carried out by the proponent is to verify in the field the accuracy of the evaluation of certain impacts and the effectiveness of certain mitigation or compensation measures in the impact study and for which some uncertainty remains.

The knowledge gained from environmental and social monitoring programs can be utilized not only to improve predictions and assessments of the impacts of new projects of a similar nature, but also to develop mitigation measures and possibly revise environmental protection standards, guidelines or principles.

The proponent must propose a preliminary environmental and social monitoring program in its impact study. This preliminary program, if necessary, must be completed following authorization of the project. The program must include:

- The reasons for the follow-up, including a list of the elements requiring environmental monitoring (including valued components);
- The minimum duration of the monitoring program, its objectives and targeted components (e.g., validate the impact assessment, evaluate the effectiveness of mitigation measures for water, air, soil, etc.)
- The number and main characteristics of the follow-up studies planned (list of parameters to be measured, projected completion schedule, participation of the Inuit and other target communities in the monitoring, if applicable)
- Monitoring program for disturbance of wind turbines (noise and visual) on mammals, including migratory caribou, as well as an assessment of the avoidance zone should be implemented;
- The procedure for the production of follow-up reports (number, frequency, format and distribution)

¹⁴ www.demandesinfos.environnement.gouv.qc.ca/dossiers/matieres_residuelles/4516_fiche.pdf

- The response mechanism that will be implemented in the event of unexpected environmental degradation
- The response mechanism that will be implemented in the event of an unforeseen impact on the human environment
- The program for communicating monitoring results to the populations concerned, in an appropriate format.

The proponent should also assess the feasibility and appropriateness of including light pollution impact monitoring in the environmental monitoring and describe the modalities of this in its impact study.

9. PRESENTATION OF THE IMPACT STUDY

The impact study must be written in clear and concise language and be limited to the ideas that are necessary to a solid understanding of the project and its impacts. To ensure general comprehension, a glossary defining technical terms, acronyms and abbreviations should be included. More technical information should not be included in the main document, unless key to the reader's understanding. Information that can be diagrammed or mapped must be presented in that format and at the appropriate scale. Project components must be displayed in thematic as well as composite maps.

The proponent must illustrate the highlights of the study using graphs, maps and photographs. Maps must be presented using common scales and reference data to allow for comparison and superimposition of the mapped elements. The availability and quality of the data used must be evaluated by the proponent. All sources of information must be referenced. In addition, the methods used in conducting the impact study (inventories, surveys, interviews, comparative analyses, etc.) must be presented, explained and scientifically validated.

A table outlining all planned mitigation and offsetting measures, as well as any other commitments, will also need to be submitted by the proponent. This table should make it possible to visualize the main optimization, mitigation or compensation measures planned according to the main potential impacts and environmental and social issues related to the project, referring to the sections of the impact assessment that address these points.

The proponent will also be required to prepare an impact statement. This summary should be presented in layman's language, should be addressed to the general public, and should include illustrations as well as maps for a quick understanding of the project's work. The summary should be sufficiently detailed to allow the reader to become familiar with the project and to understand the issues, the main impacts anticipated, the proposed mitigation measures, the residual impacts and the conclusions on the significance of these effects. The summary briefly explains the follow-ups that will be carried out and their objectives. Where appropriate, the summary provides a section that summarizes the key issues raised by the Indigenous communities consulted, the impacts of the project on those communities, as well as the mitigation and compensation measures and the resulting commitments, if any. It should be noted that other initiatives of the promoter promoting public participation such as the production of videos, radio capsules, models, information sheets are also strongly encouraged. Finally, it is suggested that the proponent translate the summary into English and Inuktitut in order to increase access to information by the community or communities concerned by the project, if applicable.

The KEQC may request that English versions of documents other than those mentioned above, or summaries thereof, be filed. Finally, the KEQC will post all documents provided by the proponent on its website.