National Energy Board

Office national de l'énergie

Electricity Filing Manual

July 2017

Canada

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Glossary of Terms

Abandon — The permanent cessation of the operation of a facility which results in the discontinuance of service. (*Cessation d'exploitation*)

Aboriginal — Includes the Indian, Inuit and Métis peoples of Canada. (*Autochtones*)

Action Plans — In the context of the *Species at Risk Act* - The competent minister is required to prepare one or more action plans based on the recovery strategy for a listed species. The action plan or plans and any amendments will be included in the public registry established under the *Species at Risk Act*. (*Plan d'action*)

Adverse Effect — The impairment of or damage to the environment or health of humans, or damage to property or loss of reasonable enjoyment of life or property. (*Effet négatif*)

Baseline Information — The current state of the environment or environmental setting for a particular element. This information will assist in determining potential environmental effects of the project by providing an environmental reference point for the element, with which to compare future environmental conditions, and potential project effects. (*Renseignements de base*)

Biophysical Environment — The components of the earth including:

a) land, water and air, including all layers of the atmosphere;

b) all organic and inorganic matter and living organisms; and

c) the interacting natural systems that include components referred to in the previous bullets. (*Milieu naturel*)

Bulk Power System — (or bulk electric system) The network of generating facilities and interconnected transmission facilities that produce and then flow electricity, respectively, around the overall power system and into non-networked distribution facilities that, in turn, radially serve end user load. (*Réseau de production-transport d'électricité*)

Contaminant — A substance that is present or released in the environment at an amount, concentration, level or rate that results in or may result in an adverse effect. (*Contaminant*)

Critical Habitat — The habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species. [*Species at Risk Act s.2*] (*Habitat essentiel*)

Cumulative Effects	Changes to the environment that are caused by an action in combination with other past, present and future human actions. ('Action' includes projects and activities.) (*Effets cumulatifs*)
Deleterious Substance	a) any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water; or b) any water that contains a substance in such quantity or concentration, or that has been so treated, processed or changed, by heat or other means, from a natural state that it would, if added to any other water, degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water. [*Fisheries Act* s. 34(1)] (*Substance nocive*)
Designated Project	A project designated under the *Regulations Designating Physical Activities* as a physical activity requiring a federal environmental assessment under the *Canadian Environmental Assessment Act, 2012* (*Projet désigné)*
Easement	An agreement under which a company acquires the right to use the land for the pipeline or powerline. It is a written contract that sets out the rights of the company and rights of the landowner for the use of the right of way. (*Servitude*)
Election Certificate	An authorization for an IPL for which the applicant has chosen that federal rather than provincial laws apply and resulting in a public hearing [*NEB Act* s. 58.27]. (*Certificat faisant suite à une décision*)
Environmental Effect	In respect of a project, any change that a project may cause to a bio-physical element found in Table 6-2 and any effect of any such change on a socio-economic element (Table 6.3) (See definition of Socio-Economic effect). (*Effet environnemental*)
Environmentally Sensitive Area	An area designated in regional or local land use plans, or by a local, regional, provincial or federal government body as being sensitive to disturbance or identified by an applicant as being sensitive for some reason. (*Région écologiquement sensible*)

Federal Lands

Under s. 67 of the *Canadian Environmental Assessment Act, 2012*, the NEB must make a significance determination for any projects on federal lands. The *Canadian Environmental Assessment Act, 2012*, defines federal lands as:

(*a*) lands that belong to Her Majesty in right of Canada, or that Her Majesty in right of Canada has the power to dispose of, and all waters on and airspace above those lands, other than lands under the administration and control of the Commissioner of the Yukon, Northwest Territories or Nunavut;

(*b*) the following lands and areas:

i. the internal waters of Canada, in any area of the sea not within a province,

ii. the territorial sea of Canada, in any area of the sea not within a province,

iii. the exclusive economic zone of Canada, and

iv. the continental shelf of Canada: and

(*c*) reserves, surrendered lands and any other lands that are set apart for the use and benefit of a band and that are subject to the *Indian Act*, and all waters on and airspace above those reserves or lands. (*Territoire domanial*)

Fee Simple Owner

The person who is entitled to the entire property, with unconditional power to disposition during his/her life, and descending to his/her heirs upon death. Usually it is the person named on the title. (*Propriétaire en fief simple*)

Fish

Includes (*a*) parts of fish, (*b*) shellfish, crustaceans, marine animals and any parts of shellfish, crustaceans or marine animals, and (*c*) the eggs, sperm, spawn, larvae, spat and juvenile stages of fish, shellfish, crustaceans and marine animals (*Fisheries Act* s. 34.1).

Fish Habitat

Spawning grounds and any other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes (*Fisheries Act* s. 34.1).

Heritage Resources	Cultural, historic, archaeological and paleontological resources are collectively known as heritage resources and can include pre-contact and post-contact features. (*Ressources patrimoniales*)
Human Health	A state of complete physical, mental and social well-being, and the ability to adapt to the stresses of daily life; it is not merely the absence of disease or infirmity. (*Santé*)
International Power Line	Facilities constructed or operated for the purpose of transmitting electricity from or to a place in Canada to or from a place outside Canada. (*Ligne internationale de transport d'électricité*)
Migratory Bird	A migratory bird referred to in the convention, and includes the sperm, eggs, embryos, tissue cultures and parts of the bird. [*Migratory Birds Convention Act* s.2] (*Oiseau migrateur*)
Mitigation	In respect of a project, the elimination, reduction or control of the adverse environmental effects of the project, and includes restitution for any damage to the environment caused by such effects through replacement, restoration, compensation or any other means. [*Canadian Environmental Assessment Act,* 2012 s. 2] (*Mesures d'atténuation*)
Monitoring	Activities for resolving specific outstanding environmental issues, observing the potential environmental effects of a project, assessing the effectiveness of mitigation measures undertaken, identifying unanticipated environmental issues and determining the action required based on the result of these activities. (*Plan de surveillance*)
Navigable Water or Waterway	Includes a canal and any other body of water created or altered as a result of the construction of any work. As well a navigable water is considered as any body of water capable, in its natural state, of being navigated by floating vessels of any description for the purpose of transportation, recreation or commerce, and may also be a human-made feature such as a canal or reservoir.[1] (*Eaux ou voies navigables*)
Navigation	Use of a vessel for transportation, recreation or commerce on a navigable water. (*Navigation*)

1 The changes to the NEB Act do not restrict the NEB's consideration of the impacts of a project on navigation and navigation safety to the Schedule of "navigable waters" that is included in the *Navigation Protection Act.*

Notice	A notice of the application for a permit or an election certificate, published by the applicant in accordance with section 58.12 of the NEB Act. (*Avis*)
Owner	For the purposes of sections 86 to 107 of the NEB Act, the 'owner' is not restricted to the fee simple owner or to freehold lands.[2] In this regard, an owner may include any interest in, or possession of land, such as the fee simple owner, Aboriginal title, the administrators of crown and public lands and occupants of land. The interest held may be registered or unregistered. (*Propriétaire*) With respect to sections 33 and 34 of the NEB Act, the owner of lands includes the fee simple owner and may also include any other interest held in the land, as described above. When determining the owners of lands required for the project, the applicant should consider all potential owners of the lands required and implement its notification and acquisition processes pursuant to the Act.
Permit	A permit means an authorization for the construction and operation of an international power line issued under Part III.1 of the NEB Act. (*Permis*)
Power Line Outside Canada	That part of a power line in the United States that is between its connection to the international power line at the border and the first switching station in the United States. (*Ligne située à l'étranger*)
Power System	Includes the generating stations, transformers, switching stations, transmission lines, substations, distribution lines and circuits necessary for the production, transmission and distribution of electricity. (*Réseau d'électricité*)
Power Transfer Capability	The amount of power that can be transferred from one power system to another without impairing the reliability criteria of the interconnected systems. (*Capacité de transfert de puissance*)

2 Sections 75 and 85 of the NEB Act describe the nature of an 'owner':
75. A company shall, in the exercise of the powers granted by this Act or a Special Act, do as little damage as possible, and shall make full compensation in the manner provided in this Act and in a Special Act, to all persons interested, for all damage sustained by them by reason of the exercise of those powers.
85. In sections 86 to 107, 'owner' means any person who is entitled to compensation under section 75.

Reclamation	The process of re-establishing a disturbed site to a former or other productive use, not necessarily to the same condition that existed prior to disturbance. The land capability may be at a level different (i.e., lower or higher) than that which existed prior to the disturbance, depending on the goal of the process. Reclamation includes the management of a contaminated site and revegetation where necessary. Reclamation is not considered complete until the goals for reclamation have been achieved. (*Remise en état*)
Recovery Strategy	A strategy for the recovery of a listed extirpated, endangered or threatened species prepared by the competent minister (as defined under the *Species at Risk Act*). If the recovery of the listed species is feasible, the recovery strategy must address the threats to the survival of the species identified by the Committee for the Status of Endangered Wildlife in Canada, including any loss of habitat. The recovery strategy and any amendments will be included in the public registry established under the *Species at Risk Act*. (*Programme de rétablissement*)
Reliability	Power system reliability is the degree of performance of the elements of the bulk electric system that results in electricity being delivered to customers within accepted standards and in the amount desired (from North American Electricity Reliability Corporation (NERC). (*Fiabilité*)
Residual Effects	Effects that are present after mitigation is applied. (*Effets résiduels*)
Responsible Authority	In relation to a project, a federal authority that is required pursuant to s. 15 of the *Canadian Environmental Assessment Act, 2012* to ensure that an environmental assessment of the project is conducted. (*Autorité responsable*)
Right of Entry	The right of access to, and use of, land surface. (*Droit d'accès*)
Right of Entry Order	An order by the National Energy Board made under the NEB Act granting a company access to, and use of, a defined portion of land for the purposes as set out in the order. (*Ordonnance de droit d'accès*)
Right of Way (RoW)	The strip of land acquired for which a company has obtained the rights for the construction and operation of the pipeline or powerline. (*Emprise*)

Socio-Economic Effect	In respect of a project, any effect on a socio-economic element found in Table 6-3, including direct effects as well as effects resulting from a change in the environment (as referred to in the definition of Environmental Effect). (*Effet socioéconomique*)
Species at Risk	A federally-listed extirpated, endangered or threatened species or a species of special concern. [*Species at Risk Act* s. 2(1)] (*Espèce en péril*)
Species of Special Status	Species listed under provincial jurisdiction or of recognized local importance because they are vulnerable, threatened, endangered or extirpated. (*Espèce à statut particulier*)
Study Area	The area within the spatial boundaries of the scope of the environmental and socio-economic effects assessment. Since the spatial boundaries of the assessment may vary with different biophysical and socio-economic elements, the study area may also vary. (*Zone d'étude*)
Substation	A subsidiary station of the electric power system where network interconnections are made and managed between transmission lines, or where electricity is flowed to or from the transmission network and transformed for further transmission or distribution along lower-voltage lines. (*Sous-station*)
Traditional Territory	Area where an Aboriginal group has claimed or asserted the right to use the land for traditional purposes such as hunting, fishing, trapping, gathering or spiritual activities. One or more Aboriginal groups may claim the same lands as their traditional territory. (*Territoire traditionnel*)
Valued Ecosystem Component (VEC)	Resources or environmental features that have all or some of the following features: (a) importance to local human populations; (b) regional, national or international profiles; or (c) if altered from their existing status will be important in evaluating the impacts of development or human actions, and in focusing management or regulatory policy. (*Composante valorisée de l'écosystème*)
Valued Socio-Cultural Component (VSC)	Cultural, social, economic or health aspects of the study population that, if affected by the project, would be of concern to local human populations or government regulators. (*Composante socio-culturelle valorisée*)

Viewshed	The area visible from an observer's viewpoint and those areas from which that viewpoint may be seen. The boundaries of a viewshed are determined by the width of the angle of vision and the distance between the observer and various levels of vision (i.e., foreground, middle-ground, background, distant, etc.) (*Bassin visuel*)
Water Body	A water body, including a canal, reservoir, an ocean and a wetland, up to the high-water mark, but does not include a sewage or waste treatment lagoon or mine tailings pond. (*Plan d'eau*)
Wetlands	Land where the water table is at near or above the surface, or which is saturated for a long enough period to promote such features as wet-altered soils and water tolerant vegetation. Wetlands include organic wetlands or “peatlands”, and mineral wetlands or mineral soil areas that are influenced by excess water, but produce little or no peat. (*Terre humide*)

List of Abbreviations

ADR	Appropriate Dispute Resolution
CCME	Canadian Council of Ministers of the Environment
CEA Act 2012	*Canadian Environmental Assessment Act, 2012*
CEA Agency	Canadian Environmental Assessment Agency
CSA	Canadian Standards Association
DFO	Fisheries and Oceans Canada
Electricity Regulations	*National Energy Board Electricity Regulations*
ESA	Environmental and Socio-economic Assessment
EP Plan	Environmental Protection Plan
GPS	Global Positioning System
IPL	International Power Line
kV	Kilovolt
NEB or the Board	National Energy Board
NEB Act	*National Energy Board Act*
NERC	North American Electric Reliability Corporation
OPR	*National Energy Board Onshore Pipeline Regulations*
Post-construction report	Post-construction environmental monitoring report
PPBoR	Plans, Profiles and Books of Reference
RoW	Right of Way
Rules	*National Energy Board Rules of Practice and Procedure, 1995*
SARA	*Species at Risk Act*
UTM	Universal Transverse Mercator
VEC	Valued Ecosystem Component
VSC	Valued Socio-cultural Component
Valued Component	VEC and VSC

Chapter 1 Introduction

1.1 Scope and Purpose of the Manual

Electric utility companies regulated by the *National Energy Board Act* (NEB Act) are required to obtain the Board's approval to construct new facilities or modify or abandon existing facilities and export electricity. Facilities include a transmission line and associated equipment, such as at a substation.

The Filing Manual is designed to provide guidance as to the type of information the Board would typically need to make a decision concerning the issuance of a permit or certificate for an IPL.

The Filing Manual is also designed to assist applicants in understanding why information is required and how it is assessed by the Board, so that applicants can therefore understand the level of detail that is needed.

This manual is not applicable to electricity exports or to other areas of NEB jurisdiction such as pipelines or oil and gas activities. Parties may wish to contact the Board for further advice or guidance on these other activities.

1.2 Board Expectations

This manual sets out the information requirements the Board expects in an application and also provides guidance on those requirements. The Board expects the applicant to include all necessary and sufficient information to explain and support the application.

When seeking approval, applicants must submit applications or information filings to the Board that enable the Board to:

- evaluate the overall public good that the facilities requested can create as well as its potential negative aspects;
- weigh the various impacts; and
- make an informed decision that balances various interests.

While it is ultimately the responsibility of the applicant to make its case before the Board, this manual provides direction regarding the information the Board would typically expect to see addressed in a filing. Complete filings should allow the Board to carry out more consistent assessments with fewer information requests and, therefore, shorten timelines required to make a decision.

As will be seen from the detailed requirements, the Board's assessment of proposed projects includes, along with other considerations, a risk-oriented approach that considers the probability and consequence of potential issues. The level of detail for any particular issue in an application should therefore consider this.

1.3 Content Organization

The filing requirements are generally presented in the following format:

- a **Goal** statement that summarizes the subject matter of the information to be provided;
- **Filing Requirements** that specify the information needed;
- a **Guidance** section that provides direction regarding, for example, the level of detail, potential issues and information references; and
- **"FYI" (for your information) grey boxes** that provide direction for when further information may be appropriate, where further guidance can be found, 'off-ramps' for when additional information may not be required, and various other tips, examples, and reminders.

1.4 Confidential Filing

An applicant may request that the NEB treat a portion or section within an application as confidential in accordance with section 16.1 of the NEB Act. If the NEB is satisfied that the filing meets the conditions set out in paragraph 16.1(*a*) or (*b*), it may take any measures and make any order that it considers necessary to ensure confidentiality. One such measure is that only select Board staff and Members responsible for the consideration of the filing would have access to the information and the information would not be available to the public.

1.5 Previously Filed Material

If an applicant wishes to refer to documents previously filed with the Board and those documents are still current (e.g., company manuals, programs, standards or procedures), rather than resubmitting the documents, the applicant may:

- indicate when, under what circumstances and under what Board file number (if known) the information was filed;
- identify the document and its version; and
- identify the section(s) of the document being referenced.

1.6 Pre-Application Meetings Guidance Notes

Applicants may request a pre-application meeting to clarify filing requirements with NEB staff. The *Pre-Application Meetings Guidance Notes* describe the process for requesting a meeting. These can be found on the NEB website.

1.7 Filing with the National Energy Board

Parties with the ability to file electronically are expected to file documents through the Board's electronic document repository at www.neb-one.gc.ca. Any person who has the ability to access documents through the repository must accept service of a notification that the document is in the repository rather than requiring that a hard copy of the document be served.

For more information about filing electronically, please refer to the Filers Guide to Electronic Submission and the Memorandum of Guidance on Electronic Filing. Both of these documents are available on the Board's internet site at www.neb-one.gc.ca.

Please note that e-mails are not considered electronic filing and will not be accepted in a proceeding.

The Board's electronic document repository will contain the full text of only those documents filed electronically (following the procedures mentioned above). When documents are filed by hard copy or facsimile, the Board may create an electronic placeholder. This placeholder indicates that a document has been filed in hard copy (and is available in the Board's library) but it will not be possible to view or search these documents on the electronic document repository.

If you are filing an application by hard copies, you must file 15 copies. If you file electronically, one hard copy must be filed subsequently. The hard copy must have attached to it a signed copy of the Electronic Filing Receipt that the system will return to the filer upon receipt of the electronic document. Please file your completed application with the NEB and address it to:

Secretary
National Energy Board
517 Tenth Avenue SW
Calgary, AB T2R 0A9
Telephone: 403-292-4800 or 1-800-899-1265
Facsimile: 403-292-5503 or 1-877-288-8803

1.8 Updates

It is the Board's intent to update this document as necessary. The Board would appreciate any comments users may have regarding the content, usability or other matters associated with this document that could assist with future updates and revisions.

All comments may be directed to the Board by:

E-mail: FilingManual@neb-one.gc.ca
Facsimile: Secretary at (403) 292-5503 or 1-877-288-8803
Telephone: 1-800-899-1265

Mail:

Secretary
National Energy Board
517 Tenth Avenue SW
Calgary, AB
T2R 0A8

The Board will communicate its future revision process and schedule and any interim updates at www.neb-one.gc.ca.

Chapter 2 Instructions to Users

2.1 Summary of International Power Line Filing Requirements

Table 2-1 below provides a high level overview of the information requirements the Board considers applicants must file with the Board for an authorization to construct an international power line. The table outlines the main chapters and headings and their corresponding main information filing requirements.

Applicants should consider each chapter of this manual and file all the information that is of relevance to their particular project, in accordance with the nature and magnitude of the project.

Applicants are encouraged to structure their application in logically sequenced and numbered paragraphs based on the content of the information.

Table 2-1Summary of International Power Line Filing Requirements

Filing Manual Chapter	Main Information Requirements
3. Common Information Requirements 3.1 Action Sought by Applicant 3.2 Project Proponents 3.3 Proof of Publication of Notice	• A description of what NEB authorization is being applied for • Identity of applicant and contact information • Identity of the owners and operators of the IPL in Canada, if different from the applicant. • A description of the owner and operator of the power systems • Identity of the owners and operators of the power line outside Canada • A proof of publication of notice
4. Project Description and Engineering	• Provide a description of the IPL project that includes its location, all project components and activities, the project schedule and any related undertakings

4.1 Project Location	• Locational information should include a description, and maps, of:
	  • The route, facility sites and any proposed ancillary facilities
	  • The terminal points and international boundary crossover point
	  • Environmental, socio-economic, and land or resource use constraints that restrict the preferred route or location of facilities
	  • Land use features which the IPL is to cross
	  • The power line outside Canada

4.2 Project Components and Activities	• The description of project components and activities should include:
	  • Voltage level
	  • Number and size of conductors
	  • Description of the tower or other structures that will provide the physical support
	  • A single-line diagram identifying all the IPL facilities
	  • Discussion of engineering philosophy and principles
	  • A description of standards, practices and procedures to be used in the design, construction and operation of the IPL

4.3 Impacts to the Bulk Power system	• Impacts to the bulk power system • A description of the power transfer capability and the criteria for this • A copy of all interconnection agreements or other agreements • A description of provincial requirements and any other approvals required, including those for the power line outside Canada
4.4 Other Required Approvals and Project Schedule	• A schedule showing the proposed dates for the start and completion of construction of the IPL and the power line outside Canada • A description of the other approvals required, the review process and schedule applicable, and their current status

Filing Manual Chapter	Main Information Requirements
4.5. Alternatives	• A description of the environmental, land-use and other criteria used to determine the proposed route and facility sites, and any alternatives • A map of the alternative route and facility sites

5. Consultation	• A description of any consultation or early public notification process implemented by the applicant, which should include:
	  • The principles and goals of the consultation program
	  • The design of the consultation program
	  • The results of the consultation
	  • An explanation if a consultation program was not implemented
	  • Notification of third parties
	  • Description of any adverse effects on other provinces

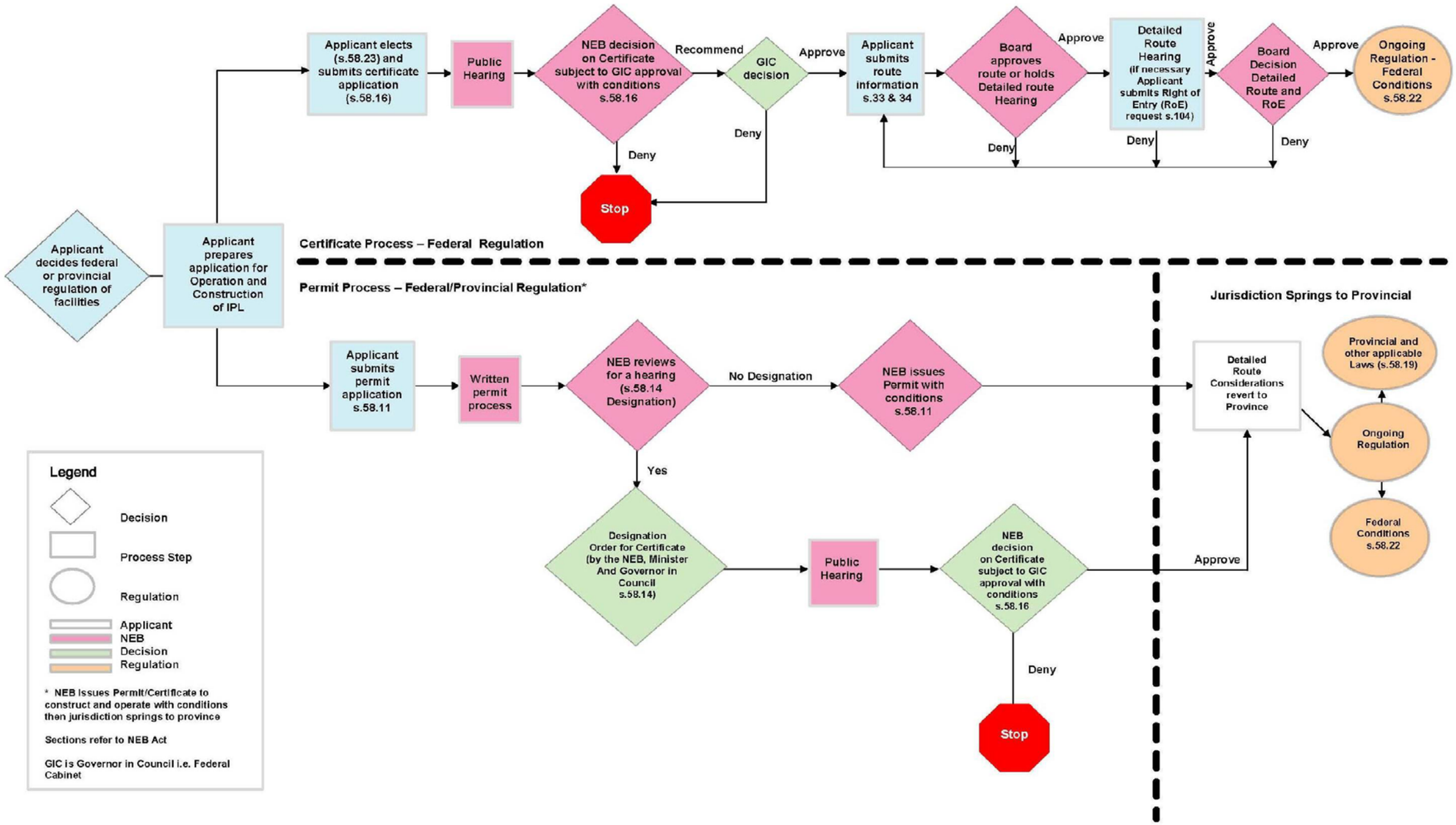
6. Environmental and Socio-Economic Assessment	• An environmental assessment, completed according to the applicable federal or provincial legislation, for the construction and operation of the proposed project • This should be based on the project description, provide a description of the environmental setting, elucidate any project-environment interactions and identify potential project-related environmental effects, describe the mitigative measures to be used, and evaluate the environmental and cumulative effects arising from the IPL • For projects > 345 kV with 75 km of new RoW, CEA Act 2012 considerations.

7. Economics	• A copy of the most recent annual report of the owner and operator of the lines both in Canada and outside of Canada
	• And alternatively, for the line in Canada, information for the Board to determine:
	  • Evidence that the proposed IPL will be used, useful and and contribute to the Canadian public interest
	  • Description of supply, demand, load conditions
	  • Evidence of the ability to finance the IPL

8. Lands Information	• Documentation on land areas and land rights • For election certificates, service of notice, land acquisition process • A plan or survey for the international boundary crossover point

Figure 2-1 outlines the different regulatory options an applicant should choose from before applying to the Board. The figure also sets out, under each option, the different steps for processing IPL facilities applications and the legislation, whether federal or provincial that would apply.

Figure 2-1
Options Under NEB Act



2.2 Regulatory Listing

Table 2-2 lists the sections of the NEB Act and instruments issued in accordance with the NEB Act that have been identified within this Manual as requiring an application to the Board with respect to IPLs.

Table 2-2: Sections of NEB Act Regarding IPLs

Application Description	NEB Act and Legal Instruments	Guide or Appendix
International Power Line (election certificate)	58.23	
Information Filed Respecting PPBoR and Notices	33 and 34	Guide A
Right-of-Entry Application	104	Guide B
International Power Line (permit)	58.11	
Addition or modification of facilities	21	
Deviations (for federal lines)	45	
General Order for Electricity Reliability Standards	MO-036-2012	Appendix I

2.3 Permit Applications

Permit applicants should note that the information required for NEB IPL permit authorizations is stipulated in Part II of the *Electricity Regulations*.

As this Filing Manual is intended to set out the requirements for an election certificate, the requirements and guidance within the manual may be more extensive and detailed than necessary for a permit application. The manual should be used as a reference and potential source of guidance and applicants should apply judgment accordingly.

For example, judgment should be used where regulatory requirements logically require certain other information or details that may not necessarily be stipulated in the *Electricity Regulations*. For instance, where section 5 of the *Electricity Regulations* refer to the need for an environmental assessment report, this would necessarily require sufficient description of the project and the environmental setting to complete the report regardless whether certain details about the project or environmental setting are specifically required in other sections of the regulation. Therefore, in accordance with the nature and magnitude of the project, as well as the *Electricity Regulations*, applicants should file all relevant information. This filing manual strives to provide guidance to this end.

A pre-application meeting with staff at the NEB is available if further guidance is desired. Please contact the Board if you wish to arrange a pre-application meeting.

To assist permit applicants for IPLs greater than 50 kV in using this filing manual as guidance, Table 2-3 below cross-references the section 5 *Electricity Regulations* requirements with the corresponding relevant chapter in the manual. Table 2-4 cross-references section 4 of the *Electricity Regulations* for IPLs less than 50 kV with related sections in the manual.

As with certificate applications, applicants are encouraged to structure their application in logically sequenced and numbered paragraphs based on the content of the information. However, permit applications may also be filed according to the order and structure of Section 5, Part II of the *Electricity Regulations*.

Table 2-3: Guide to Electricity Filing Manual by *Electricity Regulations* section 5 for IPLs over 50 kV

Part II ***Electricity Regulations***	**Filing Manual Chapter**
s.5 (*a*) and (*b*)	3. Common Information Requirements 7. Economics
s.5 (*c*)	3.3 Proof of Publication of Notice
s.5 (*d*)	5. Consultation
s.5 (*e*) and (*f*)	4.1 Project Location 4.5. Alternatives
s.5 (*g*), (*h*) and (*i*)	4.1 Project Location
s.5 (*j*)	8. Lands Information
s.5 (*k*)	3.2 Project Proponents
s. 5 (*l*)	7. Economics
s.5 (*m*), (*n*) and (*o*)	4.2 Project Components and Activities 4.3 Impacts to the Bulk Power System
s.5 (*p*), (*q*) and (*r*)	5. Consultation 4.4 Other Required Approvals and Project Schedule
s.5 (*s*), (*t*) and (*u*)	6. Environmental and Socio-Economic Assessment
s.5 (*v*)	5. Consultation
s.5 (*w*)	4.2 Project Components and Activities

Based on the nature and magnitude of the project, Applicants may wish to consult the appropriate chapter of this manual and file all the information that is of relevance to their particular project while keeping in mind that this manual generally goes further than what is required for Permit applications for IPLs over 50 kV.

Table 2-4: Guide to *Electricity Filing Manual* by NEB *Electricity Regulations* section 4 for IPLs under 50 kV

Part II *Electricity Regulations*	**Filing Manual Chapter**
s.4 (*a*) and (*b*)	3. Common Information Requirements
s.4 (*c*)	3.3 Proof of Publication of Notice
s.4 (*d*)	5. Consultation
s.4 (*e*) and (*f*)	4.1 Project Location
s.4.(*g*)	3.2 Project Proponents
s.4 (*h*)	4.2 Project Components and Activities
s.4. (*i*)	4.3 Impacts to the Bulk Power System
s.4 (*j*)	6 Environmental and Socio-Economic Assessment
s.4 (*k*) and (*l*)	4.4 Other Required Approvals and Project Schedule

Chapter 3 Common Information Requirements

This chapter outlines the filing requirements that are of a general administrative nature:

- a description of, and justification for, the Board authorization being sought by the applicant;
- details regarding the applicant, owners and operators of the IPL; and
- details regarding the publication of Notice.

3.1 Action Sought by Applicant

Goal

The application states the request being made, the reasons for it, and what action is being requested of the Board.

3.1.1 Project Summary

Filing Requirements

The application must contain a concise description of the proposed project.

Guidance

In describing what authorization is being sought from the Board, it is necessary to provide a summary overview of key facts concerning where the project is situated and what the project entails.

3.1.2 Board Authorization Being Sought

Filing Requirements

The application must state what authorization is being sought and the provisions of the Act under which the application is made.

Guidance

Types of Authorizations

Part III.1, sections 58.1 to 58.4 of the NEB Act govern construction and operation of power lines. Applicants can apply for two types of authorizations: permits and election certificates. Permits do not require a public hearing and can be granted more expeditiously, if the application is complete and suitable. Election Certificates require a full public hearing process. Applicants can apply for a permit, but the Board, once it has reviewed the application, may recommend to the Minister that the IPL be designated by order of the GIC, which would mean the IPL would require a certificate and thus a public hearing. The latter is a designation order certificate distinct from an election certificate from an implementatation pespective.

Applicants can also consider whether they want the Board or the province to have jurisdiction over the life of the facilities. In the case of permits or designation order certificates, authority

over the facilities reverts to the province once the permit or designation order certificate is granted. For election certificates, the applied-for facilities would fall under Board jurisdiction as the provisions of the NEB Act would apply and not the laws of a province.

3.1.3 Project Justification

Filing Requirements

The application clearly articulates the justification and rationale for the proposed project and authorization being sought from the Board.

Guidance

The application should provide justification for the authorization being sought. This should describe the purpose of the proposed project, the need that would be addressed by the project and how the project is an appropriate option to meeting the need while serving the public interest.

3.2 Project Proponents

Goal

The application identifies the parties involved in the proposal of the project and provides their contact information.

Filing Requirements

The application must contain:

- the name of the applicant and any authorized representative of the applicant, their mailing address, address for personal service, telephone number and any other contact information;
- the names and addresses of the owner and the operator of the IPL, if they are different from the applicant, and a description of the power systems that each owns and operates; and
- the name and address of the owner and operator of the power line outside Canada.

3.3 Proof of Publication of Notice

Applicants for certificate applications will be supplied with direction on how to publish a Notice of Hearing and its contents by the Board in the Hearing Order to be issued once the Board has decided to set an application down for a hearing. This requirement most commonly would require publication in selected newspapers or other publications along the route.

All applicants for IPL permits are required by the NEB Act (s.58.12) to publish a Notice at the time of the application. This is to be published in the *Canada Gazette, Part I* in both official languages and other publications as the NEB considers appropriate. Board staff can assist proponents in finding recent examples during a pre-application meeting.

In addition, applicants for IPL permits are directed:

- for IPL permits exceeding 50 kV, to serve a copy of their application and Notice on each directly interconnected Canadian utility, and

- to publish the Notice on the same date (insofar as it is possible to do so) as publication occurs in the *Canada Gazette, Part 1* as follows:
    - in English in the largest paid general circulation English language newspaper and in French in the largest paid general circulation French language newspaper, published in the most populous community along the route;
    - if the community referred to above is not served by a general circulation English and a general circulation French language newspaper, the Notice must be published in both official languages in the newspaper which has the largest paid circulation in that community.

Chapter 4 Project Description and Engineering

This chapter describes the information an applicant needs to file with the Board with respect to describing the IPL project, including all project components, activities and related undertakings, their location and the project schedule.

4.1 Project Location

Goal

The application includes a complete description of where the project and its components are located.

Filing Requirements

Provide a description of, and maps that show, at an appropriate scale:

- the terminal points and international boundary crossover point;
- the route, facility sites and any proposed ancillary facilities;
- land use features which the IPL is to cross;
- constraints that restrict the preferred route or location of facilities or project components;
- the power line outside Canada; and
- the location of project components and related undertakings.

Describe the width of the right of way proposed and the reasons why that width was selected.

Guidance

Constraints that restrict the preferred route or location of facilities or project components include environmental, socio-economic, and land or resource use factors, including general land tenure; current land uses, zoning and land use plans; the nearest residences and communities; and unique or major physical features.

For some information, line drawings or site plans may be more appropriate.

Where available the Board encourages applicants to include key Global Positioning System (GPS) locations as part of their spatial information submissions, particularly for the project endpoints, boundary crossover point and main IPL route locator points.

4.2 Project Components and Activities

4.2.1 Engineering Design Details

Goal

The application provides a description of the physical design, operational details and lifecycle activities of the proposed project, with sufficient detail to:

- identify project design features and procedures that will ensure the safe, secure and reliable operation of the proposed facilities;
- identify potential project related interactions with the environment; and
- identify project design features and practices that will mitigate adverse environmental and socio-economic effects.

Filing Requirements

The application shall identify and describe all project components, activities and related undertakings (e.g., conductors, substation components, access roads including temporary and permanent bridges, construction camps, temporary work space, etc.), including, but not limited to:

- the voltage level;
- the number and size of conductors;
- a description of the tower or other structures that will provide physical support for the international power line; and
- a single-line diagram identifying all the facilities that constitute the international power line.

The application should include a description of how the project will be carried out.

Provide a description of any facilities to be constructed by others which are required to accommodate the proposed facilities including temporary facilities.

Describe other permits, licenses, or authorizations that will be required before part or all of the project can proceed.

Guidance

NEB-regulated facilities are to be safe and secure. They are also to be built and operated in a manner that respects the rights of those affected. In general, the information listed above is required in order for the Board to ascertain that the electrical design and operation of the project, if it were built, would meet these goals.

The project description should address:

- what the project is, including:
    - a complete list and thorough description of the project components, activities and, any related undertakings (i.e., any additional components or activities required for the project to proceed, such as temporary work space, means of access including temporary and permanent bridges, etc.);
    - a description of replacements or expansions of physical works and activities that are anticipated over the life of the project; and
    - preliminary drawings if available.
- how the project will be carried out, including:
    - a thorough description of how project activities (e.g., clearing, blasting, tower foundations, tower raising, stringing, watercourse crossings, inspection, monitoring programs, testing, etc.) would be carried out during the construction and operations phases; and
    - the anticipated workforce (i.e., person days and skills required for construction and operations activities).

The above requirements generally assume that the project is of overhead construction. If the project is of underground construction, in whole or in part, substitute information should be provided as appropriate (e.g., trenching or conduit details and construction information versus information on tower structures).

The single-line diagram identifying all the facilities that constitute the international power line should include information detailing the line's connection to substation facilities in Canada. The diagram should clearly delineate what substation components form part of the line versus substation components forming part of the host Canadian power system. Components to be identified should include equipment and structures such as busbar, transformers, breakers, switches, air breaks, reactive compensation components, protective relaying and metering equipment, etc.

4.2.2 Engineering Design Philosophy

Goal

The application provides sufficient description of the applicable codes, standards and regulations and any engineering details with respect to any special design challenges, to demonstrate that the proposed facilities will be safe, secure and reliable.

Filing Requirements

1. The application should clearly indicate all primary codes and standards, including the version and date of issue, that will be followed in the design and material selection for each element of the applied-for facility, subject to the following:

- where there is a choice in the code or standard selected, provide a brief reason why the referenced code or standard is considered appropriate, and
- where there is no industry-recognized code or standard, provide brief reasoning why the proposed course of action would be taken with respect to affected design and material selections.

2. The application should clearly indicate that the project will comply with applicable company design and operations manuals and confirm that, in turn, these manuals comply with the codes and standards for the project. As well applicants are expected to keep the latest versions of these manuals available for Board audit and file copies upon request.

Guidance

1. The information listed above is desired in order for the Board to ascertain that the electrical design and operation of the project, if it were built, would be safe and secure and perceived as being so. To this end the application should demonstrate that the project would not be inconsistent with current generally-accepted industry practice and procedure for similar facilities built and operated under similar circumstances and conditions elsewhere, preferably in Canada.

2. Where no clearly-applicable industry-recognized code or standards exist, the use of good engineering practice is recognized, respected and expected. However, to the extent possible, a course of action proposed as a consequence of doing so should be clearly traceable back to established code, standards or engineering principles.

4.3 Impacts to the Bulk Power System

Goal

The application provides sufficient information to identify and justify the effects of the proposed project on the safe operation, security and reliability of the existing and projected power system it would become a part of.

Filing Requirements

The application shall provide:

- the total export and import power transfer capabilities, with and without the proposed international power line, of the local Canadian power system to which the proposed project will interconnect, and of the non-Canadian power system that the international power line will connect to, stating the criteria for those capabilities;
- the proposed international power line's power transfer capability for sustained transmission of power under winter and summer conditions, and the criteria for the stated power transfer capability;
- a description of the reliability standards to which the IPL will be subject during operation;

- a copy of:

    (i) each interconnection agreement that relates to the construction of the international power line, and

    (ii) any other agreement between the applicant and the owner or the operator of the power line outside Canada that relates to the construction and operation of the international power line and the power line outside Canada;

- confirmation ensuring compliance with the North American Reliability Corporation (NERC) reliability standards, as applicable.

Guidance

1. Applicants should review the General Order for Electricity Reliability Standards (Appendix I) for guidance on the Board's expections regarding reliability standards.

2. The information listed above is required in order to ascertain that the presence, timing, design and operation of the project, if it were built, would respect others' right to expect safe and reliable electrical service from the power system in its existing and projected future forms. It should also assist in ascertaining that the project, if it were built, would not compromise or jeopardize the power system's physical security. To this end the application must demonstrate that the project has or will acquire all approvals required for it from provincial governments or other appropriate authorities.

3. Where the project would be considered to form part of the bulk power system, the application for the project should provide the details of the international power line's review, studies and recommendations by the appropriate element(s) of governing electric system reliability organization(s), such as the Regional Reliability Organization(s) of the NERC. This could be provided in the form of copies of appropriate documents, such as study reports, issued by such organisations with respect to the project.

4. It is the expectation of the Board that applicants will comply with the most current version of reliability standards those are developed by a standards development authority, for example NERC, that is recognized in a province during the design, construction, and operation of the proposed facility. Applicants should confirm their commitment to the Board.

4.4 Other Required Approvals and Project Schedule

Goal

The application includes information on other regulatory approvals and processes and the project schedule.

Filing Requirements

Provide:

- a description of provincial approvals that are required for the power line in Canada including,

    - a description of the review process for each provincial approval including any public consultation component,
    - the status of each review process and the schedule for the completion of any outstanding reviews, and
    - a copy of any provincial approvals already obtained;
- a description of the approvals that are required to be obtained, from the appropriate authorities for the power line outside Canada;
- for permit applications, the identity of the designated provincial regulatory agency;
- a schedule showing the projected dates for the start and completion of construction of the international power line and the power line outside Canada; and
- the expected in-service date.

Guidance

The NEB requires information regarding the status of all approvals or authorizations both inside and outside Canada. This is in order to reasonably assure the Board that there are no issues before other regulators that would prevent or delay either the construction or use of the applied-for facilities. Updates on status may also be provided after an application has been submitted. The NEB will consider non-NEB approvals that are filed with the application to the NEB and will minimize, to the extent possible, duplications in regulatory burden. It is therefore in the applicant's interest to file non-NEB approvals at the outset to improve regulatory efficiency.

While applicants may choose when to apply for their provincial and NEB authorizations, applicants should be aware that the NEB permit process is best suited for after the corresponding provincial review. Should an applicant choose to apply to the NEB before, or at the same time as, applying to the provincial regulator, it will be especially important that project routing is as detailed as possible and that public consultation (on that specific route) is as complete as possible. Should an applicant's project planning and consultations not be far enough advanced before applying to the NEB this may result in a longer review process.

In the case of permit applications, section 58.17 of the NEB Act requires that the applicant identify what provincial regulatory agency is designated for the oversight of the proposed IPL. This is an important requirement to ensure there is no regulatory gap in the jurisdiction of the IPL ultimately reverting to the province. Proponents may wish to be prudent in ensuring this issue is resolved prior to applying with the NEB.

With respect to sheduling information, the project schedule should:

- include a breakdown of all major construction activities by sub-activities;
- identify any timing constraints or windows which the schedule must accommodate; and
- describe how any changes to schedule can affect the rest of the schedule and ultimately the project.

You should include a description of when proposed decommissioning and abandonment of the project might take place.

For elected certificates, you should also provide a schedule for operational activities, such as inspection, repair or maintenance.

FYI - Reminders...

Within the Canadian Electricity Policy, Chart 2 on the Regulation of International Power Lines clearly illustrates how propopnents should ideally obtain provincial approvals prior to applying to the NEB for authorization of an IPL.

4.5 Alternatives

Goal

The application includes a description of the alternatives considered and the rationale for the options selected.

Filing Requirements

1. Describe other alternatives that were examined and the rationale for selecting the applied-for project over these other possible alternatives.
2. Describe and justify the selection of the proposed route and site, including a comparison of the alternatives using selection criteria.
3. Describe, where appropriate, any alternative designs and construction methods that were considered and the rationale for selecting the preferred design and construction methods.

Guidance

Alternatives Considered

Alternatives are functionally different ways of meeting the need and purpose of the project, or are other technically, economically, socially and environmentally feasible means of fulfilling the project. These could include an alternative:

- interconnection strategy;
- route or site;
- facility design; or
- construction methods, including different means of development, implementation and mitigation.

Selection Criteria for Alternatives

Different project, routing, design and construction alternatives should be summarized and compared using a suite of criteria that justifies and demonstrates how the proposed option was selected and why it is the best option.

When comparing project, routing, design or construction alternatives, you should elaborate on the following criteria, as appropriate:

- engineering design;
- economic feasibility or costs;
- effect on reliability and security of the existing host power system;
- demonstrated public concern;
- environmental and socio-economic constraints, benefits or potential effects; or
- regional concern from a cumulative effects standpoint.

The level of detail provided should be consistent with the scope of the project and any potential impacts on the stability and reliability of the host power system, other parties, and the environment.

Chapter 5 Consultation

The Board expects an applicant to have a company-wide Consultation Program that establishes a systematic, comprehensive and proactive approach for the development and implementation of project-specific consultation activities. A Consultation Program should be appropriately integrated into a company's overall management system to provide protection for the public, employees, property and the environment throughout the lifecycle (design, construction, operation, maintenance, abandonment) of an IPL project.

The Board expects applicants will consider consultation for all projects. Depending on the project, that could mean carrying out extensive consultation activities or a simple consultation activity such as notifying a single landowner. Applicants are responsible for justifying the extent of consultation carried out for each application. Applicants may also make use of the Board's publications to inform potentially affected persons about the NEB and its processes. On the NEB's website there is a detailed list of our publications and what each is used for. (See Guidance for Companies on NEB Publications under *Participation & Lands*.)

The following information should be provided within the application:

- an overview of the policies and goals of the Consultation Program;
- a description of the design of the project-specific consultation activities; and
- a description of the outcomes of the project-specific consultation activities.

If no project-specific consultation activities are implemented, an explanation is also required. Each of these information requirements is discussed in further detail in the following sections.

5.1 Policies and Goals of the Consultation Program

Goal

The application outlines the corporate policy or vision with respect to consultation and the principles and goals that guide the applicant's Consultation Program.

Filing Requirement

Provide an overview of the company's consultation philosophy, which should include, but not be limited to:

- the corporate policy or vision with respect to consultation;
- the principles and goals established for the applicants's Consultation Program; and
- a copy of the Aboriginal consultation policy, if established, along with any documented policies and principles for collecting traditional knowledge or traditional use information, if applicable.

Guidance

The Board expects an applicant to develop and implement a Consultation Program to anticipate, prevent, mitigate and manage conditions which have the potential to affect persons and groups.

5.2 Designing Project-Specific Consultation Activities

Goal

The application indicates why the design of project-specific consultation activities is appropriate for the nature of the project in alignment with the company's Consultation Program.

Filing Requirement

Provide a description of the project-specific consultation activities and the factors that influenced its design.

Guidance

When designing project-specific consultation activities, applicants should consider that the Board expects consultation activities will, at a minimum:

- be initiated as soon as possible in the planning and design phase of a project;
- provide clear, relevant and timely information to potentially affected persons or groups;
- be accessible to and inclusive of all potentially affected persons or groups;
- be responsive to the needs and input of potentially affected persons or groups; and
- continue throughout the regulatory process, as well as the construction and operation phases of a project.

When consultation includes Aboriginal groups, consider establishing a consultation protocol in collaboration with these groups that takes into consideration their needs and cultural elements.

Project-Specific Consultation Activities

Describe project-specific consultation activities. At a minimum describe the:

- potentially affected persons or groups to be consulted, including:
    - local residents, landowners and land or waterway users;
    - government authorities; and
    - Aboriginal groups;
- potential information needs of the persons or groups;
- the process by which potentially affected parties can comment to the Board before the Board makes its decision;
- methods and timing of consultation;
- procedure for responding to issues and concerns; and
- plans for future consultation and follow-up throughout the operations phase of a project.

Design Factors

Consider the following factors, where appropriate, in the design of consultation activities:

- the nature, magnitude and areal extent of the project;
- the potential environmental and socio-economic effects of the project;
- effects of the project on navigation and navigation safety;
- potential broad impacts of the project that may extend beyond the project boundaries (e.g., noise and air emissions);
- all registered and non-registered interests held in the lands that may be affected by the project, which may include individuals or organizations identified through the consultation process;
- the specific or distinct needs of various potentially affected persons and groups;
- the location of Indian reserve lands, Métis settlements and traditional territories;
- existing local community concerns or sensitive issues that may be exacerbated by the project;
- the availability of emergency services;
- the compatibility of the project with current land use and zoning;
- the proximity of the project to urban centres;
- different project routing, design and construction alternatives, and their potential impacts on persons and groups; and
- any other relevant factors not included in this list.

Government Authorities

Ensure the appropriate government authorities (local, regional, provincial and federal) are included in consultation activities. In some cases, regulatory approval from another authority will be required. Contact that authority to determine their information requirements.

Table 5-1, while not exhaustive, identifies federal authorities that might need to be contacted for certain projects. This list is intended for assistance and guidance only – applicants are responsible for obtaining all necessary approvals for any project. The Board accepts no responsibility for the accuracy or completeness of this list.

Table 5-1: Other Potential Federal Contacts

Project Considerations	Contact
Does the project occur in a National Park or National Historic Site or is it likely to affect a National Park or National Historic site?	Parks Canada
Is the project likely to take place on, involve dredge or fill operations in, draw water from or discharge water to a historic canal administered by and operated by Parks Canada?	Parks Canada Public Services and Procurement Canada
Is the project likely to affect Indian reserve lands?	Indigenous and Northern Affairs Canada
Will the project occur on lands in the Yukon or the Northwest Territories that are under the control, management and administration of Indigenous and Northern Affairs Canada and require the issuance of a Class A or Class B permit?	Indigenous and Northern Affairs Canada
Is the project likely to result in international air pollution?	Environment and Climate Change Canada
Is the project likely to result in the deposition of materials into the marine environment?	Environment and Climate Change Canada
Does the project occur in a wildlife area as defined in the *Wildlife Area Regulations*?	Environment and Climate Change Canada
Could the project affect wildlife species at risk or their critical habitat or the residences of individuals of those species?	Environment and Climate Change Canada Fisheries and Oceans Canada Parks Canada
Is the project likely to result in: • killing, capturing, taking or possessing a migratory bird or its nest or eggs; • collecting eiderdown or depositing oils or other harmful substance in areas frequented by migratory birds; • an effect on migratory bird habitat within a bird sanctuary; or • the release of a species of bird not indigenous to Canada?	Environment and Climate Change Canada
Will the project affect the natural flow of an international river (i.e., water flowing from any place in Canada to any place outside Canada) or affect the actual or potential use of that river outside Canada?	Environment and Climate Change Canada
Is the project likely to result in the release of a deleterious substance?	Environment and Climate Change Canada
Is the project likely to affect wetland function?	Environment and Climate Change Canada Fisheries and Oceans Canada Parks Canada
Is the project likely to affect fish or fish habitat, affect the quantity or quality of water available for fish, or result in the destruction of fish by means other than fishing?	Fisheries and Oceans Canada
Is the project likely to affect the operation of a railway company or property owned or leased by a railway company, or require the installation of telephone, electricity, telegraph or other wire services for a railway facility?	Canadian Transportation Agency Transport Canada if *Railway Safety Act* is involved
Will the project result in cutting timber or constructing roads in a Federal Forest Experimental Area?	Natural Resources Canada
Does the project involve producing or holding explosives in a magazine?	Natural Resources Canada
Does the project involve replacing or repairing a bridge?	Public Services and Procurement Canada

Identifying Aboriginal Groups

Aboriginal groups potentially affected by the proposed project can be identified by:

- considering the location of Indian reserve lands, Métis settlements, Métis or other Aboriginal populations, and the traditional territory that may be claimed by one or more Aboriginal groups;
- contacting regional Aboriginal organizations or government agencies familiar with local Aboriginal groups; and
- taking into consideration past experience working in the area.

Consider augmenting the application with local and traditional knowledge and integrating the information and knowledge, where appropriate, into the design of the project. Where local and traditional knowledge is obtained, provide an opportunity for the individual who provided the information to confirm the interpretation of the information and how it was used in the project design.

Methods and Timing of Consultation

Project information should be communicated in a format and manner that is appropriate to the audience. If feasible, determine the means of communicating project information in conjunction with the potentially affected persons or groups.

Consultation methods to inform the public on project details may include:

- project brochures, either mailed or hand delivered;
- periodic newsletters;
- advertisements in local newspapers;
- radio spots; and
- a project web page.

Consultation methods which also provide direct opportunities for public input may include:

- telephone calls;
- open house meetings;
- project questionnaires;
- facility tours;
- on-site meetings;
- personal visits; and
- workshops.

Consultation activities should be early enough to allow those consulted opportunity for meaningful input into project planning and for adequate notification of project activities. The timing of consultation activities should also be sensitive to seasonal and other schedule constraints of potentially affected persons or groups (e.g., harvest, trapping, hunting, holiday periods).

Addressing Input

Input refers to all of the information provided to the company, or its representative, by persons or groups during the project's consultation program. To effectively address input provided by potentially affected persons or groups, the Board expects an applicant to incorporate in the design of its consultation activities a system for:

- recording input received, and ensuring opportunities to seek to understand the full nature of that input;
- considering the feasibility of and implementing any proposed changes to the project based on input obtained during consultation;
- augmenting the application with local and traditional knowledge and integrating the information and knowledge, where appropriate, into the design of the project;
- allowing opportunity for the individual(s) who provided local and traditional knowledge to confirm interpretation of the information and how it was used in the project;
- ensuring input is responded to;
- tracking how input has been considered, addressed and responded to; and
- working with persons or groups to jointly address outstanding concerns.

5.3 Implementing Project-Specific Consultation Activities

Goal

The application describes the results of the public consultation conducted to-date for the project, with sufficient detail to demonstrate:

- that all persons and groups potentially affected by the project are aware of: the project, the project application to the Board, and how they can contact the Board with outstanding application-related concerns;
- that those potentially affected by the project have been adequately consulted; and
- that any concerns raised have been considered, and addressed as appropriate

Filing Requirement

Provide confirmation that the information provided to potentially affected persons and groups described:

- the Applicant's intention to apply to the Board for approval of its project, and
- how they can contact the Board with outstanding application-related concerns before the Board makes its decision on the application.

Describe the outcomes of the consultation activities conducted for the project ,including, but not be limited to:

- the persons or groups consulted;
- the methods, dates and locations of consultation activities;
- the information that was distributed to persons or groups, which in most cases will include:
    - the location, starting and ending points, route and main components of the project;
    - a map or maps at appropriate scale that show all major components of the project, the routing of the project, the workspace required, the location of proposed facilities such as pump and compressor stations, and the location of any major towns, roads, water bodies or other landmarks in the area of the project;
    - the proposed timing and duration of construction;
    - the potential environmental and socio-economic effects of the project and how those effects will be addressed;
    - how public safety will be addressed;
    - the emergency response information;
    - how comments or concerns raised by potentially affected persons or groups will be addressed throughout the consultation process;
    - how interested persons can participate further in the consultation process;
    - company contact information;
    - the proposed timing of filing the application with the Board; and
    - the NEB pamphlet (blue colour) Information for Proposed Pipeline or Power Line Projects that Do Not Involve a Hearing if the project is not subject to a hearing. (For hearings, provide the NEB pamphlet (yellow colour) Information for Proposed Pipeline or Power Line Projects that Involve a Hearing);
- a summary of the comments and concerns expressed by potentially affected persons or groups;

- a summary of the response made regarding each of the concerns or comments, including:
    - the measures taken, or that will be taken to address those concerns or an explanation of why no further action is required to address the concerns or comments; and
    - the methods and dates that the response was made to the person(s) who raised the concern(s);
- how outstanding concerns will be addressed;
- how input from persons or groups has influenced the design, construction or operation of the project;
- details regarding discussions with Aboriginal groups, which includes each of the items listed above and:
    - the identity of all Aboriginal groups contacted, how they were identified, when and how they were contacted and who was contacted;
    - any relevant, non-confidential written documentation regarding consultations;
    - any concerns about the project raised by Aboriginal groups that you have discussed with any government department or agency, including when contact was made and with whom; and
    - if you are aware of any involvement of the Crown in consultations with the Aboriginal groups with respect to the project, describe the Crown involvement; and
- the details and results of the consultation undertaken with all persons who may be affected by any changes to the project.

Guidance

Notice To Those Potentially Affected

The Applicant should provide confirmation of adequate notice by providing a description of:

- the process by which potentially affected persons and groups can contact the Board before the Board makes its decision; and
- the methods and timing of notification and consultation.

The Applicant should maintain records and be prepared to further demonstrate the adequacy of the notice that was provided to all potentially affected persons and groups.

See Guidance in Chapter 5.2.

For consultation programs that involve a large number of people, it might not be practical to list all individuals that were consulted. It may be more practical to group people and provide the rationale for the grouping. For example, where a group of people has a common concern, need or association, the application should describe:

- the group;
- its location(s);
- its common concern, need or association; and
- the authority of any representatives of the group.

Concerns

To close the loop in consultation activities and address concerns before they become complaints, the Board expects applicants to:

- seek to understand the full nature of concerns expressed by persons or groups;
- consider the feasibility of any mitigation proposed by persons or groups to address those concerns;
- respond to concerns; and
- work with persons or groups to jointly resolve concerns.

5.4 Justification for Not Undertaking Consultation Activities

Goal

The application provides justification of why it was not necessary to carry out consultation activities with respect to the proposed project.

Filing Requirement

Explain why consultation activities were considered unnecessary.

Guidance

Consultation activities might not be necessary if the applicant can demonstrate that one or more of the following scenarios applies.

Equivalent Consultation Activities

In the event that the project has been the subject of a recent and equivalent consultation process carried out under the auspices of another agency, or conducted by another company or agency, the application should:

- describe the alternative consultation activities;
- provide evidence that these activities identified the project that is being applied for and its potential impacts; and
- demonstrate that these alternative activities meet the requirements of this section of the manual.

For example, where a road widening requires that an already existing NEB-regulated facility be relocated, the responsible transportation authorities might conduct consultation activities for the road widening that includes consultation regarding the relocation of the NEB-regulated facility. The application to the NEB would then include a description of these consultation activities and how it meets the requirements of this manual.

No or Negligible Environmental or Socio-economic Effects

Applicants will be conducting environmental and socio-economic assessments of the project in accordance with the requirements of the NEB Act, the CEAA 2012 and this manual (see Chapter 6). Through this assessment process, applicants will determine the potential adverse effects of the project. If the project's potential environmental and socio-economic effects are negligible, public consultation activities might be unnecessary.

As described in Chapter 5.2, the nature of the project and its potential environmental and socio-economic effects should be factored into the design of project-specific consultationactivities. A project with negligible effects might exist where the following conditions are met:

- the land acquisition process is complete and landowner concerns have been addressed;;
- there are no residents near the proposed project;
- no other land uses or waterway uses or interests would be affected;
- the proposed project is of a small scale and is localized;
- all construction is to occur on previously disturbed land;
- there is no potential for an impact on navigation;
- there is no potential for traditional use activities to be affected by the project;
- there is no potential for cumulative environmental effects; and
- any environmental or socio-economic effects associated with the construction and operation of the project would be localized to the project site, of short duration, reversible and negligible in magnitude.

FYI - Reminders...

Filing Requirements concerning landowner notification and land acquisition are outlined in Chapter 8.

Be sure to demonstrate how any environmental and socio-economic effects of the project are negligible.

Even when the effects of the project may be negligible, applicants must still conduct an environmental and socio-economic assessment of the project, in accordance with the requirements of the NEB Act, the CEA Act, 2012 and as outlined in this manual (see Chapter 6).

Facilities within Company Owned or Leased Lands

The application is a facilities application that relates to:

- work within the confines of land the applicant owns or leases (not including land upon which the applicant holds an easement only), except where those facilities or activities:
    - relate to an increase in the storage or disposal of toxic substances;
    - could result in increased noise emissions;
    - could result in a change in the visual landscape;
    - could result in environmental or socio-economic impacts on adjacent lands or parties;
    - could result in increased emissions of air contaminants; or
    - could result in local nuisance, including the potential for increased dust or traffic.

Work Performed as Part of a Contingency Plan

Consultation activities may not be feasible if contingency repairs must be conducted immediately or on short notice as part of emergency work. This may occur to repair damage to project facilities resulting from an accident or incident, and for which public safety and environmental protection would be compromised if emergency repairs were delayed.

5.5 Notification of Physically Affected Third Parties

Notification of physically affected third parties is normally required when the outcome of the application might produce physical impacts to their systems or facilities, including:

- reliability or safety of other provinces' power systems or the regional bulk power system;
- reliability or safety of electrical service to other local Canadian system users;
- interference with the operation of others' systems or facilities;
- unintended/unwanted voltages or currents; and
- audible noise or TV/Radio/Wireless communications interference.

The Board should be assured that all such third parties who could be affected by the decision are aware of the application and have had the opportunity to comment should they wish to do so.

Goal

The application provides sufficient information to demonstrate that all third parties whose systems or facilities could potentially be physically affected by the outcome of the application, have been provided with an opportunity to comment on the project and that any such comments have been considered.

Filing Requirements

1. The application should confirm that all third parties whose systems or facilities could potentially be physically affected by the outcome of the application have been notified and should include:

    - the method used to notify those parties; and

    - when the parties were notified.

2. The application should provide details regarding the concerns of third parties. This might include:

    - confirmation that no concerns were raised;

    - confirmation that concerns raised have been resolved; or

    - a list of the third parties who have outstanding concerns and a discussion of their unresolved concerns.

3. The application should list the self-identified interested third parties and confirm they have been notified.

4. The application should provide an explanation in the event that notification of such third parties was considered unnecessary.

Guidance

Identifying Appropriate Physically Affected Third Parties

Third parties who should be included are those whose systems or facilities could potentially be physically affected by the outcome of an application. The following are examples of when you should consider certain third parties to be affected by an application:

- Consider the appropriate NERC Regional Reliability Corporation as affected when the IPL will interconnect networked transmission-level system elements and (i) be energized at 100 kv or greater or (ii) would be considered a “critical facility” pursuant to NERC’s policies and guidelines;

- Consider any pipelines, other power lines, railway or other utility facilities as potentially affected if they cross over or under the IPL, or parallel it in any appreciable manner for any appreciable distance;

- Consider any TV/radio/wireless communications facilities, including individuals’ antennae, as potentially affected when they are within reasonable proximity – for conditions as well as IPL design voltage and current - of the proposed line; and

- Consider any fencing, buildings or other facilities in close enough proximity to the IPL that may experience stray voltage or current induced from the IPL.

Third parties involved in physical construction activities (e.g., contractors, material vendors, consultants) or that supply food and accommodation would not normally be considered to be affected third parties.

Notification

You should inform the physically affected third parties that an application has been, or will be, submitted to the NEB and provide a brief description. Notification should normally be done no later than the filing date of the application with the NEB. A copy of the application may be provided with the notification upon request or may constitute notification.

When determining the level of detail in the notification, you should consider the:

- scope of the project;
- potential impact on the third parties;
- nature of any concerns raised by the third parties; and
- resolution of concerns raised.

In general, the greater the scope of the project and the potential impact on these third parties the more information should be required. Further, more detailed information should normally be required when concerns have been raised by these third parties and remain unresolved at the time of filing.

Concerns

Where concerns have been raised and resolved, the application should include a discussion of the resolution when it would assist the NEB in making a decision. When providing a list of unresolved concerns, the application should provide any other information that would assist the NEB to understand the issues, including a discussion of any attempts to reach agreement, such as a summary of the consultative process that was used prior to filing the application.

Self-identified, Interested Third Parties

Self-identified, interested third parties refers to third parties who have indicated to the applicant that they have an interest in the application or one or more types of applications filed with the NEB.

Whether any third parties could be affected by the application or not, the NEB expects that the applicant will notify all self-identified interested third parties.

When Notification is Not Required

Notification might not be required if the outcome of the application is not expected to result in any significant physical impacts on third parties' systems or facilities. For example:

- The proposed IPL will be energized at a voltage insufficient to produce TV/radio/wireless communications interference;

- The proposed IPL will be operated at a voltage and at power levels insufficient to produce stray voltages or currents on existing surrounding facilities or produce interference with systems associated with these facilities;
- The proposed IPL will be exempt from reliability standards set by NERC for bulk power system elements.

The requirements for consultation described in Chapter 5 continue to apply even if it is decided there are no additional third parties to notify of an application.

Chapter 6 Environmental and Socio-Economic Assessment

6.1 Introduction

This chapter describes the NEB's environmental and socio-economic assessment responsibilities and process and outlines the information required in a complete application. Chapter 6 consists of two broad parts.

Subsections 6.2 to 6.4 will assist an applicant in understanding how a project is evaluated and how an applicant should provide information:

6.2 - The NEB's Approach to Environmental and Socio-Economic Assessment;

6.3 - Scope of Environmental and Socio-Economic Assessment; and

6.4 - Level of Detail.

The applicant should carefully review the information in subsections 6.2 through 6.4 to properly understand the requirements outlined in the subsections that follow.

The second part of the chapter, subsections 6.5 to 6.8, describes the information applicants should include in a project-specific Environmental and Socio-Economic Assessment (ESA):

6.5 - Description of the Environmental and Socio-Economic Setting;

6.6 - Effects Assessment;

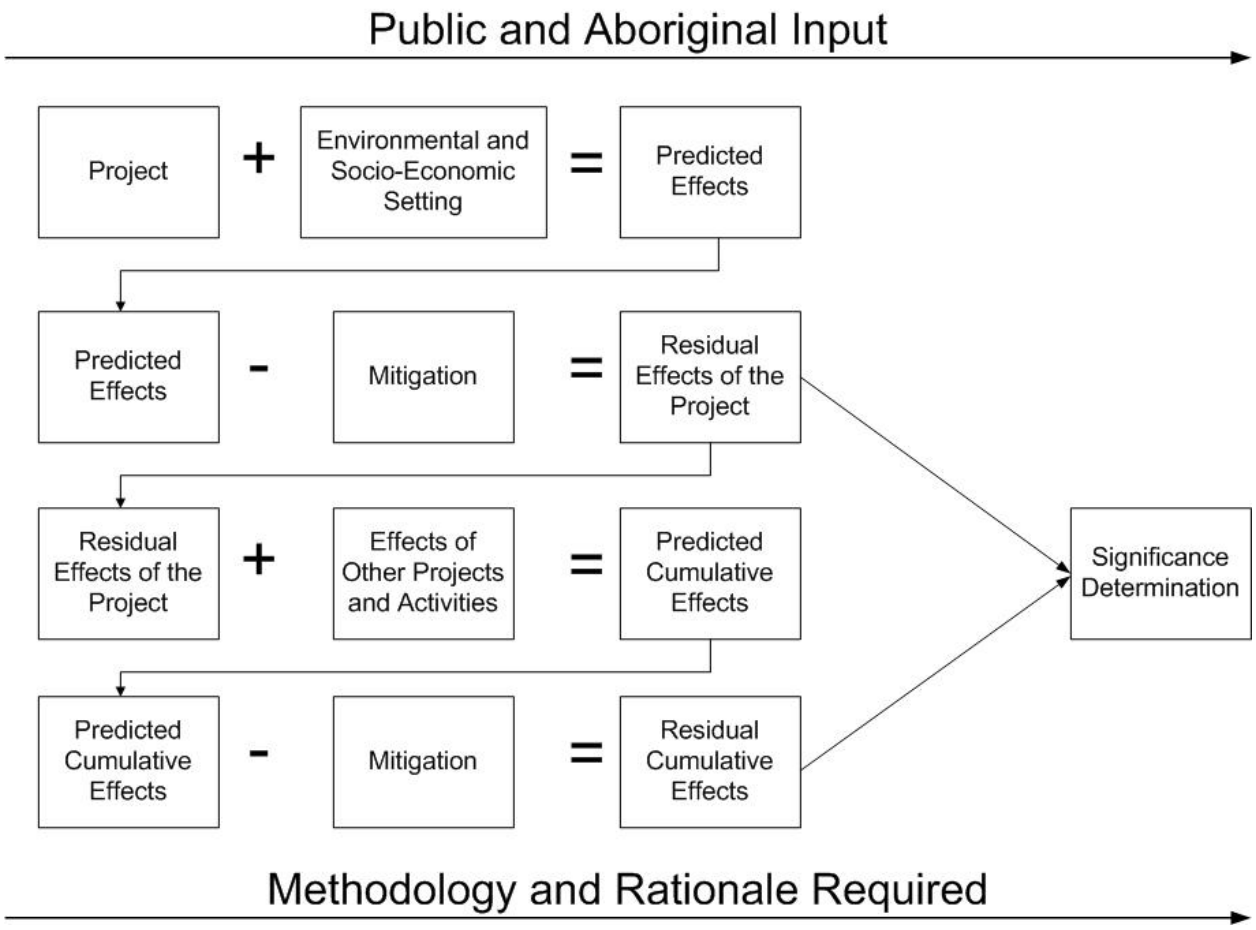
6.7 - Cumulative Effects Assessment; and

6.8 – Inspection, Monitoring and Follow-up.

In addition to the description of the project (discussed in Chapter 3 and 4 of this Manual), the applicant should describe:

- the environmental and socio-economic baseline setting;
- the predicted beneficial and adverse effects of the proposed project on the socio-economic and biophysical environment over the life of the project;
- the methods used for effects analysis, and the rationale for selecting the methods chosen;
- the proposed mitigation measures; and
- the predicted significance of residual project effects and residual cumulative effects.

Figure 2-2: The Applicant's ESA process



The level of detail the NEB requires in an application will vary with:

- the nature and scale of the project;
- the predicted effects of the project; and
- the level of public interest in the project.

The applicant must provide a defensible line of reasoning, supported by facts, to support the analysis and conclusions on identified issues and the environmental and socio-economic effects of the project.

Table 6-1 in Subsection 6.4 identifies circumstances that trigger the need for detailed information on specific biophysical or socio-economic components and considers all phases of an applied for project (construction, operation, maintenance and abandonment), including the potential for accidents and malfunctions during each phase. Tables 6-2 and 6-3, which follow Subsection 6.11 identify those specific information requirements.

6.2 The NEB's Approach to Environmental and Socio-Economic Assessment

The NEB has a broad mandate under the NEB Act and it may consider matters that appear to the Board to be directly related to the international powerlines (IPL) and relevant to its decisions or recommendations. The NEB's environmental and socio-economic assessment responsibilities cover four distinct phases:

- evaluating potential effects of constructing and operating proposed projects;
- monitoring and enforcing terms and conditions before, during and after construction;
- monitoring and regulating ongoing operations, including decommissioning; and
- evaluating potential effects of abandonment.

The NEB's objective for environmental and socio-economic assessment are that:

- the potential effects of projects receive thorough consideration before any decisions on the project are made allowing a project to proceed;
- projects are not likely to cause significant adverse effects or contribute to significant adverse cumulative effects;
- there is an opportunity for meaningful public and Aboriginal participation; and

the NEB's process and its decisions or recommendations are transparent and reflect the input received from those participating in the environmental assessment and regulatory review process.

6.3 Scope of the Environmental and Socio-Economic Assessment

6.3.1 What is Scoping?

Appropriate scoping is the foundation upon which an efficient and effective environmental and socio-economic assessment is built.

The scope ensures that the assessment focuses on relevant issues and concerns, and assists in determining the appropriate level of detail to include in the assessment. Proper scoping reduces the risk of including unimportant or irrelevant information in the assessment or excluding factors that should be assessed. Scoping is the process of identifying:

- the physical facilities and activities to include within the ESA; and
- what biophysical and socio-economic elements are likely to be affected.

FYI – See also...
Scoping information for cumulative effects assessment is provided in Subsection 6.7.1

6.3.2 The Applicant's Role in Scoping

The applicant's role in scoping includes:

- providing sufficient information for the NEB to fully understand the nature of the project it is to assess;
- ensuring the applicant's ESA focuses on relevant issues and concerns, including those identified by affected parties, and that an appropriate level of detail is included in the ESA; and
- considering the factors set out in s.19 of the CEA Act 2012 as applicable (see *Factors to be Considered* below), even for projects not governed by the CEA Act 2012.

To assist an applicant in scoping before filing an application, the NEB encourages the applicant to:

- request a meeting with Board staff to discuss process-related matters and be guided to examples of complete ESAs filed previously with the Board (see Section 1.6 – Pre-Application Meetings Guidance Notes);
- consult any relevant Canadian Environmental Assessment Agency (CEA Agency) guidance documents and if appropriate, discuss scoping with any other relevant federal authorities (see Table 5-1 for potential considerations and contacts); and
- where appropriate, consult with other regulatory bodies at the provincial, territorial, regional, municipal or Aboriginal levels of government.

An application must clearly identify, describe and substantiate:

- the scope of the applied for project;
- other physical facilities and activities necessary to enable the project to proceed, including directly-related ancillary facilities, such as access roads including temporary and permanent bridge crossings, or construction camps; and
- other physical facilities and activities likely to occur if the applied for project is approved and proceeds, which may include other power lines and works directly related to the proposed project.

6.3.3 Scope of the assessment and the NEB

The scope of the project includes the physical facilities and activities making up the project and enabling it to proceed as applied for by the proponent. It may also include other physical facilities and activities that would be undertaken if the applied for project is approved and proceeds.

The NEB determines the scope of the project by considering relevant case law, CEA Agency guidance and any other relevant commentary.

The NEB will review and assess the scope of the ESA based on the evidence before it. Although elements of the project or the scope of factors to be considered may change over the course of a proceeding (*e.g.*, as a result of public or Aboriginal input, or changes to the project), the application is usually the prime source of information and starting point for establishing what the Board will consider in the environmental assessment of a project.

For projects subject to a public hearing, the NEB will release a List of Issues that sets out the issues the Board will consider in the hearing. Within the List of Issues, environmental matters are usually identified at a sufficiently broad level that all relevant environmental effects may be considered. It is important to note the requirements within this *Filing Manual* amount to a standing scoping document in lieu of the NEB preparing a project-specific scoping document for every project.

FYI – Reminder…

The requirements contained within this *Filing Manual* are essentially a generic scope of the assessment document applicable to any facility project. The description of the project within the proponent's application sets out the scope of the project. If the information submitted is not sufficient for the NEB to be clear on scope, the NEB will request more information, which could lengthen the assessment process.

In evaluating whether to include other physical facilities and activities directly related to the proposed project, but which may be outside of the NEB's regulatory jurisdiction, the Board may consider factors such as:

- Is the physical facility or activity within the control of the applicant for the primary project being applied for under the NEB Act?
- Are mitigation measures and follow-up activities enforceable by the NEB, another federal or provincial department or agency, or person or body that will ensure implementation?
- Are effects from the other physical facilities and activities relevant to the Board's decision or recommendation under the NEB Act?

CEA Act 2012 Designated Physical Activities

For physical activities designated under the CEA Act 2012, the NEB as the Responsible Authority must prepare a description of the factors to be taken into account in the EA and the scope of those factors. Section 19 of CEA Act 2012 sets out the factors that must be taken into account. It is critical that applicants, in preparing their ESA's, apply section 19 and consider the scope of those factors based on guidance in this *Filing Manual*.

6.4 Level of Detail

The nature of the project, together with the environmental and socio-economic setting, establish the extent of interactions between the project and the environment. Those interactions form the basis on which effects are predicted, and for understanding the appropriate level of detail needed about the setting, interactions, and predicted effects. The extent of public interest may also guide the applicant in determining the level of detail necessary.

Where the project may impact Aboriginal communities and affect the use of traditional territory or potential or established treaty or Aboriginal rights, applicants must identify the potentially-affected Aboriginal groups and carry out effective consultations with them to determine their views and concerns. If there are potential impacts, applicants must file information about the Aboriginal groups affected, the concerns they have raised, how the applicant will address the concerns and identify any outstanding concerns. The level of detail provided should reflect the nature and extent of the impacts, the nature of the rights or interests affected and the degree of concern expressed by Aboriginal groups.

The information provided by an applicant in its ESA must be of sufficient detail to allow the NEB to:

- identify the spatial and temporal extent of interactions between the project and the biophysical and human environments;
- identify the potential effects of the project;
- identify the potential for the environment to affect the project; and
- determine the significance of those effects.

FYI – Example…

As an example, a project crossing a small and ephemeral watercourse during the dry perod, with no activities or physical works within the fisheries sensitive zone, would likely require less detail of effects on fish and fish habitat than a project requiring in-stream construction work in a fish-bearing watercourse during spawning periods.

The applicant must clearly rationalize the level of detail provided. This is typically reflected through the following:

- Description of the project: information describing how the project would cross the watercourse, (primary and alternative methods) and whether any physical works or construction would be required in or immediately adjacent to the watercourse, and if so, what these could be and how they might take place;
- Environmental setting: information on the nature of the watercourse, shores, riparian zones, erosive features, its fisheries and fish habitat potential;
- Interactions: information detailing the proposed timing of construction, the spatial extent of interactions, any loss of riparian or fish habitat, and extent of any potential release of a deleterious substance into the watercourse;
- Predicted effects: information on any direct and indirect effects on water quality, habitat, fish and on which life stage, or any effects on other wildlife; and

Results of consultation with other regulators: information detailing the results of any consultation with Fisheries and Oceans Canada, or the measures that will be taken to ensure compliance with the *Fisheries Act* with respect to fisheries protection.

The ESA must include both quantitative and qualitative information. Applicants must consider the extent to which detailed maps, survey and trend data, or diagrams or figures relating to specific areas of biophysical or socio-economic elements of interest or concern may enhance the assessment. The number and nature of biophysical and socio-economic elements considered within an ESA, and the supporting level of detail necessary, will vary depending on the setting and issues raised about the project.

Table 6-1 below provides examples of the range of circumstances that may lead to the need for detailed information and considers all phases of an applied for project (construction, operation, maintenance and abandonment), including the potential for accidents and malfunctions during each phase. Where circumstances described in Table 6-1 exist, Tables 6-2 and 6-3 describe the specific details to include in the assessment.

Table 6-1: Circumstances and Interactions Requiring Detailed Biophysical and Socio-Economic Information

Biophysical and Socio-Economic Elements	Circumstances and Interactions Requiring Detailed Information (considering all phases of the project including potential accidents and malfunctions during each phase)
Physical and meteorological environment	• The project may affect the morphology of unique physical features (such as physiography, bedrock, permafrost, topography, geology or other local conditions). • The project may be affected by local or regional physical features, meteorological conditions or extremes, or other natural hazards. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Soil and soil productivity	• Any portion of the project would be located outside a previously developed fenced or gravelled facility site. • Any portion of the project is to be buried underground. • The project may result in a reduction in soil productivity or integrity. • Historical land use suggests soils or sediments may contain contaminants or the project may result in the contamination of soils. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Vegetation	• Any portion of the project would be located outside a previously developed fenced or gravelled facility site. • Any portion of the project would cross through an area that may require ongoing vegetation control to protect conductors or towers. • The project may result in the proliferation of invasive species. • The project may result in the damage or destruction of vegetative communities. • The project may affect vegetation of specific concern to an Aboriginal group. • There is outstanding concern about this element of the project, which has not been resolved through consultation.

Biophysical and Socio-Economic Elements	Circumstances and Interactions Requiring Detailed Information (considering all phases of the project including potential accidents and malfunctions during each phase)
Water quality and quantity	• The project would be within 30 m of a water body. • The project may reduce the quality or quantity of water. • The project would involve the likely release or leaching of a polluting substance into a water body or groundwater. • The project may result in a change in groundwater flows. • The project may result in the inter-basin transfer of water. • The project may affect a water body of specific concern to an Aboriginal group. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Fish and fish habitat	• The project is within 30 m of a fish-bearing water body or its tributaries. • The project may result in the deposit of a polluting or harmful substance into a fish-bearing water body. • Local fisheries exist that may be affected by the project. • The project may affect fish or fish habitat of specific concern to an Aboriginal group. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Wetlands	• The project would include physical facilities or activities within 30 m of a wetland. • The project would include activities or physical facilities within regionally, provincially, territorially or federally-established limits of a wetland with provincial, territorial, regional or federal status. • The project may result in loss of wetland functions. • The project may affect wetlands of specific concern to an Aboriginal group. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Wildlife and wildlife habitat	• The project would be located on or near lands that might constitute sensitive habitat for wildlife (e.g., nesting, denning, overwintering, migratory/staging, movement corridors, forest interior habitat, mineral licks) • The project would be located on or near an area of environmental significance or of natural or scientific interest such as a National Park, a Migratory Bird Sanctuary, a National Wildlife Area, an Important Bird Area, World Biosphere Reserve, or a designated Environmental Sensitive Area. • The project may create new human access opportunities to important wildlife habitat. • The project may result in a loss or change to wildlife habitat function (e.g., nesting, foraging, migration). • The project may result in increased mortality or disturbance of wildlife. • The project may affect wildlife of specific concern to an Aboriginal group. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Species at Risk or Species of Special Status and related habitat	• The study area includes lands within the identified range of a species at risk or species of special status, and includes habitat that could support these species. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Air emissions	• There may be increased air emissions from operating or maintaining the project. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Acoustic environment	• The project may result in increased noise levels during construction, operation and maintenance (e.g., blasting, or noise from construction traffic). • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Electromagnetism and Corona Discharge	• The project may change the existing environmental setting related to electromagnetic fields. • The project will have the potential to result in radio and television interference.

Biophysical and Socio-Economic Elements	Circumstances and Interactions Requiring Detailed Information (considering all phases of the project including potential accidents and malfunctions during each phase)
Human occupancy and resource use	• The project will not be located entirely within a previously developed facility site, on company owned land, zoned for industrial purposes. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Heritage resources	• The project would include clearing of vegetation, grading, trenching, excavating or drilling. • The project would create new human access opportunities to areas with heritage resources or resource potential. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Navigation and navigation safety	• The project includes activities to be conducted or components to be located in, on, over, under, through or across a navigable waterway when the water is flowing (i.e., ***not*** seasonally dry or frozen). • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Traditional land and resource use	• The project would be located on, or traverse, Crown land or the traditional territory, reserve land or settlement area of an Aboriginal group. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Social and cultural well-being	• The project may affect the social and cultural well-being of Aboriginal groups, local residents or communities. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Human health and aesthetics	• The project may affect local or regional water quality and quantity or air quality. • The project may change the existing environmental setting related to odours, visual aesthetics (beauty) or other sensory conditions. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Infrastructure and services	• The project may cause temporary or permanent damage, or require additions, modifications or repairs to local or regional infrastructure. • The project may result in increased demands on local and regional services. • The project may affect the usage of roadways during construction and operation. • There is outstanding concern about this element of the project, which has not been resolved through consultation.
Employment and economy	• The project may affect local and regional employment, procurement (ordering) and contracting conditions or government revenues. • There is outstanding concern about this element of the project, which has not been resolved through consultation.

6.5 Description of the Environmental and Socio-Economic Setting

A description of the environmental and socio-economic setting within the study area (also known as "baseline information") is necessary to predict the effects of a proposed project. This baseline information provides a backdrop against which a project's effects are assessed, including cumulative effects of a project. The applicant is not expected to provide extensive descriptions of features of the environment or socio-economic components that would clearly not be impacted by a proposed project.

Goal

The application describes the biophysical and socio-economic setting with sufficient detail to:

- identify the elements of importance in the area;
- identify project-environment interactions;
- identify, predict and determine the significance of effects of the project;
- identify and predict the effects of the environment on the project; and
- formulate appropriate mitigation measures and monitoring programs.

Filing Requirements

1. Identify and describe the current biophysical and socio-economic setting of each element (i.e., baseline information) in the area where the project is to be carried out. Include both a map at an appropriate scale and describe:
   - the study area(s), and how the study area(s) were established;
   - the ecological land classification and key terrain features, such as mountains, rivers, lakes and other important features;
   - the locations of any nearby communities and residences (permanent and temporary) and significant landmarks;
   - current local economy and trends;
   - current land and resource uses, including traditional land and resource uses;
   - the potential to encounter heritage resources;
   - the areas of physical and environmental constraints (e.g., biophysical, land use or natural resource use);
   - navigable waterways that may be affected by project components (e.g. temporary and permanent bridges, marine terminals and loading facilities;
   - consistency between the project and any regional land use plans;
   - any environmentally sensitive areas, sensitive habitats, or areas of special concern (e.g., existing and candidate protected areas), including those identified through public or Aboriginal consultation, which influence facility routing or site locations;
   - the locations of all proposed facilities; and
   - a list of projects and/or activities in the project area.

FYI – Additional information...

Where the current state of the environment has been significantly altered from the past, the applicant must describe:

(i) how far back in time past activities are relevant and

(ii) the past activities or past state of the environment.

This may be particularly relevant for assessing cumulative effects or identifying a baseline for reclamation goals (*e.g.,* for restoring native vegetation).

2. Describe which biophysical and socio-economic elements in the study area are of ecological, economic or human importance and require more detailed analysis taking into account the results of consultation (see Table 6-1 for examples). Where circumstances require more detailed information in an ESA, see:

    i) Table 6-2, Information Requirements for Biophysical Elements; or

    ii) Table 6-3, Information Requirements for Socio-Economic Elements.

3. Provide supporting evidence (e.g., references to scientific literature, field studies, local and traditional knowledge, previous environmental assessment and monitoring reports) for:

    - information and data collected;
    - analysis completed;
    - conclusions reached; and
    - the extent of professional judgment or experience relied upon in meeting these information requirements, and the rationale for that extent of reliance.

4. Describe and substantiate the methods used for any surveys such as those pertaining to wildlife, fisheries, plants, species at risk or species of special status, soils, heritage resources or traditional land use and for establishing the baseline setting for the atmospheric and acoustic environment. If the season for a particular survey was not optimal, discuss the limitations of survey results or indicate when and how additional surveys will be conducted.

5. Applicants must consult with other expert federal, provincial or territorial departments and other relevant authorities on requirements for baseline information and methods.

Guidance

Study Area

The study area(s) must be of sufficient size to encompass the spatial boundaries of the project related facilities or activities (e.g., access roads, temporary and permanent bridges).

The study area must cover at least one kilometer on each side of the power line. It must also to be of sufficient size and orientation to encompass all areas where valued components may be affected by the project, for example:

- areas downstream and immediately upstream;

- areas in which the project may be within the range of vision;
- species' home ranges and migratory patterns;
- affected communities and known or asserted areas of Aboriginal traditional land and resource use; and
- areas in which infrastructure is affected or new or enhanced infrastructure would be needed.

Typically, the study area encompassing the above-noted areas extends beyond a narrow corridor or project site. Subsection 6.7 provides additional guidance on the study area for a cumulative effects assessment.

Source of Baseline Information

Baseline information must include both scientific information and local and traditional knowledge.

Information sources and data collection methods used for describing the baseline environmental and socio-economic setting may consist of:

- field studies, including site-specific survey methods;
- database searches, including of federal, provincial, territorial and local data banks;
- sailing directions, recreational waterway guides, etc.
- field measurements to gather data on ambient or background levels for air quality or acoustic environment;
- remote sensing information;
- literature reviews;
- literature produced by government agencies and academic institutions;
- renewable resource harvest data;
- expert, community and traditional knowledge interviews (e.g., with regulatory agencies, Aboriginal groups, community and nature conservation groups, local outfitters and recreational organizations including navigation user groups, as well as with local residents, landowners and land users); and
- statistical surveys, as applicable;

The validity and accuracy of the baseline information used in the ESA must be supported by:

- describing and substantiating the sampling, survey and research protocols or techniques followed for each information source or data collection method used;
- indicating that proper record-keeping practices have been implemented to maintain survey results for future reference, including measures to respect confidentiality of sensitive information contained in Aboriginal traditional land and resource use studies; and

- wherever appropriate, quantifying and analyzing any statistical survey data obtained.

FYI – See also...
Additional guidance on baseline information for a cumulative effects assessment is provided in Subsection 6.7.1.

6.5.1 Identifying the Need for Detailed Biophysical and Socio-Economic Information

Additional biophysical and socio-economic information must be included with the application if there is evidence of public concern, or if any of the circumstances identified in Table 6-1 exist. Tables 6-2 and 6-3 describe the specific details that should be included.

Applicants are reminded that detailed information is only required for the elements that are identified as having potential environmental or socio-economic effects. Further, a clear and defensible explanation should be provided as to why any element in Table 6-1 is not addressed.

6.6 Effects Assessment

Goal

The application includes information on the potential bio-physical and socio-economic effects of the project, with sufficient detail to:

- predict and analyze the nature and extent those effects;
- identify mitigation options to protect the biophysical and socio-economic environment and analyze their effectiveness; and
- determine the significance of any effects remaining following mitigation, including the significance of cumulative effects.

6.6.1 Identification and Analysis of Effects

Filing Requirements – Scoping and Analysis of Cumulative Effects

1. Describe the methods used to predict the potential effects of the project on the biophysical and socio-economic elements, and the effects of the environment on the project.

   This Manual assumes a valued component based approach to effects assessment where the application focuses on those biophysical or socio-economic elements, or a subset of those elements (see guidance below), that may be affected by a project and are of concern or value to the public and Aboriginal groups. Applicants must identify valued components for which effects are predicted and explain why and how the valued components were identified.

   If another method is used to assess potential effects on, the biophysical and socio-economic elements described in Tables 6-1, 6-2 and 6-3, then provide the details and rationale on the that method.

   Provide the details of any important aspects of uncertainty associated with the analysis.

Where professional knowledge or experience is cited, describe the extent of professional judgment or experience relied upon, the rationale for that extent of reliance and how the resulting conclusions or decisions were reached.

2. Predict the effects associated with the proposed project, including those that could be caused by construction, operations, decommissioning or abandonment, as well as accidents and malfunctions. Also include effects the environment could have on the project.

FYI – Reminder

If there are no predicted interactions between project activities and a particular biophysical or socio-economic element, then no further analysis is necessary for that element. Instead, provide a sufficient description of the project or setting to demonstrate why no interactions are predicted.

For those biophysical and socio-economic elements, or their valued component that require further analysis (see Table 6-1), provide the detailed information outlined in Tables 6-2 and 6-3. This must include, but is not limited to, a description and quantification of:

- spatial and temporal boundaries for the effects analysis of each biophysical or socio-economic element or valued component associated with the project;
- local and regional conditions of each biophysical or socio-economic element or valued component (*i.e.*, location, distribution, abundance, status, sensitivity to the project, ability to recover, and natural variation of valued components, as appropriate), including how this is expected to change from baseline if the project were to proceed;
- factors influencing change, the limiting factors, and the natural variation for each valued component, if known;
- magnitude and reversibility of any predicted change from baseline conditions;
- local, regional and federal management objectives (*e.g.*, recovery strategies, action plans, management plans and land use plans) and thresholds, and identify how the effects of the project relate to such strategies, plans, objectives or thresholds;
- methods used for any modelling, including the assumptions used and limitations of the models; and
- information about reporting requirements for all levels of government (*e.g.*, for GHGs), if applicable.

For each valued component, provide or reference any supporting information used in the project effects analysis, such as:

- public comments;
- consultations with other regulators and departments or agencies;
- scientific literature;
- local and traditional knowledge;
- status reports;

- approved recovery strategies, action plans and management plans for species at risk; and
- follow-up studies and case studies from other projects.

Guidance - Identification and Analysis of Effects

The identification and analysis of project effects builds directly on scoping, the description of the environmental and socio-economic setting, and the level of detail considerations described above.

Typically, applicants use a valued component approach to focus the effects analysis on practical and representative components of the biophysical and socio-economic environment. Valued components could be the broad elements described in Tables 6-1, 6-2 and 6-3 or a representative subset of those elements. In that way, the analysis of potential effects focuses on the components of those biophysical or socio-economic elements where project-environment interactions are more readily assessable, and on the interactions that may be of concern to the public or Aboriginal groups (often termed Valued Environmental Components [VECs] or Valued Socio-Economic Components [VSCs]). The valued components selected must:

- be indicative of predicted effects that could result from the project over time;
- have baseline data available in order to determine the significance of effects; and
- be able to reflect measurable changes that result from the project effects over time.

The analysis should result in an understanding of where uncertainty about project-environment interactions may exist, or where information gaps necessary to predict effects may remain.

Spatial and Temporal Boundaries

The spatial and temporal boundaries should:

- be provided for each valued component, along with a rationale for selecting those boundaries;
- include the area over which effects on valued components may occur. This area could include a population boundary, home range, airshed, watershed, Aboriginal traditional land and resource use area, or municipal or regional planning district;
- include the duration that each valued component may be affected;
- consider the effects of the project on the valued component and the extent to which those effects are measurable;
- include all phases of the project; and
- not be constrained by jurisdictional boundaries.

Analysis

The analysis methods must be fully disclosed and meet the study needs. In addition to meeting the requirements of other regulations (*e.g., Species at Risk Act* [SARA], *Migratory Bird Convention Act* [MBCA], *Fisheries Act,* etc.), the analysis of project effects must take into

account local, regional and federal policy or management objectives (*e.g.*, recovery strategies, action plans, management plans and land use plans) and thresholds. Where there are no management objectives or thresholds, include information on the current state of knowledge on the valued component. After a review of the available literature, if the state of knowledge is incomplete or there is substantial uncertainty, identify any information gaps, and indicate if and how they will be filled. Where uncertainty exists about the project effects on a valued component, describe how the inspection and monitoring program will reduce the uncertainity.

Where there is applicable local and traditional knowledge, it must be included in the ESA. See Section 5.3 Consultation, for further details on consulting with Aboriginal persons and groups and gathering traditional knowledge.

Effects Assessment for Accidents and Malfunctions

The prevention of any accidents and malfunctions associated with NEB-regulated projects is the NEB's goal. In the event an accident or malfunction does occur, the Board will hold its regulated companies accountable for an appropriate response under their Emergency Management Program.

The applicant's ESA must identify and assess the effects on workers, the public, and biophysical and socio-economic elements of all potential accidents and malfunctions.

Accidents and malfunctions and associated emergencies can result from numerous events, including equipment failure, human error, natural perils such as tornadoes, hurricanes, floods, or earthquakes, and terrorism or other criminal activities. Multi-hazard emergencies, such as an earthquake, may cause facility damage, fires and explosions, which result in injury and further property damage.

The level of detail provided on potential effects of accidents and malfunctions will depend on the:

- type, scale, and location of the proposed project;
- environmental and socio-economic sensitivities within potentially affected areas; and
- extent to which an applicant's existing Emergency Management Program and other plans and manuals address the issues and concerns about the proposed project.

Abandonment

The abandonment of an IPL requires an application to the Board.

For an application to construct and operate an IPL, the level of detail provided may be constrained by the uncertainties inherent with forecasting a phase of the project that may be several decades in the future. However, an abandonment application should outline what project components would be removed and how the right of way would be returned to a state comparable with the surrounding environment.

6.6.2 Mitigation Measures

Filing Requirements – Mitagation Measures

1. Describe the standard and project specific mitigation measures and their adequacy for addressing the project effects, or clearly reference specific sections of company manuals that provide mitigation measures. Ensure that referenced manuals are current and filed with the NEB.

> **FYI – Reminder…**
> See Section 1.5 - Previously Filed Material, for guidelines on referring to information already filed with the Board.

   - If more than one mitigation measure is proposed as a possibility for any particular effect, provide the applicable criteria for selecting the mitigation to use, or describe how measures would be combined to mitigate against a single effect.
   - If new mitigation measures are to be used, provide any test results or a technically based rationale for their use and describe how their effectiveness will be evaluated.
   - Ensure mitigation measures are appropriate for the scale of impacts predicted.
   - If project effects cannot be avoided, mitigation must reduce or compensate for them.
   - Where an applicant hires a third party to prepare its ESA, provide a statement committing to adopting and implementing all mitigation recommendations included in the ESA. Explain any mitigation recommendations not adopted and provide alternative approaches, as appropriate.
   - Identify the conditions of approvals or permits required by other regulatory bodies related to the mitigation of environmental or socio-economic effects.

2. Ensure that commitments about mitigative measures will be communicated to field staff for implementation through an Environmental Protection Plan (EP Plan). An EP Plan might be simple and concise for smaller, less complex projects but for certain projects (see guidance below), the NEB may require a comprehensive EP Plan. An EP Plan must include all environmental commitments specific to the project and include or cross-reference other plans and programs relied on. Describe any plans or programs that may be used to mitigate potential effects (*e.g.,* waste management plans, invasive species plans, horizontal directional drill contingency plans, heritage resource discovery contingency plans, etc.).

3. Describe plans and measures to address potential effects of accidents and malfunctions during construction and operation of the project (see guidance under Identification and Analysis of Effects, Accidents and Malfunctions in Subsection 6.6.1).

Guidance - Mitigation Measures

Mitigation measures are:

- developed during a project's feasibility study;
- developed during project design;

- defined in the project plan;
- refined as the ESA progresses and the project's predicted environmental and socio-economic effects become more certain, and
- may be standard or project-specific measures.

The identification and analysis of effects and mitigation measures may be presented together.

Mitigation Options

At the application stage of the proposed project many mitigation measures may still be tentative, subject to further detailed design and to site specific environmental conditions. For these cases the ESA should describe:

- the different mitigative options available and being considered; and
- the criteria that will be used for selecting the actual mitigation to be implemented.

Including the options and selection criteria for contingency measures in an EP Plan may avoid having to submit variance applications to the NEB if changes in field conditions require use of construction alternatives.

FYI – Reminder…

In some cases, the proposed route or site, route segments, facility design or construction methods may themselves be forms of environmental mitigation when compared to alternative routing, design or construction methods. This may be demonstrated in the application's discussion of alternatives (see Section 4.5) by:

- identifying which design features and construction methods are considered to be mitigation;
- identifying any alternatives that were considered to these features or methods and the proposed routing; and
- providing a comparative analysis of the mitigation measures considered.

Environmental Protection Plan (EP Plan)

Although the NEB expects an EP Plan to be prepared for all projects, the size and scope of an EP Plan will vary. An EP Plan is specific to a project and is a tool to communicate a company's environmental protection procedures and mitigation measures to employees, contractors, and regulators. The purpose of an EP Plan is to document and communicate all project-specific environmental commitments made by an applicant and the associated mitigation measures in a clear and user-friendly format.

The NEB may request a comprehensive EP Plan during the examination of an application, or as a condition of approval to be complied with before construction. The NEB may expect a comprehensive EP Plan to be filed under the following circumstances:

- when the applicant does not have up-to-date company manuals on file with the NEB that document its environmental protecction procedures;
- if site-specific or project-specific mitigation or protection measures are provided by the applicant as commitments to avoid or address predicted adverse environmental effects in the application; or

- if the application and assessment process is lengthy or complex, and environmental protection measures and commitments are contained in several different places or documents (e.g., responses to information requests).

Comprehensive EP Plans are typically required for larger facility applications. In these circumstances, the NEB encourages companies to submit a draft EP Plan containing all preliminary environmental protection and mitigation measures with their application to assist the NEB in assessing the application. Should the project be approved, the NEB often requires the company to file an updated EP Plan before starting construction.

When preparing its EP Plan, an applicant should consider:

- identifing specific goals for protecting environmental elements and addressing socio-economic elements;
- describing the environmental protection objective for each goal, and providing mitigative options to meet those objectives based on site-specific conditions; and
- providing decision-making criteria for choosing which measures and procedures to implement and under what circumstances for each objective.

Draft EP Plan

If a draft EP Plan is filed with the application, it should contain:

- the purpose of the EP Plan, a summary of the project with a map, and a description of how environmental compliance would be achieved for the project;
- the resource-specific mitigation to be applied for the project, and the general environmental protection measures for each phase of construction;
- relevant construction specifications and drawings to execute environmental mitigation measures, and the corresponding environmental alignment sheets;
- other more detailed plans as applicable (*e.g.*, waste management plan, emergency and security management plans, contingency plans, and other element-specific management plans and programs);
- the assignment of accountabilities and responsibilities for carrying out practices and procedures, making criteria-based decisions and confirming compliance with the Environmental Protection Program; and
- a table of contacts for reporting environmental incidents as required by other regulators.

Final EP Plan

A final comprehensive EP Plan must:

- include all items required in a draft EP Plan;
- if relevant, include an amendment or concordance table detailing changes from the draft to final version of the EP Plan;
- incorporate all environmental commitments made during the NEB application assessment process, including all requirements set out in permits, certificates, or any other authorizations;
- include a copy of any NEB discussion or assessment of environmental matters as set out in or attached to the NEB certificate or permit;
- include additional requirements as a result of season-specific field surveys conducted before construction;
- include the GPS locations for environmentally-sensitive areas identified in the surveys; and
- include updated environmental alignment sheets summarizing all pertinent environmental issues and the corresponding mitigation measures that will be implemented during construction.

Variances to the EP Plan

It is the responsibility of the company to apply to the Board for variances to the commitments made in the application, in the application assessment process or as required in the project approval conditions. It is therefore of benefit to the applicant to incorporate decision making criteria for choosing which measures and procedures to implement and under what circumstances. Where this is done, there may be sufficient flexibility to respond to changes that result in the field without filing a variance application.

Further information about variation applications can be obtained from the NEB Operations Project Manager assigned to the project or activity.

Waste Management Plan

A waste management plan for the control of contaminated and non-contaminated waste from the project is required. The plan must describe the purpose of the plan, the types of waste anticipated, the resulting prevention and mitigation measures to be applied to manage that waste, and how any relevant reporting requirements will be met. The plan must also include a reporting structure, contact list and reference to other applicable legislation.

Mitigation for Potential Effects of Accidents and Malfunctions

An applicant's programs, plans and manuals should be considered as part of its mitigation of potential effects of accidents and malfunctions.

There may also be project-specific plans and commitments an applicant should consider as part of its mitigation of potential effects of accidents and malfunctions. As noted in Section 6.1, these must also be incorporated into a company's programs as appropriate.

6.6.3 Evaluation of Significance

Filing Requirements – Evaluation of Significance

1. After taking into account any appropriate mitigation measures, identify any remaining residual effects from the project.
2. Describe the methods and criteria used to determine the significance of adverse effects, including defining the point at which any particular effect on a valued component is considered "significant".
3. Evaluate the significance of residual adverse environmental and socio-economic effects against the defined criteria.
4. Evaluate the likelihood of significant residual adverse environmental and socio-economic occuring and substantiate the conclusion made.

Guidance – Applicant's Evaluation of Significance

Evaluating environmental and socio-econmic effects consists of assessing:

- whether the effects are adverse;
- whether the adverse effects are significant; and
- whether the significant adverse effects are likely.

A common way for an applicant to assess a project's effects is to compare the quality of the existing environment with the predicted quality of the environment if the project is approved and built. The direction of change to the environment may be adverse, neutral or beneficial.

The following criteria may be useful in assessing the significance of a project's adverse effects:

- magnitude;
- duration;
- frequency;
- geographic extent;
- ecological context; and
- reversibility or degree of permanence.

In applying these criteria to each residual effect, an applicant must define each criteria and the range considered within each criteria. To help evaluate the significance of a particular effect and define the point at which it becomes "significant", consider providing rating attributes (*e.g.*, low / moderate / high) for each significance criteria and defining the range of each attribute. An applicant must also describe how each criterion or combination of criteria was used to reach the applicant's significance conclusion.

Definitions for rating criteria are expected to be quantitative and based on standards, guidelines, objectives or other established and accepted ecological thresholds. In the absence of any such references or regulatory guidance, or where these are not quantitative (*e.g.*, it may not be appropriate to set thresholds to determine "acceptable levels of change", in relation to all socio-economic effects), then rating attribute definitions must be qualitative and based on available research literature. Applicants must also consider the level and nature of concerns raised by the public and address issues of concern to Aboriginal groups potentially affected by the project.

The significance of adverse effects could also be assessed by comparing effects to conformity requirements within approved land use plans or conducting a quantitative risk assessment.

Where professional judgement is used to determine the significance of adverse effects, the extent of reliance on professional judgement must be described and rationale for the extent of the reliance must be provided. An applicant's ESA must provide an evaluation of the likelihood and significance of any adverse environmental effects, for consideration by the NEB.

Assessing the likelihood of significant adverse effects must be based on the probability of occurrence and state the level of scientific uncertainty. If a qualitative determination of the likelihood of significant adverse effects is used, provide a clear rationale and supporting information.

6.7 Cumulative Effects Assessment

Goal

The application must include information about the interaction between predicted residual environmental and socio-economic effects of the project and effects from other projects or activities that have been or will be carried out. This information must provide enough detail to:

- identify and analyze cumulative environmental and socio-economic effects;
- identify proposed mitigation measures to protect the environment and address socio-economic effects, and to analyze their effectiveness; and
- evaluate the significance of any predicted cumulative effects.

6.7.1 Scoping and Analysis of Cumulative Effects

Filing Requirements – Scoping and Analysis of Cumulative Effects

1. Identify the valued components for which residual effects are predicted, and describe and justify the methods used to predict any residual effects.

> **FYI - Additional Information...**
> Both significant and non-significant residual effects may contribute to cumulative effects and must be considered. Residual effects are those effects remaining after implementing the applicant's mitigation measures. If the applicant can clearly demonstrate that no residual effects are predicted, further analysis of cumulative effects is not required.

2. For each valued component where residual effects have been identified, describe and justify the spatial and temporal boundaries used to assess the potential cumulative effects.

3. Identify other physical facilities or activities that have been or will be carried out within the identified spatial and temporal boundaries for the cumulative effects assessment.

4. Identify whether the effects those physical facilities or activities that have been or will be carried out would be likely to produce effects on the valued components within the identified spatial or temporal boundaries.

5. Where other physical facilities or activities may affect the valued components for which residual effects from the applicant's proposed project are predicted, continue the a cumulative effects assessment as follows:

    - Consider the various components, phases and activities associated with the applicant's project that could interact with other physical facilities or activities.

    - Provide a description of the extent of the cumulative effects on valued components.

    - Where professional knowledge or experience is cited, explain the extent to which professional knowledge or experience was relied upon and justify how the resulting conclusions or decisions were reached.

Guidance – Scoping and Analysis of Cumulative Effects

Cumulative Effects Assessment

Assessing cumulative effects typically requires the same method of analysis as described in the project-specific effects assessment. As discussed in Subsections 6.3 to 6.6, the baseline information, project description and project-specific mitigation measures already captured in the application must be provided in enough detail to characterize the extent of the residual effects of the project.

Subsection 6.6 and Tables 6-2 and 6-3 outline the type of information required for a project-specific effects assessment. Although the tables also make specific note of information required for a cumulative effects assessment for valued components, all information requirements contained in the tables should be evaluated, as appropriate, as a guide for applicants in completing a cumulative effects assessment.

A cumulative effects assessment differs from a conventional project-specific effects assessment in that it typically includes:

- larger geographic study areas;

- longer time frames;

- environmental and socio-economic effects associated with physical facilities or activities that may not be directly related to the applied for project (e.g., upstream or downstream facilities not within the Board's jurisdiction, a proposed highway project or residential sub-division in the study area, ongoing forestry or agricultural activities); and

- spatial boundaries that are generally not constrained by jurisdictional boundaries.

The level of effort and scale of the cumulative effects assessment should be appropriate to:

- the nature and context of the project under assessment;
- its potential residual effects; and
- the environmental and socio-economic setting (e.g., an increased level of detail may be required when rapid or intensive development of the region has occurred or is anticipated, or particular environmental or socio-economic sensitivities or risks are involved, such as significant Aboriginal traditional use).

Applicants should also consult the CEA Agency's "*Operational Policy Statement - Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012*".

Other Physical Facilities or Activities

Provide clear reasoning, with supporting rationale, for selecting the other existing and future physical facilities or activities to be included within the cumulative effects assessment. When identifying other physical facilities or activities, include those physical facilities or activities likely to take place as opposed to those not reasonably foreseeable or hypothetical.

Consideration of other physical facilities or activities that have been or will be carried out within the defined spatial and temporal boundaries must, at a minimum, include:

- existing projects and activities;
- those physical facilities or activities for which formal plans or applications have been made or are likely to occur; and
- other related project or activity development assumptions that support and are consistent with the long term economic or financial assumptions (Chapter 7) and engineering assumptions (Chapter 4) made in the application, even if formal plans or applications have not yet been made.

The Courts have said that the decisions of responsible authorities are not required to "consider fanciful projects by imagined parties producing purely hypothetical effects"[3]. However, the NEB does have discretion to consider future development scenarios if it is reasonable to anticipate that the applied for project could contribute to the potential cumulative effects resulting from such future development (i.e. if the economic feasibility of the applied for project is contingent upon the future development). The extent to which an applicant must consider the effects associated with other future physical facilities and activities and the associated depth of analysis will depend upon the relative contribution of the applied for project to the predicted cumulative effects.

Where intensive or expansive development of the region is occurring or anticipated, details regarding the flexibility of project-specific mitigation and monitoring strategies become

[3] *Bow Valley Naturalists Society v. Canada* (Minister of Canadian Heritage), [2001] F.C.J. No. 18 (F.C.A.) at para. 75

particularly important and should also be provided with the application to demonstrate the ability of the applicant to adapt its plans in the future should the resulting cumulative effects differ from those predicted (further Filing Requirements and Guidance for project related monitoring are provided in Subsection 6.8 below).

The Board recognizes that an applicant's depth of analysis in assessing the effects associated with other future physical facilities and activities will depend on the feasibility and practicality of assessing those effects. For example, future effects associated with projects not within the direct control of the applicant and for which there is limited information, or which are still in early planning stages, are inherently more challenging to assess. Despite this, an applicant should use the best available information or undertake additional work to assess these potential effects. Any uncertainties associated with the information used and any assumptions or limitations associated with the analysis must be explained.

6.7.2 Mitigation Measures for Cumulative Effects

Filing Requirements – Mitigation Measures for Cumulative Effects

Describe the general and specific mitigation measures beyond project-specific mitigation already considered, that are technically and economically feasible to address any cumulative effects.

- If appropriate, provide any additional mitigation measures being considered as alternatives to the preferred cumulative effects-specific measures (e.g., adaptive or contingency measures)
- If more than one mitigation measure is available for any particular cumulative effect, then provide the criteria that would be applied to select the mitigation to use (e.g., for the application of contingency plans).
- If new or unproven mitigation measures are to be used, provide any test results or a technically based rationale for their use and describe how their effectiveness would be evaluated.
- Indicate the likelihood of success in reducing or avoiding cumulative effects by the application of the mitigation measures identified.

Guidance – Mitigation Measures for Cumulative Effects

Mitigation of cumulative effects may include broader-scale planning measures or initiatives to reduce interactions and effects from multiple projects or activities. Potentially effective mitigation of cumulative effects may not be within the direct control of, or undertaken by, the applicant. For example, operators may have cooperation plans in place to prevent simultaneous occurrence of activities or projects, or multiple operators may cooperatively make use of existing disturbed areas to prevent new disturbances. Further, regional-level multi-stakeholder planning initiatives may also be evaluated as a means to mitigate cumulative effects. Where such measures or initiatives are in place, an applicant should clearly explain why the identified mitigation would be appropriate to mitigate any cumulative effects. If the mitigation is not within the direct control of the applicant, it should state who would implement the mitigation and how that responsible party intends to monitor implementation of the mitigation.

Various forms of compensation (e.g. habitat offsets) should also be considered as part of an applicant's proposed mitigation, as appropriate.

If monitoring or research programs are identified as a means to adaptively manage cumulative effects, the applicant should explicitly identify how those programs will be used to avoid or reduce effects (i.e., which management actions will be triggered when certain ecological or socio-economic effects are identified, or thresholds reached).

6.7.3 Applicant's Evaluation of Significance of Cumulative Effects

Filing Requirements – Applicant's Evaluation of Significance of Cumulative Effects

1. After taking into account any appropriate mitigation measures for cumulative effects, identify the remaining residual cumulative effects.
2. Describe the methods and criteria used to determine the significance of remaining adverse cumulative effects, including defining the point at which each identified cumulative effect on a valued component is considered "significant".
3. Evaluate the significance of adverse residual cumulative effects against the defined criteria . If the total cumulative effect on a given valued component is considered significant, describe the incremental increase in total cumulative effects caused by the project.
4. Evaluate the likelihood of significants, residual adverse cumulative environmental and socio-economic effects occuring and substantiate the conclusions.

Guidance – Applicant's Evaluation of Significance of Cumulative Effects

Refer to section 6.6.3 for guidance on evaluating the likelihood and significance of adverse residual environmental and socio-economic effects on a project-specific basis . The key difference between determining the significance of project-specific effects versus cumulative effects is the consideration of other physical facilities and activities. The evaluation of significance must focus on the total cumulative effect that may be created from all physical facilities and activities considered in combination with the proposed project. The definition of significance must be clearly explained and take into account local, regional and federal policy and management objectives (*e.g.* recovery strategies, action plans, management plans and land-use plans) and thresholds.

6.8 Inspection, Monitoring and Follow-up

Goal

The application describes the environmental protection plans and programs that will be in place to anticipate, prevent, mitigate and manage potentially adverse environmental effects over the life of the project.

Filing Requirements

1. Describe inspection plans to ensure compliance with biophysical and socio-economic commitments in sufficient detail to demonstrate adequacy and effectiveness. Plans must:

    - identify those positions accountable and responsible for monitoring and ensuring environmental compliance;

    - reference inspection procedures, and describe any accountability and reporting structure for environmental inspectors; and

    - describe minimum qualifications and experience, including training requirements of individuals who will be undertaking inspection and monitoring responsibilities.

2. Describe the surveillance and monitoring program for the protection of the IPL, the public and the environment The monitoring program must be sufficiently detailed to demonstrate its adequacy and effectiveness and must include

    - methods for:

        i) identifying and tracking environmental and socio-economic issues;

        ii) resolving any environmental and socio-economic issues specific to the project, including any sampling programs or site-specific investigations as appropriate; and

        iii) monitoring the effectiveness of mitigation and reclamation, based on established reclamation criteria (see requirements of individual elements in Table 6-2) as well as the applicant's performance measures and targets for each mitigation measure;

    - a description of the frequency or schedule for implementing the procedures listed above; and

    - the criteria for assigning specific monitoring procedures to certain environmental and socio-economic issues.

3. Consider any particular elements in the Application that are of greater concern and evaluate the need for a more in-depth monitoring program for those elements.

4. For CEA Act designated physical activities, identify which elements and monitoring procedures would constitute follow-up under the CEA Act 2012..

Guidance

The NEB recognizes three categories of verification conducted by the applicant. These apply both during and upon completion of construction through the life of the facility:

- Inspections to confirm both implementation of commitments made during the application process and fulfillment of NEB-approval conditions to promote safety, security and environmental protection;
- Monitoring to confirm if mitigation objectives for a specific project, program, or the continued operation of the project have been met; and
- Identify and address any potential short term and long term issues or effects experienced, but not predicted.

A more rigorous type of monitoring program to confirm the effectiveness of an element-specific program may be appropriate when:

- the project or activity is contributing to regional issues of concern;
- the project involves new or unproven technology or is not routine in nature;
- the project involves uncertain effects;
- the project involves new or unproven mitigation measures whose effectiveness is uncertain;
- a familiar or routine project is proposed in a new or unfamiliar environmental and socio-economic setting;
- there is some uncertainty about the conclusions of the ESA.

A condition on the project certificate or order may be imposed to require the applicant to file post-construction monitoring reports after the completion of construction. The time period for required reporting can vary, but typically ranges from one to five years following the commencement of project operations. Projects requiring a longer period of time to reach reclamation goals (*e.g.*, work in areas difficult to revegetate, such as native prairie) or requiring an in-depth, element-specific program may be required to submit monitoring reports of greater scientific rigour or over a longer time period.

- For CEAA 2012 designated physical activities, follow-up on identified elements or issues of concern to:
  - verify the accuracy of the environmental assessment; and
  - determine the effectiveness of any measures taken to mitigate the adverse effects of the project.

Follow-up would generally be an in-depth, scientifically rigorous program.

Revisions to Applicant Plans and Programs

The NEB encourages applicants to use its current and relevant plans and programs to support the inspection, monitoring and follow-up components of its application. If these plans or programs have been previously filed with the Board, provide the document title, version number, latest revision date, date of filing and the NEB file number. Refer to Section 1.5 for more information

regarding these documents. If a project is approved, applicants must file any updates required to incorporate the approved project.

Economic and financial information is advised in an application when the applied-for facilities would result in one or more of the following:

- the construction of a new transmission line; or
- an increase in the capacity of an existing NEB regulated transmission line.

Table 6-2: Filing Requirements for Biophysical Elements

FYI - Reminder …

Filing Requirements for an effects assessment are described in Subsections 6.5 and.Table 6-1in Subsection 6-4 provides examples of the circumstances and interactions that lead to the need for detailed information and considers all phases of an applied for project (construction, operation, maintenance and abandonment), including the potential for accidents and malfunctions during each phase.Table 6-2 was designed to assist applicants in identifying the required information specific to individual biophysical elements.The elements and circumstances described in the tables are not exhaustive.

Applicants must adapt the framework below to logically present the detail and analysis of their particular projects. Where project effects may overlap different element categories, it may be appropriate to define a more suitable or specific element or valued component. For example, where there is a risk of soil contamination reaching groundwater, then "groundwater contamination" might be an appropriate element to assess. This could more accurately focus on the issue of concern, avoid repeating information under both soils and water categories, and provide a more focused assessment.

Physical and Meteorological Environment	
Filing Requirements	**Guidance**
1. Describe the general topography of the project area and any particular physical features crossed by the project or which may affect the project. 2. Identify any areas of ground instability. *3.* Identify areas of potential wind or water erosion. 4. Describe the local and regional climate. Also identify the potential for extreme weather events such as wind, precipitation, and temperature extremes. 5. Identify any areas with potential for acid-generating rock and describe the effects if exposed as a result of the project. 6. Identify and describe any areas with premafrost conditions. 7. Describe how local or regional physical and meteorological conditions could affect the project including how changing conditions may affect the project over the lifetime of the project.	This section provides information on factors or elements of importance that may affect project design. Give special consideration to the following components which may be either directly or indirectly affected by the project or which may impact project design: • unstable slopes or other unfavourable geotechnical conditions including areas with the potential for landslides, mudflows, slumping, subsidence; • seismicity; • flooding, migrating watercourses and eroding banks; • extreme weather events; • seasonal and peak flow regime at stream crossings; • river ice processes and potential ice jams; • permafrost; and • areas with acid rock. Local and regional climate should be described in terms of the range of its variability and the severity (i.e. frequency and durations of maximums and minimums) as well as its averages.

	In regions with potential for extreme weather events, describe and assess these events terms of: · their frequency and intensity; · the maximum expected loading (ice or wind) on the proposed facility; and · extreme heat and any resulting conductor sag should also be considered; Describe how any applicable design standards reduce the potential threat (also see the Filing Requirements contained in Subsection 4.2.1 Engineering Design Details. Meteorological impacts must be considered in the context of: • climate variability and trends (including changes in extreme weather events); • winter ground conditions; and • areas where warming trends may influence hydrologic conditions such as runoff. In areas where permafrost regimes exist: • identify and quantify permafrost conditions, including: · discontinuous permafrost; · high ice content soils; · thaw sensitive slopes; and · riparian areas; • develop baselines for: · near-surface ground temperatures; · active-layer conditions; · slope stability; and · movement potential on the approaches to river crossings. • describe how any changes in the permafrost regime may affect the project over its lifetime.
Soil and Soil Productivity	
Filing Requirements	**Guidance**
1. Describe general soil characteristics and the current level of disturbance associated with soils. 2. For agricultural lands or forested lands with agricultural capability, describe: • the soil classification, including the order, group, family, series and type of soil prior to construction and quantify the soil classification; • the productivity of land and the type of agricultural resource; • the soil types in the study area that are highly susceptible to: i) wind and water erosion; ii) soil compaction; and iii) loss of structure and tilth; • any other soil types needing specific management or mitigation measures; and • soil conservation and protection measures. 3. Describe any contaminants of concern potentially	Soil profile descriptions for dominant soil types must consider: • soil horizons; • thickness of horizons; • texture; • colour; • chemical properties; and • organic content. The soils assessment and mitigative plan must consider: • soil salvage techniques (e.g., soil stripping including proposed width, grubbing, and alternative soil handling techniques); • soil separation maintenance measures; • erosion control measures, including drawings of proposed techniques, particularly at watercourse crossings; • wind erosion and wet soil shutdown procedures; and

associated with the project that may affect soil. 4. Describe the historical land use to determine the potential for contamination of soils or sediments. Describe any known or suspected soil contamination within the study area that could be re-suspended, released or otherwise disturbed as a result of the project. 5. If sediments or soils are contaminated, describe the applicable regulatory standards and all remediation, mitigation and monitoring measures that will be undertaken. 6. Describe the criteria for evaluating reclamation success. Explain how this evaluation would be undertaken and documented. Reclamation measures could include, where applicable: • erosion control, other than re-vegetation; • soil reclamation; • drainage tile repair; • soil compaction alleviation; and • soil salinity reduction. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	• soil compaction prevention measures. Where there is a potential for human health effects see Table 6-3. Where soil contamination is suspected or may be present, consider the guidance provided in the Canadian Standards Association's (CSA) Z768-01 and Z769-00 standards for Phase I and II Environmental Site Assessments. In addition, the NEB's Remediation Process Guide (2011) may also be of value. Additional guidance: • The Canadian Soil Information Service (under Agriculture and Agri-Food Canada) provides access to soils information, including the *Canadian System of Soil Classification,* which describes current accepted standards for soil classification in Canada. • The Canadian Council of Ministers of the Environment (CCME) *Canadian Environmental Quality Guidelines* (including Soil Quality).
Vegetation	
Filing Requirements	**Guidance**
1. For lands where vegetation may affect or be affected by the project, describe: • the pre-project diversity, relative abundance and distribution of vegetation species and communities of ecological, economic or human importance (e.g., traditional use, tame pasture, native prairie, wetland or old growth), prior to construction; • the conservation status applicable to any particular species or communities; • the current level of disturbance associated with vegetation; and • the amount, merchantability and location of any merchantable timber to be removed during project construction. 2. Describe any weed infestations and other invasive and introduced species of concern. 3. Describe re-vegetation procedures to be implemented as part of the project including: • re-vegetation techniques and the locations where they would be implemented; • seed mixes to be used, their application rates, and the locations for their application, or the criteria for determining these specifications, and a discussion of the use of seed certificates; • any fertilizers to be used, their application rates and locations, or the criteria for determining these specifications; and • contingency planting and seeding plans that include a description of any species of vegetation to be replanted, the locations for replanting, or the criteria for determining these specifications.	The description of vegetated lands does not include industrial lands. Vegetation community must apply the most relevant and up to date ecological classification or mapping system. Reference any available provincial or territorial inventory and mapping standards and guidelines. Consultations with potentially affected Aboriginal groups may provide further information. Conservation status (provincial and COSEWIC) of ecological communities as well as plant species must be noted. Explain how communities in the study area were delineated (*i.e.,* existing mapping, remote sensing interpretation, or field mapping). Indicate the date of spatial data collection. Provide justification if field work was not carried out. The effects analysis on vegetation must consider: • change in vegetation cover caused by the project; • alternatives to clearing the entire ROW (include options and decision criteria for retaining vegetation in order to break lines of sight, control access, maintain wildlife corridors, maintain habitat connectivity, reduce fragmentation and reducing overall cumulative effects); • weed control measures (e.g., prevention, treatment); • avoidance of any sensitive or rare communities and important individuals (e.g., vegetation

4. Describe the condition(s) to which the RoW and temporary work space will be reclaimed and maintained once construction has been completed. Explain the extent to which the RoW needs to be kept cleared or could be left to grow and provide the criteria relied on to determine this. 5. Describe the vegetation standards and control to be implemented while constructing and operating the project. Describe any integrated vegetation management program including: • the criteria and circumstances for applying chemical, biological or mechanical control methods; • the selection of plant species to be kept and planted to promote naturally low growing plant communities; and • the use of herbicides, tree growth regulators or other chemicals, their application rates and protocols. 6. Describe the condition(s) to which the RoW and temporary work space will be reclaimed and maintained once construction has been completed. Explain the extent to which the ROW needs to be kept cleared or could be left to grow and provide the criteria relied on to determine this. 7. Describe criteria for evaluating reclamation success related to vegetation and how this evaluation would be undertaken and documented.	important to wildlife); and • seed mixes and replanting for re-vegetation purposes. Native and indigenous species adapted to local conditions should be used when the goal of revegetation is to naturalize or regenerate the area. Vegetation management standards should consider: • maximum conductor sag; • minimum clearance requirements between conductors and the ground and adjacent trees; • terrain and built features; and • the wire area directly under the conductors, the adjacent border area within the RoW and vegetation adjacent to the RoW. Vegetation control programs, including the frequency of work, monitoring and inspection of RoW vegetation conditions, and control procedures, must consider: • the nature of the vegetation cover (e.g., species mix, characteristics) occuring along the RoW, and variations over different biogeographical areas; • the promotion or inhibition of different plant communities (naturally low or slow growing plant species versus predominantly tall or fast growing species); and • the application of other integrated vegetation management practices. If herbicides or other chemicals may be used, consider: • the criteria for their use; • the concentrations, rates and methods of application; • their specificity and potential adverse environmental effects; and • referring to material safety data sheets.
Water Quality and Quantity	
Filing Requirements	**Guidance**
1. Provide a project-specific water use assessment identifying and describing the water resources and the quality of those resources potentially affected by the project, including: any need for water withdrawn from local waterbodies, the purpose, the quantities required, the waterbodies used as a supply source, the flow rate or volume of water available in the waterbody and how and where waste water would be discharged. 2. Describe any interactions between the project and groundwater. Where there is interaction: • describe any potential changes in groundwater flows and any subsequent effects from the changes; and • identify any wells nearby, providing criteria for the spatial boundary considered, and describe the potential for well water quantity and quality to be affected. 3. Describe any contaminants of concern potentially associated with the project that may affect water quality. 4. Describe mitigation for any potential effects on surface-,	The effects analysis regarding quality or quantity of ground or surface water (e.g., lakes, watercourses, riparian areas or man-made water bodies or structures) must consider: • withdrawal or discharge needs for the proposed project, and • any potential inter-basin transfers that might introduce undesirable biota. Project interactions with groundwater may result from crossing a shallow water table or specific project activities (*e.g.,* blasting). In these cases, consider the spatial extent and depth levels as well as water characteristics (*e.g.,* salinity) Consider and describe whether the project may affect evaporation and transpiration rates and therefore affect surface land use, especially in agricultural areas. If there is potential for contaminants affecting water resources, consider sediment or groundwater sampling for assessment of contaminants. Where there is a potential for human health effects

ground- or well-water quantity and quality, including the need for any specific pre- and post-construction monitoring 5. Describe any applicable water management plans. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	see Table 6-3. Additional guidance: • The CCME's *Canadian Environmental Quality Guidelines* (including Water Quality). • Health Canada's *Guidelines for Canadian Drinking Water Quality* .
Fish and Fish Habitat	
Filing Requirements	**Guidance**
1. Identify fish species and their life stages in the study area, as well as their contribution to local fisheries or to ecological importance. 2. Describe the seasonal ranges, seasonal sensitive periods, habitat use, movements, and general population status of fish species identified above. 3. Identify any fisheries avoidance measures, mitigation, or other measures to protect and enhance fish and fish habitat, including protected areas in and near the study area. 4. Identify the need for an Authorization under paragraph 35(2)(b) of the Fisheries Act for a serious harm to fish that are part of a commercial, recreational or aboriginal fishery, or to fish that support such a fishery and discuss any applicable DFO guidance documents. 5. Describe, in detail, sensitive areas and sensitive habitats, including wetlands and riparian habitat. 6. Where fish-bearing watercourses would not be crossed by trenchless methods, either describe and justify the watercourse-crossing techniques to be used or the criteria for determining the techniques proposed for each watercourse crossing. *7.* Describe the timing of any instream work, including restricted activity periods and windows. 8. Describe the condition(s) to which the watercrossings and riparian zones would be reclaimed and maintained once construction has been completed. 9. Describe criteria for evaluating success of reclamation of fish-bearing water bodies and their banks as well as riparian areas. Describe how and when this evaluation would be undertaken and documented. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	Applicants should work with the relevant fisheries authorities to identify issues and appropriate mitigative measures and, where appropriate, Aboriginal groups. Where an authorization for serious harm to fish is required from DFO, outline any appropriate offsetting and monitoring. Where effects on fish and fish habitat may affect human health effects, see Table 6-3. DFO has several guidance documents and information pieces that could be useful in dealing with fish and fish habitat. Please refer to the DFO National website for applicable materials and guidance.
Wetlands	
Filing Requirements	**Guidance**
1. Quantify delineate and describe wetlands in the context of: • wetland class, ecological community type and conservation status; • abundance at local, regional and provincial scales;	Wetlands include bogs, fens, marshes, swamps and shallow waters as defined in the Canadian Wetland Classification System (National Wetlands Working Group, 1997). The effects analysis regarding wetlands must consider

• distribution; and • current level of disturbance. 2. Identify and describe wetland capacities to perform hydrological, water quality, habitat, or other ecological functions. 3. Identify a regional study area of sufficient size to capture effects on wetlands within the larger drainage area. Include wetlands located outside of the local study area that may be affected by hydrological changes as a result of cumulative effects. 4. Detail the efforts to be taken to avoid impacting wetlands, mitigation, monitoring and any applicable compensation measures, for potentially affected wetlands. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	any potential loss of wetland function. A higher level of assessment may be required for provincially or territorially significant wetlands for wetlands of significance to Aboriginal groups or for features of significance. Discuss any applicable provincial or territorial classification schemes, and protection policies and requirements. Applicants should consult with Environment and Climate Change Canada regarding mitigation for wetlands. Additional guidance: Useful information sources accessible from Environment and Climate Change Canada include: • The Federal Policy on Wetland Conservation; • The *Federal Policy on Wetland Conservation Implementation Guide;* • *Wetland Ecological Functional Assessment: An Overview of Approaches*; and • *Wetlands Environmental Assessment Guideline.*
Wildlife and Wildlife Habitat	
Filing Requirements	**Guidance**
1. Identify wildlife species of ecological, economic or human importance in the study area. Also describe the: • diversity, distribution and location; • abundance and population status; • life cycle; • seasonal ranges (e.g., migration); • habitat requirements; • movements (e.g., wildlife corridors); and • sensitive periods (e.g., seasonal, diurnal and nocturnal) With respect to birds in the area, describe: • the species' vulnerability to collisions with overhead conductors; • any monitoring of bird strikes with existing nearby powerlines and the findings from this; • the findings from studies on the effectiveness of diverters or other proposed mitigations for the particular birds of relevance; • the design with respect to the risk of electrocution of birds; • any proposed mitigation and monitoring, and the rationale for these; and • any comments received from the Canadian Wildlife Service and any local birding group. 2. For the wildlife identified, describe and quantify the habitat type including its: • function; • location; • suitability; • structure; • diversity; • relative use; and • abundance as it exists prior to project construction. 3. Describe any lands in the study area that might constitute sensitive areas and habitat for wildlife, or nearby environmentally-significant areas such as	The identification and description of wildlife presence in the area must include, but not be limited to, resident, temporary (e.g., migratory) unique species or populations, and umbrella and keystone species. Mammals, birds, amphibians, reptiles and invertebrates may be relevant. The identification and description of wildlife of human importance must also consider consumptive (e.g., hunting, harvesting) and non-consumptive (e.g., bird-watching) values, as well as species of importance to potentially affected Aboriginal groups. The identification, description and quantification of habitat must include, but not be limited to: • breeding or rutting grounds, • nesting and denning sites; • wintering grounds; • hibernation or hibernaculum sites; • moulting, migration and staging areas; • movement corridors; • mineral licks; and • trees important to wildlife (e.g., bat trees). Other sensitive areas and habitats include: • wetlands (and associated upland habitats); • riparian habitat; • forest interior habitat; • old growth ; and • grassland / native prairie. The effects analysis regarding wildlife and wildlife habitat must consider factors such as: • ecosystem functions; • the timing of construction activities in relation to sensitive periods for wildlife (e.g., migratory bird breeding season); • varying degrees of wildlife habitat loss; • changes in habitat quality (e.g., fragmentation, edge effects);

National Parks, areas of natural or scientific interest, Migratory Bird Sanctuaries or other important bird areas or sanctuaries, National Wildlife Areas, or World Biosphere Reserves.
4. Identify wildlife management areas and established or proposed sanctuaries or other areas in or near the study area.
5. Describe the levels of disturbance currently affecting wildlife and habitat, such as habitat fragmentation and the extent of human access and use.
Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.
Further, with respect to cumulative effects:
1. Describe the cumulative disturbance footprint of proposed and future physical facilities and activities within known key habitats (*e.g.,* migration corridors, denning or calving areas, feeding areas) and distribution of that footprint, quantitatively where possible. Describe the effects on the connectivity of key habitats.
2. Describe the cumulative effects on wildlife that could occur as a result of the timing of the proposed project in combination with other physical facilities or activities.
3. Describe how cumulative changes in access would affect wildlife mortality risk or habitat quantity and quality.
4. Compare the cumulative effect on each species assessed to any available species-specific thresholds or policies, and indicate to what degree a threshold is approached or exceeded.
	• changes in human access;
	• disturbance to wildlife, including sensory (light and noise) disturbance from operation of above-ground facilities, including on birds and nocturnal species; and,
	• direct and indirect wildlife mortality.
	Ensure spatial boundaries for the study area and assessment are specific to the valued component and ecologically defensible (*e.g.,* winter range boundaries, migration routes, fawning and calving areas).
	When calculating the disturbance footprint or linear disturbance density, remember to include the total avoidance area experienced by the valued component, which may be considerably larger than the physical footprint itself depending on the valued component.
	Temporal considerations are also relevant. For example, effects on wildlife from noise and sensory disturbance, water usage or divergence, or waste stream emissions to air, land or water can be exacerbated by having a number of projects taking place simultaneously (or continuously over more than one season) in a watershed, breeding area or migratory pathway.
	Increased access to project areas, whether temporary or permanent, affects wildlife habitat, populations, distribution and interactions. Access may include not only human access but increased ease of access by predators or competing species.
	Examples of tools that may be used to assess cumulative effects on valued components include scenario-based models, spatial analysis using a geographic information system, and landscape level indicators of change (*e.g.,* linear density) (see the CEA Agency's Cumulative Effects Practitioners Guide, 1999).
	Applicants should note the requirements of applicable provincial, territorial and federal regulations (*e.g.,* the federal *Migratory Birds Regulations)*.
	Additional guidance:
	Environment and Climate Change Canada and its Divisions (*e.g.,* Canadian Wildlife Service) are sources of relevant information on:
	• wildlife and wildlife habitat;
	• Acts and Regulations, including the *Migratory Birds Convention Act*;
	• locations of National Wildlife Areas and Migratory Bird Sanctuaries; and
	• environmental assessment guides, including:
	  • *Environmental Assessment Guideline for Forest Habitat of Migratory Birds*;
	  • *Migratory Birds Environmental Assessment Guideline*;
	  • *Wetlands Environmental Assessment Guideline*;
	  • *Environmental Assessment Best Practice Guide for Wildlife at Risk in Canada*; and
	  • relevant Canadian Wildlife Service Technical Report Series publications.

	The Important Bird Areas database may be accessed through Bird Studies Canada or Nature Canada.
Species at Risk or Species of Special Status	
Filing Requirements	**Guidance**
1. For effects related to wildlife, fish and plant species at risk or species of special status: • identify the species and their status; • provide the appropriate references to the SARA Schedules, or Committee on the Status of Endangered Wildlife in Canada (COSEWIC), provincial or territorial listing; • identify their habitat(s), including any critical habitat(s) identified in a Recovery Strategy or an Action Plan listed on the SARA public registry; • determine whether the species, its critical habitat, or the residences of those species could be affected by project activities; i) if no, explain why not; ii) if yes, describe any potential effects; iii) identify any critical timing windows (e.g., denning, rutting or spawning) setback distances, or restrictions; iv) identify if a provincial, territorial or federal (e.g., SARA) permit will be required; and v) identify any proposed mitigative measures (e.g., improved project design or construction timing or comprehensive plan). 2. Where the project may result in the destruction of any part of the critical habitat of a wildlife species listed on Schedule 1 of SARA, describe: • any discussions with the appropriate Federal Authority (Environment and Climate Change Canada, Fisheries and Oceans Canada, Parks Canada) on obtaining a permit under section 73 of the SARA; • all reasonable alternatives to the project that would avoid the effect on the species' critical habitat; and • all feasible measures that will be taken to minimize the effect of the work or activity on the species' critical habitat. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical works or activities and expand on the matters described above as appropriate.	Many rare species (*e.g.*, endangered or threatened species under the SARA) are at risk in large part as a result of the past cumulative effects on their population or habitat. Their inclusion on official lists reflects their status as having crossed a threshold requiring special actions for their protection and recovery. Any additional residual effects have the potential to further contribute to this existing situation. Consequently, proposed projects must preferably avoid, or fully mitigate or compensate for any residual project contribution to cumulative effects. Status refers to designation under federal, provincial or territorial legislation or guidelines (e.g., extirpated, endangered, threatened or of special concern). Consult the SARA public registry for Schedule 1, the List of Wildlife Species at Risk, and Schedules 2 and 3. Consult with Environment and Climate Change Canada (Canadian Wildlife Service), Fisheries and Oceans Canada, or Parks Canada on Species at Risk or their critical habitat in the study area. Where critical habitat has not been defined, field studies may be necessary, as well as identifying, with federal, provincial or territorial authorities, mitigation measures that effectively avoid sensitive interaction periods or activities. Field surveys may be useful in identifying mitigation needs or locally common populations not substantially affected. For species at risk listed on Schedule 1 of SARA, the proposed mitigative measures must be consistent with any applicable Recovery Strategies and Action Plans listed on the SARA public registry. Consult with appropriate provincial or territorial authorities on species listed under those jurisdictions. For species at risk with no recovery strategy or action plan, applicants should use the best available information, such as COSEWIC status reports, draft recovery strategies or action plans, existing plans or input from the recovery team and specific advice (or management plans) from any jurisdiction that manages the species. Describe how measures to avoid, fully mitigate or compensate project effects would align with the best available information. When relying on compensation plans, describe the details of consultation with relevant experts, the options available, and criteria for selecting the options relied on, and for assessing the adequacy (sufficiency and validity) of any compensation measures or offsets. Applicants should conduct a thorough inventory of all

	areas potentially affected by the project that are expected to support any species at risk or species of special status. Consult federal, provincial, territorial, regional and local databases (*e.g.,* conservation data centres) and any other information associated with species of special status. Species data in existing databases may not be systematically collected or updated and, therefore, a database search may not be sufficient to support a conclusion about the absence of a species in the area. Additional guidance, including direction to relevant federal, provincial, territorial and other related information, is available from the COSEWIC and Environment and Climate Change Canada.
Air Quality	
Filing Requirements	**Guidance**
For effects, or public concerns, associated with dust or emissions from construction activities: • provide an overview of concern; and • provide a qualitative assessment.	Where there is a potential for effects on aesthetics or human health see Table 6-3.
Acoustic Environment	
Filing Requirements	**Guidance**
1. Where there is a public concern associated with an increase in noise levels during construction, provide a noise impact assessment, including an overview of the concerns. 2. For projects that result or may result in an increase in noise emissions during operations or maintenance: • Describe existing ambient noise levels in the area, including the methods and data sources used to determine the ambient levels; • Identify the potentially affected receptors and permissible sound levels for each receptor; • quantify noise levels at appropriate distances from the facility (e.g. at edges of RoW/facility and at the affected receptors) and describe the frequency, duration and character of noise; • provide the predicted sound levels from the project alone and predicted cumulative sound levels in combination with other existing and future physical facilities and activities in the area, including an assessment of low frequency noise; • describe consultation with regulators, stakeholders, community groups, landowners and Aboriginal communities about potential effects of the project on the acoustic environment; • identify and justify the applicable guidelines used to determine the significance of the effects of the predicted emissions associated with the project; • provide a noise management plan, including identification of noise sources, an assessment of current noise mitigation measures, performance effectiveness of noise control devices, best practices programs and continuous improvement programs; and	The effects assessment must consider: • any effects from inaudible noise (e.g., low frequency noise); and • the effects of noise on wildlife. Noise management plans must consider: • notification of nearby residences and local authorities of plans and procedures for preventing and managing noise. Where there is a potential for human health effects see Table 6-3. Additional guidance: • Alberta Energy Regulator's *Directive 038: Noise Control* (AER Directive 038) • Alberta Utilities Commission's *Rule 012 – Noise Control (AUC Rule 012*) • British Columbia Oil and Gas Commission's *British Columbia Noise Control Best Practices Guideline* For projects in provinces with no guidelines, please refer to ERCB Directive 038 or AUC Rule 012, whichever is the most appropriate.

• identify the need for a follow-up monitoring for the purposes of validation of the model or as a result of any concerns raised by the public. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	
Electromagnetism & Corona Discharge	
Filing Requirements	**Guidance**
1. For operating voltages above 240 kV, describe: (i) the levels of noise, (ii) ozone concentration, (iii) electric field gradient and magnetic field strength expected at the edge of the right-of-way at maximum loading of the international power line, (iv) the predicted electromagnetic field levels and (v) any relevant standards. 2. Identify the potential for any electromagnetic interference with radio and television signals and reception, under fair and foul weather conditions at maximum load. Describe the area potentially affected, the frequency and duration of occurrence, and any applicable standards. 3. Describe potential induction effects on other infrastructure operators. Where this could affect existing operations describe any authorizations required and consultations with potentially affected infrastructure operators and how any concerns raised will be addressed.	Where there is a potential for human health effects see Table 6-3. Describe noise associated with corona discharge from power lines during periods of foul weather, describe: • the frequency of foul weather periods and how these are defined; • predicted audible noise levels for both fair and foul weather periods, at appropriate distances from the facility (e.g. at edges of RoW and at nearest or most affected receptors). With respect to electromagnetic field level, describe quantitatively: • ambient conditions; • distances to edge of RoW, nearest residences, schools and other public institutions; • modelling and prediction of environmental conditions during construction and operations at the above distances; and • distance to where predicted conditions would meet any applicable standards, and populations within that radius.

Table 6-3: Filing Requirements for Socio-Economic Elements

Human Occupancy and Resource Use	
Filing Requirements	**Guidance**
1. Describe the general patterns of human occupancy and resource use in the study area. 2. Describe the potential interactions of the project with local and regional human occupancy and resource development activities. Include effects the project may have on the maintenance of those activities and on the livelihood of local workers, business owners and operators. 3. Describe the goals of any applicable local or regional land use plans or local or regional development plans and the extent with which the project aligned with such plans. 4. Identify predicted impacts of the project on the quality and quantity of ground or surface water used for domestic, commercial, agricultural or recreational uses. *5.* Identify any predicted visual or other aesthetic effects of the project on existing land use in the study area. 6. Identify any predicted effects of the project on livestock health and productivity. *7.* Describe any site specific and project wide mitigation to address identified effects. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	The assessment of potential impacts on human occupancy and resource use must evaluate: • rural and urban residential areas (includes both year-round and seasonally occupied facilities), Indian Reserve Lands, Aboriginal communities and Aboriginal traditional territories; • agricultural areas (including specialty crops, orchards and vineyards); • health and productivity of livestock; agricultural areas (including specialty crops, orchards and vineyards); • recreation and park areas (including local and provincial or territorial parks and recognized scenic areas); • lands under Parks Canada's jurisdiction, conservation areas, International Biological Program Sites or other ecological reserves or preserves; • industrial and commercial areas; • controlled or managed forest areas (including agreement forests and timber sales areas); • registered or recognized hunting, trapping or guiding areas and commercial and sport fishing areas; • water reserves and licences, and water supply sources or intakes for agricultural, industrial, commercial, residential and municipal users; and • transportation infrastructure which, in addition to road and rail infrastructure, would also include navigable waterways. The project should be assessed for compatibility with local and regional land use and development plans. Where “multiple-use” is permitted, it should also be assessed for compatibility with existing uses. If there is a predicted effect on the use of traditional territory or potential or established treaty or Aboriginal rights, refer to the Traditional Land and Resource Use element within this table. If there is a predicted effect on a biophysical component (e.g. Water Quality and Quantity, Acoustic Environment,) that could affect Human Occupancy and Resource Use, refer to that biophysical component in Table 6-2. If there is a predicted effect on visual or other aesthetic qualities, refer to the guidance under the Human Health element within this table.
Heritage Resources	
Filing Requirements	**Guidance**
1. Describe any known heritage resources in the study area. 2. Determine the potential for any undiscovered heritage resources in the study area. 3. Describe what contingency plans and field measures would be undertaken should a heritage resource be	Applicants must be aware of any federal, provincial or territorial legislation or guidelines for identifying and protecting heritage resources. Applicants must consult with Aboriginal groups with concerns about heritage resources in the project area.

discovered during construction. 4. Provide copies of correspondence from provincial or territorial authorities responsible for heritage resources with comments respecting any heritage resource impact assessment and proposed mitigation measures. 5. Provide a statement indicating whether the company will implement the recommendations of the provincial or territorial heritage resource authorities. 6. If a previous heritage resource assessment has been completed in the study area, a summary should be filed along with any additional mitigation measures specific to the applied-for project.	Although lands may be previously disturbed, an archaeological and paleontological assessment may still be required. The heritage resources assessment must be completed by a qualified archaeologist or paleontologist and include details of the field methodology used in the study. Where there is potential for discovery of heritage resources during construction or operations activities, a heritage resources contingency plan must be submitted. The plan must state at a minimum, who would be contacted and under what conditions work would stop and resume.
Traditional Land and Resource Use	
Filing Requirements	**Guidance**
1. Describe how lands and resources in the study area are currently used by Aboriginal persons or groups for traditional purposes. 2. Identify the Aboriginal persons or groups currently carrying out traditional land and resource use activities, the spatial and temporal extent of use, and how the project would impact on this use. 3. Describe all reasonable alternatives to the project considered that would avoid the impact on the Aboriginal traditional land and resource use considered during project development. 4. Describe all feasible measures that would be taken to mitigate the impact of the activity on Aboriginal traditional land and resource use. 5. Describe the methodology used to collect the Aboriginal land and resource use information and provide a listing, and the rationale for the listing, of all Aboriginal persons and groups contacted. 6. Demonstrate that those Aboriginal persons and groups participating in collecting traditional use information have had the opportunity to review the information and proposed mitigation. Include any comments from the Aboriginal participants on the information and proposed mitigation. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	An assessment of impacts on current use of lands and resources for traditional purposes by Aboriginal people is required for the ESA. Aboriginal people may use lands for various traditional activities such as hunting, fishing, trapping, berry picking, and plant gathering, for medicinal, cultural or household use, as well as cultural or spiritual ceremonies. In assessing the temporal aspects of traditional land and resource use, note the frequency, duration and seasonal aspects of each activity. In assessing the spatial aspects of traditional land and resource use, note that some activities could be site specific (e.g., berry-picking areas) but others may not (e.g., hunting may extend over a broad area and temporal considerations may be more relevant). Applicants must also refer to the assessment of the applicable biophysical element (wildlife and wildlife habitat, vegetation, and fish and fish habitat) when considering traditional land and resource use. Where confidentiality of the traditional land and resource information is a concern, this information may be provided in the following manner: • a traditional land use study in which the information is provided using a system of data classification to protect the confidentiality of site-specific details; • a traditional land use study including the methodology and proposed mitigation; or • alternatively, applicants may ask permission to file the study confidentially, in accordance with the criteria set out in section 16.1 of the NEB Act.
Social and Cultural Well-Being	
Filing Requirements	**Guidance**
1. Describe the socio-cultural setting of the study area, indicating the: • predominant cultural and Aboriginal groups; • demographic features of the local population and workforce; and • prevalent socio-cultural concerns of residents, families and workers in the study area.	Socio-cultural effects on local communities may arise from various sources and may include: • an increase in temporary or permanent residents to an area; • location of construction camps within, beside or near local communities; • a significant increase to, or uneven distribution

2. Provide an overview of the predicted socio-cultural effects on the local community from the project. 3. Describe the interactions of project construction, operations, and maintenance workforces with the local community, residents and businesses. 4. Describe any mitigative measures to address identified effects. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	of, personal income at the community level; and • disruptions to cultural traditions and institutions. The potential effects from the sources listed above may include: • stresses on community, family and household cohesion; • alcohol and substance abuse; or • illegal or other potentially disruptive activities. The identification and evaluation of potential effects must: • be conducted at the community level rather than the individual level to protect the privacy of individuals; and • include consultation with local, regional and Aboriginal social and cultural service providers, agencies and institutions as appropriate. The local community could include: • more than one inhabited area within the study area; and • more than one cultural group within an inhabited area.
Human Health	
Filing Requirements	**Guidance**
1. Describe and quantify: • the project related activities, toxic components, nuisances and environmental changes that could potentially be sources of adverse human health effects; and • the potential human receptors of these effects. 2. Where the project could create air, water or noise emissions or effluent discharge levels that meet local, provincial, territorial or federal guidelines (e.g., CCME Guidelines, ERCB Directive 038, AUC Rule 012), yet public concerns regarding human health effects have been raised, provide a description of the public concerns and how they would be addressed. 3. Where the project could create health effects, summarize how these effects would be mitigated. 4. Where it is reasonable to assume there could be a potentially high or significant risk to human health from the project, provide a human health risk assessment. 5. Provide a description of any predicted visual or other aesthetic effects of the project on residents or other potentially affected persons or users in the study area. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	Applicants must consider the potential for effects to human health to determine the level of assessment required. For example, where the project may cause nuisance-related health concerns, applicants must summarize the effect, outline mitigation measures to minimize the effect, and give appropriate details of analytical procedures used (e.g., a source and release assessment, exposure assessment, dose-response assessment or risk characterization). Identifying and evaluating potential human health effects must include consultation with local, regional, Aboriginal, provincial or territorial, and federal health service providers, agencies and institutions, as appropriate. Applicants must consider the potential effects of the project on the health of susceptible groups such as: • local residents, landowners and tenants; • the elderly and children; and • others who may regularly use the study area such as recreationalists, hunters and trappers. Applicants must also consider how the project may impact the health of those using traditional areas for hunting, trapping, fishing, berry picking, and medicinal plant collection. This consideration must be linked with the applicant's assessment of traditional land and resource use. As the definition of human health includes consideration of mental and social well-being, applicants must also consider any adverse emotional or social stressors potentially resulting from the project including: • concern for public safety from construction or operations-related accidents or malfunctions; or • disruption of normal, daily living activities. Where a particular project emission or effluent

	discharge level falls below or within applicable limits, additional mitigation may not be required. However, where the change may be substantial, even if within set limits, due to local or regional circumstances or the extent of the change, the applicant must provide any other additional mitigation to minimize pollution and future human health risks. A visual impact assessment must consider and describe factors such as, but not limited to: • how landforms, vegetation cover and other landscape features may or may not screen or visually absorb the project; • how the project will compare with other adjacent or nearby built features; • identification of view points and areas from which the project will be visible • identification of views affected by the project; • the depth of view to any project obstruction of views; and • the width of angle of vision obstructed by the project. Where visual impacts are a concern the assessment should consider using methods such as photographic superimposition, mapping or GIS modelling of viewsheds. Applicants must clearly link this portion of their assessment to those sections of their assessment that consider the biophysical elements affecting human health (e.g., Acoustic Environment or Water Quality and Quantity). Consult Health Canada for information on human health impact assessments and to access The Canadian Handbook on Health Impact Assessment. Health indicator data is available from Statistics Canada.
Infrastructure and Services	
Filing Requirements	**Guidance**
1. Describe the existing local and regional infrastructure in the study area, including: • railways; • roads, highways and their traffic useage levels and patterns; • pipelines, water mains and sewage lines; • navigable waterways; • existing power lines; and • any other potentially affected facilities. 2. Describe the existing local and regional services in the study and the predicted effects on those services. Include an assessment of effects to: • accommodation, including camping facilities; • recreation; • waste disposal; • police; • fire-fighting; • ambulance; and • health care services. 3. Describe potential induction effects on other infrastructure operators. Where this could affect existing operations describe any authorizations	The assessment must consider, and where possible quantify, how project construction and operation activities may affect local or regional infrastructure and services, such as: • housing; • educational facililties; • essential and emergency services (fire, police, ambulance, hospital) including the standard of service provided (e.g. response time); • recreational requirements; • transportation; and • utilities including water, sewer, waste disposal, electricity. Effects related to the above-noted factors must be assessed from the perspectives of both: • the project's needs for infrastructure and services (e.g., to meet workers' needs for housing or transportation); and • the project's effects on local infrastructure and services, and consequent effects on local residents (e.g. project effects on availability of housing for local residents or on traffic flows and

required and consultations with potentially affected infrastructure operators and how any concerns raised will be addressed. 4. Describe any need for government and applicant expenditures for new or expanded services or infrastructure, arising out of project-related effects 5. Describe any mitigative measures, including applicable plans, to address identified effects. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	delays to the local population) Applicants must consider any local and provincial or territorial guidelines regarding emergency services or requirements for heavy load vehicles and construction access permits.
Navigation and Navigation Safety	
Filing Requirements	**Guidance**
1. Provide a listing of navigable waterways that the proposed power line corridor will pass in, on, under, over, through or across and the proposed crossing methodology. 2. Provide a listing of ancillary project components that will be constructed in, on, under, over, through, or across navigable waterways to support the power line project (e.g., temporary and permanent bridges). 3. Provide a listing of potentially affected waterway users and describe consultation conducted with waterway users and Aboriginal groups regarding navigational use, issues raised, and how issues have been addressed. 4. Describe project effects on navigation and navigation safety. 5. Describe proposed mitigation measures to address project effects on navigation and navigation safety.	Where there are waterways which are considered navigable and there are project effects on navigation and navigation safety, Applicants must assess who navigates the affected waterways (e.g., tourism groups, guide outfitters, anglers, kayaking organizations), the type of craft, the ability to notify waterway users of impediments, the project effects / impacts on safe and reliable navigation, and identify mitigation measures to minimize or eliminate project effects on navigation and navigation safety. Applicable codes such as CSA 22.3 Overhead Systems are to be adhered to.
Employment and Economy	
Filing Requirements	**Guidance**
1. Describe the local and regional employment situation in the study area. 2. Describe any local or regional training and employment development plans. 3. Describe the ability of local and Aboriginal residents and businesses to provide labour services, equipment, supplies and other contracting needs during construction, operation and maintenance of the project. 4. Describe plans to encourage local and Aboriginal employment, procurement and contracting opportunities. 5. Describe any training programs the applicant is supporting to enhance employment opportunities for local and Aboriginal residents. 6. Provide an estimate of the anticipated levels of local and regional economic participation in the project in comparison to the total project requirements (e.g., number of workers and total dollar value of contracts). 7. If the project has the potential to directly affect local, regional, provincial, territorial or federal government revenues from tax levees or other means during	The assessment should include a quantitative and qualitative review of: • local and regional employment and unemployment levels; • education and skill levels; • local and regional economic conditions; and • direct government revenues expected to be generated by the project. Construction and operations workforce numbers and contract values must be provided, where possible, on a month-to-month basis through the construction phase of the project and on a yearly basis for the operations phase of the project. For smaller projects, only an estimate of the construction workforce and the full-time operations workforce is required. The assessment must describe those situations when the project may directly or indirectly create economic hardship or the displacement of workers or businesses, including any mitigative measures to address these effects. If the applicant has prepared an economic benefits plan or has entered into specific cooperation agreements with communities or Aboriginal groups,

construction and operation, provide a quantitative assessment of the potential impacts.	the applicant should provide a summary of the employment, training and business commitments that were made.

Chapter 7 - Economics

7.1 Economics

Goal

The application provides sufficient economic information to demonstrate that the applied-for facilities will be used, will be useful, and that the project will contribute to Canadians benefiting from efficient energy infrastructure and markets.

Filing Requirements

The application could include the following economic information:

- a description of the supply, demand and load conditions of the markets at the origin and terminus points of the proposed IPL and any other markets that the proposed IPL would service.

The NEB must be satisfied that there is, or will be, an adequate supply and markets available to the IPL that the applied-for facilities could be expected to be used at a reasonable level over their economic life and would contribute to Canadians benefiting from efficient energy infrastructure and markets. Information should include demonstration that the capacity of the applied-for facilities is appropriate for the volumes that would be transported on the IPL.

7.2 Finance

Goal

The application provides sufficient financial information to demonstrate that the applicant has the capability to finance the project.

Filing Requirements

The application could include the following financial information:

- an overview of the company and a description of its financial strength;
- a copy of the most recent annual report or financial statements of the owner and the operator of the international power line;
- a description of the intended methods and sources of financing for the proposed facilities; and
- any changes to the financial risk of the company associated with its intended methods of financing the facilities.

7.3 Level of Detail

In order for the NEB and interested parties to properly evaluate the proposed facilities, sufficient and clear information is required from the Applicant. However the amount of information and its

level of detail required from the Applicant to describe the economics and financing of proposed facilities may vary. This could depend upon:

- whether the Applicant is a well-established entity;
- the magnitude of the proposed project, and;
- the extent of public interest in the proposed project.

FYI - Example …

For comparison, a project such as the replacement of an existing power line by a long-established utility might only require the submission of an annual report. In contrast, a project by a new consortium, and for which significant public interest in the project has been identified, may require more information and detail about its economics and financing.

Chapter 8 Lands Information

When an applicant elects for federal laws to apply certain sections of the NEB Act which are normally reserved for pipelines, also apply to IPLs pursuant to section 58.27 of the NEB Act. These sections are described below.

Goal

The application includes accurate documentation regarding land requirements, land rights, service of notices and the land acquisition process, which demonstrates compliance with legislative requirements and respects the rights of affected parties.

Note that, under the NEB Act, detailed routing and land acquisition in respect of IPLs will be carried out under provincial laws for permits or designated order certificates unless the applicant elects, pursuant to section 58.23 of the NEB Act, to have federal laws apply (i.e., an Election Certificate). Therefore, the applicant is advised to consider the following filing requirements in relation to filing an application for a Certificate.

8.1 Land Areas

Filing Requirement

The land area documentation should include the following:

- the width of the RoW including the locations where the width varies;
- the locations and dimensions of known temporary work space required for the project or, if locations are not known, a drawing showing the typical dimensions of the temporary work space required for road, watercourse and other crossings, storage areas and camps; and
- the locations and dimensions of any new lands required for all associated facilities.

Guidance

Provide a description of the requirements and rationale for both temporary and permanent lands which would allow the Board to assess the appropriateness of the land areas. The description should include the dimensions of the:

- RoW;
- temporary work space;
- access roads; and
- ancillary facilities.

Describe the location and distance of any changes to the RoW width and the reasons for the change. Where new lands under any type of agreement are not required for the project, this should be clearly stated in the application and no further land area information needs to be filed. As well, where GPS information is known it should be filed with the Board.

8.2 Land Rights

1. Provide a description of the type of land rights proposed to be acquired for the project and related facilities.

2. Provide a description of the nature and relative proportions of land ownership along the proposed route (i.e., freehold, Crown or public lands).

3. Where no new land rights are required, provide a description of the existing land rights that allow for the project.

Guidance – Land Rights

The description of the land rights will inform the Board and landowners of the different types of land rights needed for the project (e.g., option, easement, fee simple, statutory RoW, temporary work space, permit or licence, etc.) and the areas where existing land rights allow for the project.

A description of the land ownership informs the Board of the land acquisition areas and agreements required for the project.

8.3 Lands Acquisition Process

1. Provide a description of the proposed process for acquiring the lands required for the project.

2. Provide the timing of acquisition and the current status of acquisition.

3. Provide the status of service of notices on all owners of lands to be acquired pursuant to subsection 87(1) of the NEB Act.

Guidance – Lands Acquisition Process

Upon filing an election, the application should describe the land acquisition process to be implemented. This will allow the Board to assess the process, to be aware of the timing of acquisition and to verify compliance with the NEB Act.

The land acquisition information should describe the:

- number of landowners and tenants;
- number of option or easement agreements signed;
- number of notices served; and
- timing of service of remaining notices.

This information may be provided in a table.

8.4 Land Acquisition Agreements

1. Provide a sample copy of each form of land acquisition agreement proposed to be used (includes option and easement). The agreement shall be in the form required by subsection 86(2) of the NEB Act:

   86. (2) A company may not acquire lands for a [pipeline][4] under a land acquisition agreement unless the agreement includes provision for

   (*a*) compensation for the acquisition of lands to be made, at the option of the owner of the lands, by one lump sum payment or by annual or periodic payments of equal or different amounts over a period of time;

   (*b*) review every five years of the amount of any compensation payable in respect of which annual or other periodic payments have been selected;

   (*c*) compensation for all damages suffered as a result of the operations of the company;

   (*d*) indemnification from all liabilities, damages, claims, suits and actions arising out of the operations of the company other than liabilities, damages, claims, suits and actions resulting from gross negligence or willful misconduct of the owner of the lands;

   (*e*) restricting the use of the lands to the [line of pipe] or other facility for which the lands are, by the agreement, specified to be required unless the owner of the lands consents to any proposed additional use at the time of the proposed additional use; and

   (*f*) such additional matters as are, at the time the agreement is entered into, required to be included in a land acquisition agreement by any regulations made under paragraph 107(*a*).

2. Provide a sample copy of any proposed agreements for:

   - fee simple ownership;
   - temporary work space;
   - an access road; or
   - other agreements for the lands required for the project.

Guidance – Lands Acquisition Agreements

Upon filing an election, the application should be accompanied with a sample copy of the acquisition agreement(s) to enable the Board to verify that the agreement complies with the requirements of subsection 86(2) of the NEB Act and that landowner rights are protected.

4 For election certificates, sections 86 and 87 apply and reference to the word “pipeline” which should be read as a reference to IPL. See s.58.27 of the NEB Act.

8.5 Section 87 Notices

1. Provide a sample copy of the notice proposed to be served on all owners of land pursuant to subsection 87(1) of the NEB Act:

   87. (1) When a company has determined the lands that may be required for the purposes of a section or part of a [pipeline][5], the company shall serve a notice on all owners of the lands, in so far as they can be ascertained, which notice shall set out or be accompanied by

   (*a*) a description of the lands of the owner that are required by the company for that section or part;

   (*b*) details of the compensation offered by the company for the lands required;

   (*c*) a detailed statement made by the company of the value of the lands required in respect of which compensation is offered;

   (*d*) a description of the procedure for approval of the detailed route of the [pipeline][5]; and;

   (*e*) a description of the procedure available for negotiation and arbitration under this Part in the event that the owner of the lands and the company are unable to agree on any matter respecting the compensation payable.

2. Confirm that all notices served or proposed to be served on owners of land pursuant to the requirements of subsection 87(1) of the NEB Act include a copy of the Board publication titled: *Pipeline Regulation in Canada: A Guide for Landowners and the Public.*

Guidance – Section 87 Notices

Notice

Viewing a sample copy of the notice assists the Board in verifying that the notice complies with the requirements of subsection 87(1) of the NEB Act and that landowners and others persons are adequately notified.

Exemption from Section 33 of the NEB Act

The procedure for approval of the detailed route of the power line, as described in sections 34 to 39 of the NEB Act, may not apply. In this situation, the subsection 87(1) notice will describe the procedure for approval of the detailed route of the pipeline and will also include a statement that sections 34 to 39 of the NEB Act will not apply in respect to the procedure for approval of the detailed route of the power line.

[5] For election certificates, sections 86 and 87 apply and reference to the word “pipeline” which should be read as a reference to IPL. See s.58.27 of the NEB Act.

Lands not Acquired

In the event that an election certificate is issued, pursuant to s 58.16 of the NEB Act the applicant would file the Plans, Profiles and Books of Reference (PPBoR) for the power line and serve notices pursuant to the requirements of subsection 34(1) of the NEB Act on those landowners from which land rights have not been acquired. The Board may allow construction of the project for those portions where the lands have been acquired, with the exception of a buffer zone near the lands not yet acquired pending the applicant demonstrating to the Board that either the lands have been acquired, or the rights of the landowners have not been prejudiced.

8.6 Application to Address a Complaint

Where an applicant proposes work or construction to address a landowner or public complaint that has been filed with the Board, the application should include:

- a statement that the purpose of the work or construction proposed by the applicant is in response to a complaint that has been filed with the Board;
- the name and location of the complainant;
- the nature and date of the complaint; and
- how the activities proposed will address the complaint.

Guide A – Information Filed Respecting Plan, Profile, Book of Reference and Notices (NEB Act s.33 and s.34)

When an applicant elects for federal laws to apply, certain sections of the NEB Act which are normally reserved for pipelines, also apply to IPLs pursuant to section 58.27 of the NEB Act.

A reference to the word:

(*a*) a "company" were a reference to the applicant for or holder of the certificate issued in respect of the line;

(*b*) a "pipeline" or "line" were a reference to the international or interprovincial power line; and

(*c*) "hydrocarbons" were a reference to electricity.

Goal

The application for approval of PPBoRs includes accurate documentation regarding the detailed route of the electricity facility and related ownership, which demonstrates compliance with legislative requirements and respects the rights of potentially affected landowners.

The application for approval of notices includes accurate sample notices, which demonstrates compliance with legislative requirements, respects the rights of potentially affected landowners and other persons and provides the required regulatory information that may engage these parties in a Board regulatory process.

A.1 Plan, Profile, Book of Reference (PPBoR)

Filing Requirements

Section 33 of the NEB Act requires:

> **33**. (1) When the Board has issued a certificate, the company shall prepare and submit to the Board a plan, profile and book of reference of the [pipeline][6].
>
> (2) The plan and profile shall be drawn with such detail as the Board may require.
>
> (3) The book of reference shall describe the portion of land proposed to be taken in each parcel of land to be traversed, giving the numbers of the parcels, and the area, length and width of the portion of each parcel to be taken, and the names of the owners and occupiers in so far as they can be ascertained.
>
> (4) The plan, profile and book of reference shall be prepared to the satisfaction of the Board, and the Board may require the company to furnish any further or other information that the Board considers necessary.

6 For election certificates, sections 86 and 87 apply and reference to the word “pipeline” which should be read as a reference to IPL. See s.58.27 of the NEB Act.

In addition, the plan and profile of the project should be drawn to a scale of 1:10 000 or larger and, if appropriate, should show:

1. the proposed route of the IPL;

2. property boundaries; and

3. the numbers of the parcels of land to be traversed (i.e., legal land descriptions).

Guidance

When the Board releases a decision approving an application for an election certificate pursuant to section 58.16 of the NEB Act, the company may provide a draft version of the PPBoR.

Upon receipt of the section 58.16 election certificate, the company shall file PPBoRs pursuant to section 33 of the NEB Act for approval pursuant to section 36 of the NEB Act. The applicant may consider using a photomosaic overlay for the final PPBoR. A photomosaic can provide a high level of visual information about the detailed route of the project. The PPBoR will allow landowners and other persons to examine the PPBoR to determine the precise location of the proposed detailed route, the lands that will be crossed, the type of land rights that will be required and the landowners who will be affected.

In the event the Board approves the PPBoR for a project, the company is required to file the PPBoR with the registrar of deeds in the appropriate land titles or land registry office prior to the commencement of construction or other activities in respect of the approved PPBoR.

A.2 Section 34 Notices

When PPBoRs are filed with the Board (pursuant to subsection 33(1) of the NEB Act), a sample notice shall be filed for Board approval prior to service and publication. The notice will meet the requirements of section 34 of the NEB Act, section 50 of the *National Energy Board Rules of Practice and Procedure, 1995* (Rules) and the *Official Languages Act*.

Filing Requirements

Section 34 of the NEB Act states:

> **34**. (1) Where a company has prepared and submitted to the Board a plan, profile and book of reference pursuant to subsection 33(1), the company shall, in a manner and in a form to be determined by the Board,
>
> (*a*) serve a notice on all owners of lands proposed to be acquired, in so far as they can be ascertained; and
>
> (*b*) publish a notice in at least one issue of a publication, if any, in general circulation within the area in which the lands are situated

(2) The notices mentioned in subsection (1) shall describe the proposed detailed route of the [pipeline][7], the location of the offices of the Board and the right of the owner and of persons referred to in subsection (4) to make, within the time referred to in subsection (3) or (4), as the case may be, representations to the Board respecting the detailed route of the pipeline.

(3) Where an owner of lands who has been served with a notice pursuant to subsection (1) wishes to oppose the proposed detailed route of a pipeline, the owner may, within thirty days of being served, file with the Board a written statement setting out the nature of the owner's interest in the proposed detailed route and the grounds for his opposition to that route.

(4) A person who anticipates that his lands may be adversely affected by the proposed detailed route of a [pipeline][6], other than an owner of lands referred to in subsection (3), may oppose the proposed detailed route by filing with the Board within thirty days following the last publication of the notice referred to in subsection (1) a written statement setting out the nature of that person's interest in those lands and the grounds for the opposition to the proposed detailed route of the [pipeline][6].

Section 50 of the Rules states:

50. (1) Before any notice in respect of a plan, profile and book of reference of a pipeline or an international or interprovincial power line is served or published by an applicant under section 34 of the Act, the applicant shall

(*a*) submit to the Board for approval as to form a sample notice for service and a sample notice for publication, both of which shall include a sample description of the proposed detailed route of the pipeline or the international or interprovincial power line that is to be included in each notice; or

(*b*) identify in writing, for the approval of the Board, one or more forms of notices previously approved by the Board that the applicant proposes to serve or publish in relation to the plan, profile and book of reference.

(2) The submission required under paragraph (1)(*a*) shall include

(*a*) a copy of any map that the applicant proposes to publish; and

(*b*) a list of the titles and the number of issues of the publications in which the applicant proposes to publish the notice.

(3) Any notice served or published under section 34 of the Act shall not depart in any material respect from the notice approved by the Board under subsection (1).

7 For election certificates, sections 86 and 87 apply and reference to the word “pipeline” which should be read as a reference to IPL. See s.58.27 of the NEB Act.

In addition, the Applicant must provide the following information.

1. File a copy of the notice that will be served on landowners. At a minimum, the notice should include:

    - a map of the proposed detailed route of the IPL;
    - a plan of the lands proposed to be acquired, which:

        i) includes reference to legal survey points, if such points are available; and

        ii) is of a scale sufficient to identify, with reasonable accuracy, the location, dimensions and area of lands in relation to the remaining adjacent lands of the owner, if any.

2. Provide a copy of the notice, in both official languages, that will be included in local publications. At a minimum, the notice should include:

    - a description of the requirements described within sections 35 to 39 of the NEB Act;
    - a description of the proposed detailed route of the IPL;
    - a plan of a scale sufficient to identify, with reasonable accuracy, the location of the proposed detailed route in relation to:

        i) topographical features;

        ii) population centres;

        iii) highways;

        iv) utilities; and

        v) other such prominent local landmarks;

    - a schedule that lists sequentially the names of each registered fee simple owner of the land that is proposed to be acquired within the area covered by the plan and identifies the lands of each owner by legal description, including the:

        i) municipal address;

        ii) parcel number;

        iii) registered plan number;

        iv) lot;

        v) concession;

        vi) township;

        vii) parish;

viii) range;

ix) county; or

x) other equivalent land divisions, as are sufficient to identify the lands of each such owner;

- the location within or near the area covered by the plan where the PPBoR for that area are available for public inspection.

3. The list of the publications that will be used should include:

   - proposed dates of publication;
   - submission deadlines;
   - frequency (daily, weekly, monthly) of publication; and
   - language of publication (French, English or both).

4. Where the applicant completes the service and publication of notice under section 34 of the NEB Act, it shall forthwith notify the Board in writing of the dates of the last service and publication. The company shall file a tear sheet of the newspapers.

Guidance

After the Board has issued an election certificate and the PPBoRs have been filed with the Board pursuant to section 33 of the NEB Act, the company must provide a sample notice, in both English and French, of the proposed section 34 notices, or identify notices previously approved by the Board that the applicant proposes to serve or publish. NEB staff can provide assistance in order to ensure that the notices comply with the NEB Act requirements. Once Board approval has been obtained, the company can serve and publish its section 34 notices.

When publishing notices, consider the availability of English and French newspapers and their respective regional coverage. In the event that newspapers in the region are published in only one official language, publish both the French and English versions side by side in compliance with the *Official Languages Act*.

The Rules require that where an applicant completes the service and publication of any notice under section 34 of the NEB Act, the company shall forthwith notify the Board in writing of the dates of the last service and publication. This allows the Board to determine when the notices were served and published which commences the comment period set out in subsections 34(3) and 34(4) of the NEB Act. The Board will not approve any PPBoR prior to the expiry of the comment period.

Detailed Route Hearing

If an objection is received by the Board pursuant to subsection 34(3) or (4) of the NEB Act, the Board will, pursuant to subsection 35(1) of the NEB Act, order a public hearing be conducted with respect to the detailed route and method and timing of construction of the IPL.

Following the issuance of a Hearing Order by the Board, consider filing the following information:

- a description of all landowner concerns with respect to the detailed route;
- the methods and timing of construction of the project; and
- comments on the potential for using the Board's Appropriate Dispute Resolution (ADR) services.

A.3 Application to Correct a PPBoR Error (NEB Act s.41)

Goal

The application for a permit to correct an omission, misstatement or error in a registered PPBoR includes accurate documentation regarding the error and will address all land matters, which demonstrates compliance with legislative requirements and respects the rights of the affected landowner(s).

Filing Requirements

An application pursuant to subsection 41(1) of the NEB Act should include:

- the Order number and date of the original PPBoR approval;
- the nature and description of the error in the PPBoR;
- the accurate information (i.e., related to the plan, profile or book of reference); and
- confirmation that, pursuant to subsection 41(3), copies of the permit will be provided to the offices of the registrars or appropriate land title offices.

Guidance

Section 41 of the NEB Act provides a company with the means to correct an omission, misstatement or error in its registered PPBoR.

Pursuant to subsection 41(2) of the NEB Act, the Board may, at its discretion, issue a permit setting out the nature of the omission, misstatement or error and the correction allowed.

Subsection 41(3) of the NEB Act provides that the permit and supporting documentation are considered to be corrected once registered at the appropriate land titles office.

Guide B – Application for Right of Entry (NEB Act s.104)

When an applicant elects for federal laws to apply, certain sections of the NEB Act which are normally reserved for pipelines, also apply to IPLs pursuant to section 58.27 of the NEB Act. A reference to the word:

(*a*) a "company" were a reference to the applicant for or holder of the certificate issued in respect of the line;

(*b*) a "pipeline" or "line" were a reference to the international or interprovincial power line; and

(*c*) "hydrocarbons" were a reference to electricity.

Where a company is not able to acquire land required for the power line through negotiations with the landowner, it may apply to the Board for a right-of-entry order pursuant to the requirements of section 104 of the NEB Act and section 55 of the Rules.

Goal

The Applicant provides sufficient information to demonstrate that:

a) they have made every reasonable atempt to acquire land through negotiation; and

b) it is in the public interest for Board to grant Right of Entry.

Filing Requirements

Section 104 of the NEB Act states:

> **104**. (1) Subject to subsection (2), the Board may, on application in writing by a company, if the Board considers it proper to do so, issue an order to the company granting it an immediate right to enter any lands on such terms and conditions, if any, as the Board may specify in the order.
>
> (2) An order under subsection (1) shall not be issued in respect of any lands unless the company making the application for the order satisfies the Board that the owner of the lands has, not less than thirty days and not more than sixty days prior to the date of the application, been served with a notice setting out
>
> (*a*) the date the company intends to make its application to the Board under subsection (1);
>
> (*b*) the date the company wishes to enter the lands;
>
> (*c*) the address of the Board to which any objection in writing that the owner might wish to make concerning the issuance of the order may be sent; and

(*d*) a description of the right of the owner to an advance of compensation under section 105 if the order is issued and the amount of the advance that the company is prepared to make.

Section 55 of the Rules states:

55. (1) To apply for a right of entry order under section 104 of the Act, a company shall, after serving the owner of the lands with the notice described in subsection 104(2) of the Act, file an application with the Board not less than 30 days and not more than 60 days after the date of service of the notice on the owner.

(2) The application must be served on the owner of the lands on the same day that the application is filed with the Board.

(3) The application must contain

(*a*) a copy of the notice described in subsection 104(2) of the Act;

(*b*) evidence that the notice has been served on the owner of the lands

(i) not less than 30 days and not more than 60 days prior to filing the application with the Board, and

(ii) in accordance with subsection 8(8) or in any manner ordered by the Board under the National Energy Board Substituted Service Regulations;

(*c*) a schedule that is proposed to be made part of the order sought and that contains, in a form suitable for depositing, registering, recording or filing against lands in the land registry or land titles office in which land transactions affecting those lands may be deposited, registered, recorded or filed, a description of

(i) the lands in respect of which the order is sought,

(ii) the rights, titles or interests applied for in respect of the lands, and

(iii) any rights, obligations, restrictions or terms and conditions that are proposed to attach

(A) to the rights, titles or interests applied for in respect of the lands,

(B) to any remaining interest or interests, or

(C) to any adjacent lands of the owner;

(*d*) a current abstract of title to the lands, a certified copy of the certificate of title to the lands or a certified statement of rights registered in the land registers for the lands;

(*e*) a copy of section 56; and

(*f*) evidence that the application, including the information set out in sections (a) to (e), has been served on the owner of the lands.

In addition to the requirements of section 104 of the NEB Act and section 55 of the Rules, an applicant should also include the following information.

1. A chronological summary of the land negotiation process conducted between the applicant and the owner of the lands for which a right-of-entry order is sought, including the dates of meetings held between the applicant and the owner of the lands;

2. If applicable, the date of service of notice on the landowner pursuant to section 34 of the NEB Act;

3. The date of service of notice on the landowner pursuant to subsection 87(1) of the NEB Act; and

4. A discussion of outstanding issues and the reason(s) that a voluntary agreement could not be reached.

Guidance

Pursuant to section 56 of the Rules, the landowner may file a written objection with the Board any time after receipt of the notice up to 10 days after the date the company files the right-of-entry application.

In the event the Board approves the right-of-entry order, the order must be deposited in the appropriate land registry or land titles office, pursuant to section 106 of the NEB Act, prior to the company exercising its rights as granted by the right-of-entry order.

The dates of service for all notices served on the landowner pursuant to section 34 of the Act should provide the Board with confirmation that:

- the company is in compliance with the applicable sections of the Act and the Rules;
- the company has completed its consultation commitments;
- the rights of the landowner have been protected; and
- all legal requirements have been met prior to Board consideration of the application for immediate right of entry.

Guide C – Requirements For Substituted Service Applications

When an applicant elects for federal law, certain sections of the NEB Act which are normally reserved for pipelines, also apply to IPLs pursuant to section 58.27 of the NEB Act. A reference to the word:

(*a*) a "company" were a reference to the applicant for or holder of the certificate issued in respect of the line;

(*b*) a "pipeline" or "line" were a reference to the international or interprovincial power line; and

(*c*) "hydrocarbons" were a reference to electricity.

Goal

The applicant provides sufficient information to demonstrate that they have attempted to locate and serve notices on the potentially affected landowner(s), in compliance with legislative requirements.

Filing Requirements

Sections 3 to 5 of the National Energy Board Substituted Service Regulations state:

> **3**. (1) Subject to subsection (2), where a company has been unable to effect personal service of a notice on a person after having made reasonable attempts to do so, the Board may, on application by the company, order substituted service of the notice on the person by one or more of the methods referred to in subsection 5(1).
>
> (2) The Board shall not order substituted service of a notice on a person unless
>
> (*a*) the Board is satisfied that personal service of the notice on the person is impractical in the circumstances; and
>
> (*b*) the information provided in accordance with section 4(c) discloses that there is a reasonable possibility that substituted service of the notice on the person will bring the notice to the attention of that person.
>
> **4.** An application for an order under section 3 shall be made by filing with the Board five copies of a written application, with evidence by affidavit disclosing
>
> (*a*) the efforts made to effect personal service;
>
> (*b*) the prejudice to any person that would result from further attempts at personal service; and
>
> (c) the last known address of the person on whom a notice is required to be served, the address of the residence or place of business of the person or any other place thought to be frequented by the person, the names and

addresses of any persons who may be in communication with the person, or any other information respecting where the person might be found.

5. (1) Substituted service of a notice may be effected by one or more of the following methods:

(*a*) leaving the notice with an adult person at the residence or place of business of the person or at any other place thought to be frequented by the person;

(*b*) leaving the notice with any other adult person who may be in communication with the person;

(*c*) sending the notice by registered mail to the last known address of the person;

(*d*) publishing the notice in one or more publications in general circulation in the area where the person was last known to be or is thought to be; or

(*e*) any other method that appears to the Board more likely to bring the notice to the attention of the person.

Guidance

This section applies to the service of notices pursuant to sections 34 and 87 and subsection 104(2) of the NEB Act which would only apply to elections pursuant to sections 58.23, 58.24 and 58.27 of the NEB Act. Personal service is defined in the Substituted Service Regulations as any manner permitted by the general rules of practice in the Federal Court of Canada and in a manner determined by the Board.

Where a company is required to complete personal service of a notice on a person and has made reasonable attempts to do so, without success, the company would apply to the Board for approval of substituted service and the sample notice to be used. This may be the case where the whereabouts of a landowner is unknown and the company has made reasonable attempts to locate the landowner.

Appendix I

General Order for Electricity Reliability Standards

General Order for Electricity Reliability Standards [Filing A49626]

GENERAL ORDER MO-036-2012

IN THE MATTER OF the *National Energy Board Act* (Act) and the regulations made under that Act; and

IN THE MATTER OF the reliability, safety and security of international power lines under the Board's jurisdiction under File OF-Fac-ElecGen-Rel-IPL-05.

BEFORE the Board on 29 November 2012.

WHEREAS the Board may order the holders of certificates issued in respect of international power lines to take measures that the Board considers necessary for the safety and security of international power lines, including their reliability;

AND WHEREAS as a result of the 2003 blackout in Eastern Canada and the Eastern United States, a bilateral Canada-U.S. team recommended the development and enactment of mandatory electricity transmission reliability standards;

AND WHEREAS the Board recognizes that the electrical power system in North America is integrated and that mandatory and enforceable transmission reliability standards are critical to the proper functioning of the electrical power system;

AND WHEREAS the Board has determined that it necessary for the safety and security of international power lines as part of the electrical power system to require the holders of the certificates issued in respect of international power lines listed in the Appendix to comply with mandatory and enforceable transmission reliability standards;

AND WHEREAS the Board acknowledges that the harmonization of rules respecting the reliability of international power lines with regulatory authorities in the provinces promotes the overall safety and security of international power lines;

IT IS ORDERED that, pursuant to subsection 48(1.1) and section 58.27 of the Act, the following Order be made:

Interpretation - Reliability Standards

1. In this Order,

(a) "certificate" means a certificate issued or deemed to have been issued under Part III.1 of the *National Energy Board Act* in respect of an international power line;

(b) "reliability standard" means a standard, rule or requirement for the purpose of

planning and promoting the reliable and secure operation, monitoring or maintenance of the power system that is, from time to time,

- (i) adopted or approved by a provincial authority, or
- (ii) established, developed or adopted by a standards development authority;

(c) "power system" has the same meaning as in section 2 of the *National Energy Board Electricity Regulations*;

(d) "provincial authority" means any entity authorized by the laws of a province to adopt or approve a reliability standard;

(e) "standards development authority" means

- (i) the Midwest Reliability Organization (MRO),
- (ii) the North American Electric Reliability Corporation (NERC),
- (iii) the Northeast Power Coordinating Council Inc. (NPCC),
- (iv) the Western Electricity Coordinating Council (WECC), or
- (v) any successor to a body listed in subparagraphs (i) to (iv).

Application

2. This Order applies only in respect of the holders of the certificates listed in the Appendix and the international power lines for which those certificates were issued.

Reliability Standards

3. The holder of a certificate shall, in accordance with this Order, operate, monitor and maintain the international power line, in respect of which the certificate was issued, to

(a) be reliable and secure;

(b) avoid any adverse effects that the operation of the international power line may have on the reliability of any power system to which the international power line is interconnected; and

(c) comply with the reliability standards specifically required under section 5.

4.(1) The Board may exempt the holder of a certificate from compliance with a reliability standard or any other related obligation under this Order if it is satisfied that

(a) the reliability standard or any other related obligation does not properly apply to the international power line for which the certificate was issued;

(b) an entity, other than the holder of a certificate, is responsible under the laws of a province for operating or maintaining the international power line for which the certificate was issued in compliance with that reliability standard or obligation instead of the holder of the certificate.

(2) The holder of a certificate may request the Board for an exemption under subsection 4(1) by filing an application, in a form acceptable to the Board, that specifies

(a) each reliability standard or other related obligation under this Order for which the holder requests an exemption; and

(b) the reasons for each exemption including, in the case referred to in paragraph 4(1)(*b*), the identity of the other entity and the provincial law under which the other entity has responsibility for a reliability standard or other related obligation under this Order.

5.(1) The holder of a certificate shall comply with reliability standards respecting resource and demand balancing for the proper use and control of power system resources and the development of tools and methodologies to

(a) maintain interconnection steady-state frequency by balancing power generation to continuously match actual demand; and

(b) maintain the reliable operation of the power system.

(2) The holder of a certificate shall comply with reliability standards respecting critical infrastructure protection, including security management controls, to protect the operation, performance, integrity and reliability of the physical and cyber assets of the international power line and to provide demonstrable evidence of the reliability of the power system.

(3) The holder of a certificate shall comply with reliability standards respecting communications so that adequate and reliable communication facilities are available, used and maintained for the exchange and coordination of information between system operators, reliability coordinators and other authorities.

(4) The holder of a certificate shall comply with reliability standards respecting emergency preparedness and operations for the development, maintenance and implementation of a set of plans to mitigate, monitor and report operating emergencies, including load shedding, system restoration, black start capabilities and loss of control centre functions.

(5) The holder of a certificate shall comply with reliability standards respecting facilities design, connection and maintenance to

(a) establish methodologies to determine and implement facility rating, system operating limits and transfer capabilities, and

(b) manage vegetation to prevent outages from vegetation inside the international power line's right of way, minimizes outages from vegetation outside that right of way and maintains clearance between transmission lines and vegetation on and along that right of way.

(6) The holder of a certificate shall comply with reliability standards respecting interchange, scheduling and coordination to check each interchange schedule of power transfer according to the reliability requirements of interchange scheduling and dynamic power transfers in one or more control areas before a power transfer is implemented.

(7) The holder of a certificate shall comply with reliability standards respecting interconnection reliability operations and coordination for the authorization of a reliability coordinator to determine that the power system is operated reliably under normal and contingency conditions, conduct system studies, prepare reliability assessments, provide a wide-area view of reliability and coordinate emergency operations for one or more control areas.

(8) The holder of a certificate shall comply with reliability standards respecting modelling, data and analysis for consistent and uniform methodologies to determine, verify and use available transmission system capabilities and capacity margins.

(9) The holder of a certificate shall comply with reliability standards respecting personnel performance, training and qualifications for personnel operating the international power line to have the training, competence, responsibility and authority necessary to take timely action to maintain the reliability of the power system.

(10) The holder of a certificate shall comply with reliability standards respecting the protection and control of the power system against abnormal power system conditions.

(11) The holder of a certificate shall comply with reliability standards respecting transmission system planning and operations to maintain steady state stability and dynamic stability of the power system through the planning of normal operations, planned outages and operation under single or multiple contingencies.

(12) The holder of a certificate shall comply with reliability standards respecting voltage and reactive control for the monitoring, control and maintenance of voltage levels, reactive flows and reactive resources in real time within operating limits to protect

equipment and the reliable operation of the international power line.

6.(1) The holder of a certificate shall maintain a record, in the form of a spreadsheet, that contains

(a) the identity of the provincial authority or standards development authority whose reliability standards the holder of the certificate is complying with for the purposes of sections 3 and 5;

(b) the names and any reference numbers of the reliability standards applicable to the international power line; and

(c) the reasons why the holder is complying with those reliability standards.

(2) The holder of a certificate shall, within 90 days of issuance of this Order, file with the Board a declaration that it is maintaining the record under subsection 6(1) and a copy of the record.

7. The holder of a certificate shall, within 30 days after the end of each year, file with the Board a report that contains a detailed description of any reliability standard adopted, approved, established or developed after this Order is made, with which the holder is complying, including

(a) the identity of the provincial authority or standards development authority that adopted, approved, established or developed those reliability standards;

(b) the names and any reference numbers of the reliability standards applicable to the international power line; and

(c) the reasons why the holder is complying with those reliability standards.

8. For greater certainty, the holder of a certificate is not required to obtain approval from the Board for

(a) the particular reliability standards with which the holder of the certificate is complying for the purposes of sections 3 and 5;

(b) the content of the record under subsection 6(1); or

(c) the content of the report under section 7.

Compliance Document

9. The holder of a certificate shall, on request, provide to the Board a copy of any compliance document, or any portion thereof, prepared by the holder that describes the manner in which the holder is conducting compliance monitoring and enforcement to assess, investigate, evaluate, audit or measure its compliance with any reliability standard.

Reporting on Non-Compliance

10.(1) The holder of a certificate shall report to the Board any event known to be a failure to comply with sections 3 or 5.

(2) The report referred to in subsection 10(1) must be sent without delay after the event has been determined to be a failure and must contain a detailed description of

(a) the nature, duration and cause of the event; and

(b) any steps the holder has taken or proposes to take to mitigate the event or correct the performance of the international power line

(3) If the holder of a certificate is obliged, by law or agreement, to send a report or notice that contains the same information required under subsections 10(1) and 10(2) to a provincial authority or standards development authority, the holder may send a copy to the Board of that report or notice, or such portions thereof that provide the required information, in lieu of the report under subsection 10(1).

NATIONAL ENERGY BOARD

Sheri Young
Secretary of the Board

GENERAL ORDER MO-036-2012

APPENDIX

Certificates and International Power Lines Subject To This Order

Province	Owner / Operator	Certificate No.	Line Designation	Line Parameters (kV)	No. of IPLs
British Columbia	BC Hydro	EC-III-12	5L51	500	1
	BC Hydro	EC-III-04	5L52	500	1
	BC Hydro	EC-III-10	2L112	230	1
	Teck Cominco Metals Ltd.	EC-III-01	C51	230	1
Saskatchewan	Saskatchewan Power Corporation	EC-III-19	B10T	230	1
Manitoba	Manitoba Hydro	EC-III-16		500	1
	Manitoba Hydro	EC-III-09	Y2OP	230	1
	Manitoba Hydro	EC-III-14	R40M	230	1
Ontario	Hydro One Networks Inc.	EC-III-6	L4D	345	1
	Hydro One Networks Inc.	EC-III-13	L51D	345	1
	Hydro One Networks Inc.	EC-III-20	PA301, PA302	230	2
	Hydro One Networks Inc.	EC-18	L33P	230	1
	Hydro One Networks Inc.	EC-11	L34P	230	1
	Hydro One Networks Inc.	EC-13	J5D	230	1
	Hydro One Networks Inc.	EC-12	B3N	230	1
	Hydro One Networks Inc.	EC-16	BP76, PA27	230	2
	Hydro One Networks Inc.	EC-14	BSC105N	69	1
	Hydro One Networks Inc.	EC-15	BSC105S	69	1
	Hydro One Networks Inc.	EC-17	BL104	115	1
	Hydro One Networks Inc.	EC-17	BSH-106	69	1
New	New Brunswick	EC-III-08	301	345	1

Brunswick	Power Transmission Corporation				
	New Brunswick Power Transmission Corporation	EC-III-25		345	1
	New Brunswick Power Transmission Corporation	EC-III-18		138	1
	Algonquin Power	EC-III-2	Tinker 6904	69	1
	Algonquin Power	EC-III-3	Tinker 6901	69	1
Québec	Hydro-Québec	EC-III-15	7040	765	1
	Hydro-Québec	EC-III-21	451 - 452	+/- 450 DC	1
	Hydro-Québec	EC-III-17	1400	120	1
	Cedars Rapids Transmission Company Ltd.	EC-III-24		120	1