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Kativik environmental quality commission
Commission de la qualité de l'environnement Kativik

MINUTES

OF THE

280th meeting

February 7, 2024

Quebec City

ADOPTED

Meeting summary

The 280th meeting was held in Quebec City on February 7, 2024.

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

PROJECTS AND OTHER MATTERS

DISCUSSIONS OR DECISIONS

Project of Dismantling and rehabilitation of the Tasiujaq generating station by Hydro-Quebec (3215-10-020)	<ul style="list-style-type: none"> In the light of the information presented, the Commission decided to exempt the project of the environmental and social impact assessment and review procedure.
Project of Deployment of a Windmill on the Territory of the Northern Village of Quaqtq (3215-10-019)	<ul style="list-style-type: none"> The Commission decided that this project of deployment of a wind turbine on the territory of the northern village of Quaqtq by Les Énergies Tarquti inc. is subject to the environmental and social impact assessment and review procedure and transmitted to the Administrator instructions to be sent to the proponent for the conduct of impact studies.
Project to build a new thermal power plant on the territory of the northern village of Puvirnituq by Hydro-Québec (3215-10-014)	<ul style="list-style-type: none"> After analysis and discussion of the information received, the Commission decided that the promoter's soundscape monitoring program was acceptable.
Project of Construction of a Backup Thermal Power plant on the Territory of the Northern Village of Inukjuak by Hydro-Québec (3215-10-012)	<ul style="list-style-type: none"> After analysis and discussion of the submitted information, the Commission decided that condition 3 of the May 3, 2022, certificate of authorization was met.
Project Of Expansion and Modernization of the Oil Depot in Aupaluk by FCNQ (3215-22-022)	<ul style="list-style-type: none"> The Commission decides to exempt the project.
Project to Dismantle, Clean-up and Restore Mobile Camp Sites Request 10 (3215-21-014)	<ul style="list-style-type: none"> After analysis of these reports and discussion, the KEQC considers the proponent has carried out the works in accordance with the information it provided in the preliminary information.
Project to Dismantle, Clean-up and Restore Mobile Camp Sites Request 13 (3215-21-014)	<ul style="list-style-type: none"> After analysis of these reports and discussion, the KEQC considers the proponent has carried out the works in accordance with the information it provided in the preliminary information.

The project consists of the installation of a 3 MW wind turbine on a site located more than 4 km from the nearest residence, on Category I land. The project includes an access road, drainage areas and a power line. The expansion of a 4.8 km seasonal access road will also be necessary. The running surface from 4 to 5 meters will have to be widened to 6 meters, in addition to the installation of culverts.

Members briefly wondered about the balance between revenue losses due to reduced consumption of petroleum products and environmental benefits. But in general, the project is community driven and the Commission considers that the potential environmental benefits offset the loss of income. The Commission notes that the issue of local employment was considered upstream of the project by the promoter. There is also the question of the representation of the opinions of women in the community during consultations. The Commission is of the opinion that in general it must remain alert and ensure that the consultations take into account sufficiently representative samples of the populations concerned, in particular women, which in the opinion of Lisa Koperqualuk, Member of the Commission, are too often excluded from community decisions.

The Commission decided that this project of deployment of a wind turbine on the territory of the northern village of Quaqtq by Les Énergies Tarquti inc. is subject to the environmental and social impact assessment and review procedure and transmitted to the Administrator instructions to be sent to the proponent for the conduct of impact studies. The instructions are reproduced in Appendix C of this report.

Action: Send a letter to the Administrator – Guidelines of 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 3 of the January 17, 2023 Certificate of Authorization

Task: For discussion, decision

Condition 3 of the January 17, 2023, certificate of authorization, stipulates: “No later one year after project approval and before the commissioning of the station, the proponent shall submit to the Provincial Administrator, for approval, an operational soundscape monitoring program. Covering the first year following operation, this soundscape monitoring program will include a description of the sound measurement method and will propose mitigation measures in the event of exceedances.” As per this condition, on November 21, 2023, the proponent submitted its soundscape monitoring program.

After analysis and discussion of the information received, the Commission decided that the promoter’s soundscape monitoring program was acceptable.

Action: Send a letter to the Administrator – condition met

7. Project of Construction of a Backup Thermal Power plant on the Territory of the Northern Village of Inukjuak by Hydro-Québec (3215-10-012)

7.1. Follow-up to condition 3 of the May 3, 2022 Certificate of Authorization

Task: For discussion, decision

Condition 3 of the May 3, 2022, certificate of authorization, stipulates: “No later one year after project approval and before the commissioning of the station, the proponent shall submit to the Provincial Administrator, for approval, an operational soundscape monitoring program. Covering the first year following operation, this soundscape monitoring program will include a description of the sound measurement method and will propose mitigation measures in the event of exceedances.” As per this

condition, on June 16, 2023, the proponent submitted its soundscape monitoring program. Following analysis of this latter, the Commission decided to send questions and comments to the proponent on October 5, 2023. The proponent filed its answers to the questions and comments on October 13, 2023.

After analysis and discussion of the submitted information, the Commission decided that condition 3 of the May 3, 2022, certificate of authorization was met.

Action: Send a letter to the Administrator – condition met

8. Project to build a new thermal power plant on the territory of the northern village of Kangiqsujuaq by Hydro-Québec (3215-10-017)

8.1. Request for a certificate of authorization – impact study

Task: For discussion, decision

Hydro-Québec plans to build a generating station in the Northern Village of Kangiqsujuaq to replace the existing plant. This new station will ensure the supply of electricity to Kangiqsujuaq starting in 2028. After this date, the existing plant will be dismantled. With a design life of 50 years, the new station will be equipped with three generating units (855 kW, 1135 kW and 1168 kW) for a total installed capacity of 3.16 MW and a maximum capacity of 3.16 MW. This power can be increased to 4.6 MW, as needed, with the addition of a fourth generator. The integration of renewable energy (solar panels as soon as the station is built, and a wind farm with an energy storage system at a later project stage) will optimize the cost of energy production for this autonomous power network.

The planned site for the new generating station is about 900 metres south of Kangiqsujuaq. The developed area will be approximately 16192 m² and will house the station, a fuel farm equipped with two exterior stocking tanks of 35,000 litres each, a 4.16-kV booster with two distribution line feeders and storage areas for operational needs. A 140-metre access road to the generating station will also be built. Lastly, two approximately 1-km distribution lines will run from the switching station along the access road and the municipal road to connect to the existing network.

Construction of the generating station is scheduled from 2026 to 2028, with commissioning of the plant slated for February 2028.

After analysis and discussion of the impact statement, the Commission wishes to obtain further information in order to make its decision on the authorization of the project and requests the proponent to answer the following questions and comments:

2.4 Related projects

In section 2.4 (page 2–5 of volume 1 of the impact study), the proponent refers to the construction of the access road to the generating station as a related project not specifically mentioned in schedules A or B of the Environment Quality Act. It also undertakes to obtain the exemptions for these infrastructures and all government authorizations required to carry them out in a timely manner.

QC-1. The Commission asks the proponent to provide a general description of the access road construction project and its potential environmental and social impacts. The Commission also asks the proponent why this access road project was not included in the power plant construction project.

3.3 Information and consultation activities

QC-2. In section 3.3.1 (page 3-2 of volume 1 of the impact study), the proponent mentions the adoption of resolution 2020-13 by the Kangiqsujuaq municipal council. The Commission asks the proponent to file this resolution.

QC-3. In section 3.3.2 (page 3-2 of volume 1 of the impact study), the proponent mentions the adoption of resolution 2021-23 by the Kangiqsujuaq municipal council. The Commission asks the proponent to file this resolution.

QC-4. In section 3.3.4 (page 3-3 of volume 1 of the impact study), the proponent summarizes the meeting with representatives of the Kangiqsujuaq municipal council and the Nunaturlik landholding corporation concerning the recommended site and the results of the analysis of potential sites. The Commission asks the proponent to provide the minutes of this meeting.

QC-5. In section 3.3.5 (page 3-3 of volume 1 of the impact study), the proponent mentions the adoption of resolution 2022-29 by the Kangiqsujuaq municipal council and resolution 2022-49 by the Nunaturlik landholding corporation. The Commission asks the proponent to provide these resolutions.

QC-6. In section 3.3.6 (page 3-3 of volume 1 of the impact statement), the proponent mentions that it held an information and consultation session on November 9, 2022, on the local radio in Kangiqsujuaq, during which it provided listeners with updated information on the project. Some residents would like the site protected by physical barriers to ensure public security during construction. The Commission asks the proponent to specify whether such barriers will be installed during construction and, if not, why not.

4.2.9 Operating phase

In section 4.2.9 (page 4-16 of volume 1 of the impact study), the proponent mentions that it is working with partners on a wind power project in parallel with the construction of the new generating station. It also mentions that the Kangiqsujuaq power grid will initially be supplied entirely by the new generating station, which will then gradually be operated with a combination of diesel, wind and battery power.

QC-7. The Commission asks the proponent to specify whether it is the designated proponent for the wind power project, which could be considered a phase 2 of the present project, or whether the parallel project will be carried out with partners and thus be considered a new project requiring another assessment.

4.3.2 Layout of borrow pits

Section 4.3.2 (page 4–20 of volume 1 of the impact study) explains that the location of the borrow pits have not yet been determined. There is little granular material available in Kangiqsujuaq, and that available is already largely used by the village.

QC-8. The Commission asks the proponent to locate and map all existing and planned operations (borrow pits, sand pits, quarries) for the purposes of the project, specifying their proximity to the location of roads, watercourses and proposed protected areas to take into account the regulations, characteristics and possibilities of the environment. It must evaluate the areas and volumes required and, if necessary, will submit sounding reports describing the stratigraphy and provide grading curves. The proponent must indicate how the evaluation of the required borrow material was optimized. Finally, an overview of the redevelopment and decommissioning measures for these sites must also be provided.

4.3.5 Dismantling of the existing plant

QC -9. In section 4.3.5 (page 4-20 of volume 1 of the impact study), the proponent indicates that the dismantling of the existing plant and the site’s restoration are planned to take place after the new generating station is commissioned in 2028. The Commission wishes to remind the proponent that it must file an exemption request for this purpose.

QC -10. The Commission notes that for a project to dismantle a thermal power plant in another Northern Village, the promoter offered the community certain buildings to reuse rather than to destroy them. The Commission asks the promoter to state whether it intends to do the same for this project.

4.4 Hazardous residual materials

QC -11. Section 4.4 (pages 4-21 and 4-23 of volume 1 of the impact study) briefly presents the management of hazardous residual materials during the construction and operating phases. The Commission asks the proponent to submit a plan for managing these hazardous residual materials, including a list of all materials generated during the project’s operating phase (metals, plastics, electronic products, etc.), the storage conditions for these materials, disposal sites, transportation route including distance to be covered and number of trucks per week. This management plan for hazardous residual materials must also include an estimate of the quantities of materials generated during the operating phase, as well as a description of the measures put in place to ensure compliance with the 3RV principle, whenever applicable.

QC -12. In section 4.4.1 (page 4-21 of volume 1 of the impact study), the proponent indicates that an agreement could be reached with the Northern Village of Kangiqsujuaq for the disposal of construction waste at the village’s northern landfill. Residual materials generated during the operating phase will also be disposed of at this site, as is the case for the existing plant. The Commission asks the proponent to provide documents confirming its agreement with the Northern Village of Kangiqsujuaq to receive construction waste and residual materials during generating station’s operating phase.

Impacts on the human environment and mitigation measures

Greenhouse gases and climate change

Section 6.8.2 (pages 6-23 to 6-34 of volume 1 of the impact study) presents specific mitigation measures and plans to install wind turbines. However, there are no plans to completely replace the new generating station's energy input with renewable energy, such as solar or wind power, at the end of the station's expected useful life. The most optimistic scenario forecasts a reduction of around 52% for 2077; yet, Quebec's carbon neutrality target is set for 2050.

QC - 13. The Commission asks the proponent to specify the issues involved in meeting Quebec's 2050 carbon-neutral objective, and how the project's current strategy could be modified to address this shortcoming. Finally, the proponent must include in its environmental monitoring program a plan for monitoring GHG emissions during the operating phase.

Health, safety and quality of life

Section 6.8.7 (page 6-47 of volume 1 of the impact study) states that the proponent intends to adopt certain measures to minimize potential social impacts, given the external workers who will be in the community during the construction phase.

QC -14. The Commission asks the proponent to specify how it will ensure that contractors and workers from outside the community are made aware of local realities and apply a code of good conduct. The proponent must also undertake to maintain an ongoing dialogue with the various stakeholders during the construction and operating phases, with a view to making any necessary adjustments to the project.

Identifying potential for accidents

QC-15. Section 8.1.10 (page 8-10 of volume 1 of the impact study) assesses the risk of contamination of watercourses and wetlands by runoff in the event of petroleum product spills or leaks, and proposes management measures. The Commission asks the proponent to also assess the risk of contamination of bedrock and groundwater, taking into account local conditions, such as permafrost depth. It must also propose mitigation, control and follow-up measures, where appropriate.

Emergency preparedness plan during operations

Section 8.3 (pages 8-18 and 8-19 of volume 1 of the impact study) states the proponent will implement emergency response measures for the operating phase of the generating station. These measures will be integrated into the emergency preparedness plan already in place for all Hydro-Québec's autonomous power plants in Nunavik. This plan takes into account their location in small, isolated communities. It also provides a preliminary version of these emergency measures. It specifies that the municipality and other involved public authorities will be consulted, and the plan will be submitted to the MELCCFP before the station is commissioned.

QC-16. The Commission asks the proponent to complete the emergency preparedness plan with the following measures:

- Ensure its station's emergency preparedness plan is coordinated with the Kangiqsujaq fire department, as well as with the Kativik Regional Government for fire prevention services, the risk coverage plan and the civil protection plan. The same applies to the transitional emergency measures plan during the construction phase (hazardous materials for the work site and residual materials).
- Inform the municipality and fire department of Kangiqsujaq, as well as the Kativik Regional Government, of any transshipments of old reservoirs and the initial filling of new reservoirs. The same applies to the dismantling of old reservoirs.
- Organize a tour of the final station with the fire department to familiarize first responders with procedures specific to the station's hazards. The frequency of training and drills should be determined.
- Include the COG (24/7), specifying that it is the Ministère de la Sécurité publique, in the telephone list of external resources.
- Pay attention to the different perimeters in relation to the multi-dwelling building located approximately 300 metres from the KAQ-2 site (page 4-5 of volume 1 of the impact study report).

Phase I site characterization studies

According to the Phase I site characterization report in Appendix F (volume 2 of the impact study), a former contractor's work area and heliport, as well as a former dump site, are identified on adjacent land, just to the north of the proposed generating station site.

QC-17. The Commission asks the proponent to assess the risk of contamination from activities that have taken place on this neighbouring property (e.g. atmospheric dispersion from burning open waste or from runoff). If the land is likely to have been contaminated, the proponent must carry out a soil characterization adapted to the risk (number, location and depth of test pits).

Atmospheric Dispersion Study

Appendix J (section 3.9, page 14 of volume 3 of the impact study) states that the atmospheric dispersion modeling of contaminants was carried out in accordance with Appendix H of the Règlement sur l'assainissement de l'atmosphère (RAA) and generally accepted methodology, except for the modelling method for nitrogen oxides. In fact, section 3.9 mentions that the Plume Volume Molar Ratio Method (PVMRM) was used. The PVMRM method is recommended when sources are isolated and elevated. However, it is possible to see that the generating station's springs are side by side and 12 metres high.

QC-18. Thus, the Commission asks the proponent to redo the modelling using the total conversion method, and if the limit values of Appendix K of the RAA are exceeded with this method, it must redo the modelling according to the Ozone Limiting Method (OLM). This method is more appropriate when the sources are close to the surface and when the plumes can overlap. If the second option is chosen, the ozone concentrations and initial NO₂ concentrations from the "Northern rang" in Table 1 will have to be used for the new modelling.

If the new modelling shows exceedances in NO₂ and odour concentrations, the proponent will have to plan additional mitigation measures to make the project acceptable in terms of ambient air.

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

9. Project Of Expansion and Modernization of the Oil Depot in Aupaluk by FCNQ (3215-22-022)

9.1. Request of exemption - Preliminary information

Task: For discussion, decision

The Aupaluk Oil Depot is operated by the Fédération des coopératives du Nouveau-Québec (FCNQ Petro). It is used to store arctic diesel and gasoline. The oil depot consists of storage facilities (tanks), a loading dock for tanker trucks, a pumping station and an electrical building.

In order to meet the growing needs of the Northern Village of Aupaluk, FCNQ Petro plans to carry out work to increase its petroleum product storage capacity for a period of 15 years. At the same time, the facilities are slated to be brought up to standards and modernized. The current depot, which has a total capacity of 2,196,900 litres, would therefore be increased to 4,360,000 litres, which is almost double its current capacity, by the adding two tanks totalling 2,436,000 litres.

In the light of the received information, the Commission considers not necessary to submit the project to the environmental and social impact assessment procedure.

However, the Commission wishes to clarify that, although the proponent has a verbal agreement with the municipality of Aupaluk, obtaining a resolution from the latter is still necessary prior to the start of the works.

Action: Send a letter to the Administrator – Exemption

10. Project to Dismantle, Clean-up and Restore Mobile Camp Sites (3215-21-014)

10.1. Dismantling Report - Request #10 by Club Chambeaux inc.

The project involves the dismantling, clean-up and restoration of mobile camp site facilities that were used for outfitting purposes in the practice of sport caribou hunting in the territory of Nord-du-Québec. Nearly 300 such sites are found in the Inuit and Naskapi nations' areas of interest or on public lands in their shared area of interest.

According to the proponent's dismantling reports, the 7 affected sites contained a total of 35 buildings, which were dismantled. For logistical reasons, no burning could be carried out. This stage is scheduled for summer 2024.

After analysis of these reports and discussion, the KEQC considers the proponent has carried out the works in accordance with the information it provided in the preliminary information. Furthermore, and as agreed when the preliminary information was submitted, the proponent has filed a copy of the dismantling report within nine months of completion.

However, the Commission wishes to remind the proponent that it expects a dismantling report to be submitted for all the sites concerned once the burning has been carried out

Given that the 7 camps are located in Naskapi area of interest, the KEQC is informing the Nation.

Action: Send a letter to the Administrator – condition met

10.2. Dismantling Report - Request #13 by Caribou expedition

Task: For discussion, decision

According to the proponent's dismantling reports, the 4 affected sites contained a total of 31 buildings, which were dismantled. However, the proponent indicated that the burning could not be carried out on one site (SCM 10575-01 Hurst Lake).

After analysis of these reports and discussion, the KEQC considers the proponent has carried out the works in accordance with the information it provided in the preliminary information. Furthermore, and as agreed when the preliminary information was submitted, the proponent has filed a copy of the dismantling report within nine months of completion.

However, the Commission wishes to remind the proponent that it expects a dismantling report to be submitted for site #10575-01 once the burning has been carried out

Given that the 4 camps are located in Naskapi area of interest, the KEQC is informing the Nation.

Action: Send a letter to the Administrator – condition met

11. Varia

12. Next meetings

Next KEQC meeting will be held by videoconference on March 6, 2024



APPENDIX A

280th Meeting

February 7, 2024, 9:00 pm to 5:00 pm. — Quebec City

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 279

NEW DOSSIERS

4. Project of Dismantling and rehabilitation of the Tasiujaq generating station by Hydro-Quebec (3215-10-020)

4.1. Request of exemption - Preliminary information

Task: For discussion, decision

5. Project of Deployment of a Windmill on the Territory of the Northern Village of Quaqtac (3215-10-019)

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 Puvirnituc by Hydro-Québec (3215-10-014)

6.1. Follow-up to condition 3 of the January 17, 2023 Certificate of Authorization

Task: For discussion, decision

7. Project of Construction of a Backup Thermal Power plant on the Territory of the Northern Village of Inukjuak by Hydro-Québec (3215-10-012)

7.1. Follow-up to condition 3 of the May 3, 2022 Certificate of Authorization

Task: For discussion, decision

8. Project to build a new thermal power plant on the territory of the northern village of Kangiqsujuak by Hydro-Québec (3215-10-017)

8.1. Request for a certificate of authorization – impact study

Task: For discussion, decision

9. Project Of Expansion and Modernization of the Oil Depot in Aupaluk by FCNQ (3215-22-022)

9.1. Request of exemption - Preliminary information

Task: For discussion, decision

10. Project to Dismantle, Clean-up and Restore Mobile Camp Sites (3215-21-014)

10.1. Dismantling Report - Request #10 by Club Chambeaux inc.

10.2. Dismantling Report - Request #13 by Caribou expedition

Task: For discussion, decision

11. Varia

12. 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 of Construction of an Access Road in the Northern Village of Kangiqsujuaq, by Hydro-Quebec (3215-05-011)

Project of Construction of two thermophilic composting sites in Kuujjuaq and Kangiqsualujjuaq, by the KRG (3215-16-064)

Nunavik Nickel Project Phase 2a: Exploitation of the Expo Sud, Ivakkak UG, Méquillon UG2 and Nanaujaq deposits, by Canadian Royalties Inc. (3215-14-007)

Nunavik Nickel Project Phase 2a: presentation of the PEIIC, by Canadian Royalties Inc. (3215-14-007)

Stockpile at the Puimajuq Deposit Nunavik Nickel Project, by Canadian Royalties Inc.					
Project of construction of an access road on the territory of the Northern Village of Kangiqsujuaq, by Hydro-Québec	MELCCFP to KEQC	Preliminary Information (exemption request)	Rec'd Jan. 23, 2024		
Project of thermophile composter in Kuujuaq and Kangiqsualujuaq by Kativik Regional Government	MELCCFP to KEQC	Preliminary Information (exemption request)	Rec'd Jan. 23, 2024		
Nunavik Nickel Project by Canadian Royalties Inc. Phase 2a	MELCCFP to KEQC	Complementary information	Rec'd Jan. 23, 2024		
Nunavik Nickel Project by Canadian Royalties Inc. Phase 2a	MELCCFP to KEQC	PEIC	Rec'd Jan. 23, 2024		

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I. FOREWORD

Hydro-Québec and Les Énergies Tarquti inc. wish to supply 80% of Nunavik's autonomous networks with clean energy by 2030. To do this, the community of Quaqtuq, in partnership with the proponent, wants to build and operate a 3 MW wind turbine on its territory, in order to reduce its dependence on diesel and GHG emissions from the thermal power plant operated by Hydro-Québec.

Nunavik communities are mainly dependent on diesel for energy production, heating buildings and transportation. In 2022, a total of over 62 million litres of diesel was consumed for the 14 northern villages of Nunavik.

The project consists of the installation of a 3 MW wind turbine on a site located more than 4 km from the nearest residence, on Category I land. The project includes an access road, drainage areas and a power line. The expansion of a 4.8 km seasonal access road will also be necessary. The running surface from 4 to 5 meters will have to be widened to 6 meters, in addition to the installation of culverts.

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.

Basic principles

The following sections describe four basic principles that should guide the proponent in conducting its impact statement.

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) . 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.

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 (individuals, groups, communities, etc.), afin de considérer les opinions des parties intéressées lors des choix et des prises de décision. 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 website¹.

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.

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.

¹ <http://www.environnement.gouv.qc.ca/evaluations/documents/guide-initiateur-projet.pdf>

III. 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 outline the administrative structure of the company that provides the financial guarantees required when environmental restoration measures, decontamination, infrastructure dismantling or other measures must be taken. In this regard, the guarantees of supply with Hydro-Québec must be defined and presented as well as the links with the land corporation, the northern village and local businesses.

1.2 Project context

The proponent will be required to provide a project description that includes the project's geographic coordinates and key technical and economic characteristics. It will focus on the overall context of the project, its goals, related components, the construction and operation schedule of the project, its cost and the possibility of an expansion of the project, if planned. The proponent will also have to detail the main constraints of the environment when implementing the project. The proponent will also need to discuss events that could cause a temporary slowdown or shutdown of operations or abandonment of the project.

The history of the project and the business opportunities in the project's line of business should also be described in the presentation of the context and the purpose of the project.

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.

he 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 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);
- 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, etc.);
- Environmental vulnerability to climate change impacts, in particular regarding the thawing of the permafrost;
- The possibility of expanding the project by adding wind turbines.

The proponent will provide relevant geographic information to allow for the proper location of project elements as well as variants and temporary infrastructure, as appropriate, including the names of water bodies and their geographic location.

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 both for the wind turbine and for related installations (power line and road).

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 method used for the selection of the technologies must be clearly explained and include the following elements:

- Ability to meet the demand (objectives, needs, opportunities);
- Availability and technical feasibility;
- 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 will need to demonstrate the project's ability to meet legal and regulatory standards, criteria and requirements.

The proponent must specify the schedule for carrying out its project and will indicate the dates or periods expected for carrying out the work and the anticipated duration of the work.

3.1. General project description

The following items must be included in the impact study:

- Wind mill characteristics:
 - Turbines, access roads, electrical connections to the grid;
 - Conditions for the maintenance and operation of the wind farm;
- Characteristics of the type of foundation chosen, including a presentation of the results of geotechnical studies;

- An overall plan of the project components at an appropriate scale and a representation of all the planned developments and works.

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 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 will have to make available the corporate policy on job training and hiring of members of local Inuit communities, and their integration into the labour pool. It will deal in particular with measures (transport, information, working hours, frequency, etc.) possible to promote the access of local workers to job and business opportunities created by the project of retaining these workers and the sustainability of jobs during the operation phase.

The proponent will need to estimate the number of workers in the construction and operation phase (especially during peak periods), specify where they will be housed, and specify whether infrastructure will need to be built on the site for this purpose.

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, recovery. Waste disposal must be the last resort.

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 categorization 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.

3.5. GHG emissions

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), 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). 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 hazards 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.

3.6. 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 will also have to locate on a map, the components of the physical and human environments that could be affected by noise.

4. DESCRIPTION OF THE ENVIRONMENT

In this section, taking into account Inuit cultural knowledge and 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 biophysical and human environments relevant to the project.

4.1. Description of the physical environment

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 proponent will need to demonstrate that local knowledge is considered in the determination of study area boundaries.

4.2. Description biophysical environment

The proponent must describe the state of the environment as it exists in the study area prior to the project. It must describe in the most factual way possible the components of the biophysical and human environments likely to be affected by the project, including the valued components of the ecosystem. If the data available from government, municipal, Aboriginal 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. We encourage the proponent to consult these documents in advance to ensure that they provide basic information.

The proponent shall describe, for the study area, the following components using specific maps where existing and proposed infrastructure will be identified. Where appropriate, information is mapped at appropriate scales and photographs are provided:

- Aquatic and wetland environments (marshes, swamps, bogs), paying particular attention to the locations where a crossing is planned :
 - o the nature of the stream bed substrate;
 - o uses of waterways and other water bodies;
 - o areas of erosion and disturbance (cuttings, embankments, etc.);
- wildlife and floristic species and their habitats (annual cycles and migratory patterns);
- species of specific social, economic, cultural or scientific importance;
- local weather conditions (temperatures, precipitation, prevailing winds), including frost zones and areas at risk for ice;

4.2.1. Fauna and flora

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 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 wind turbine must be presented..

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 map the vegetation cover of aquatic, riparian and terrestrial environments in the study area, indicating the presence of fragile or exceptional stands. The proponent will also 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. If necessary, the proponent may consider other topics considered relevant to the project assessment.

At the social level, particular attention must be paid to the occupation of the territory by users and in particular by Indigenous communities, including Inuit. In this sense, emphasis should be placed on taking into account the presence of hunting territories and traditional travel routes (land or navigable). The periods of family land use and the impact of the Project on access and occupancy

of hunting, fishing, trapping and gathering areas should be detailed. Without limitation, the proponent shall describe:

- current occupation and use of the study area, including traditional activities
- areas where sites of historical or archaeological interest and sites with archaeological potential;
- areas or sites of special value to the population for recreational, tourist, historical, cultural or spiritual reasons.

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. It must consider the positive and negative, direct and indirect impacts on the environment and, where appropriate, the cumulative, synergistic, deferred and irreversible impacts related to the implementation of the project.

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 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.

5.1.1 Biophysical Environment

For all phases of the project, the assessment of impacts on the biophysical environment must include, but is not limited to:

- Water and wetland disturbances, effects on their integrity, water flow, including stripping, backfilling and excavation, and sedimentary regime;
- Impacts of work on soil and surface water quality;
- the impacts of transporting materials, components and workers on the physical environment;
- les impacts du concassage de matériaux granulaires sur le milieu naturel, notamment le bruit et la poussière;
- effects on vegetation, local and migratory wildlife, including its movements and habitats, species that are threatened or vulnerable, or likely to be so designated, or species of specific social importance, economic, cultural or scientific (areas affected, number of species affected, population density, etc.).

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;
- Economic benefits, both local and regional associated with the development and operation of the facilities;
- Effects of project noise from construction and operations on sensitive receptors;
- 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.

6. MITIGATION MEASURES, RESIDUAL IMPACT AND COMPENSATION MEASURES

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:

- Measures to respect the noise climate during road construction and rehabilitation works, as well as when transporting the wind turbine;
- The choice of routes for the transport of materials, components and workers and the scheduling of work to avoid accidents and nuisances;
- The selection of the best time to conduct the work in order to avoid sensitive areas and periods for avian and ichthyian wildlife and not to compromise recreational and subsistence activities (hunting, fishing and trapping);
- The measures and guarantees to be provided for or provided for the restoration of the premises and the disposal of equipment after the work and at the end of the useful life of the project;
- The modalities and measures for the protection of soil, surface water and flora;
- 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.

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*, the *Guide de gestion des risques d'accidents industriels majeurs* and the *Norme qui s'applique à la planification des mesures et interventions d'urgence*. 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.

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

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*.

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);
- The procedure for the production of follow-up reports (number, frequency, format and distribution)
- 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.

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.

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