AUC
Alberta Utilities Commission

Rule 007

Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments

This rule as amended was approved by the Alberta Utilities Commission on March 21, 2018, and is effective on April 2, 2018.

Contents

List of abbreviations

AEP	Alberta Environment and Parks
AESO	Alberta Electric System Operator (the independent system operator in Alberta)
CEAA	Canadian Environmental Assessment Agency
DFO	distribution facility owner
ISD	industrial system designation
ISO	independent system operator
Kg/MWh	kilograms per megawatt-hour
kV	kilovolt
kW	kilowatt
kWh	kilowatt-hour
LSD	legal subdivision
MWh	megawatt-hour
NO_x	nitrogen oxides
NRCB	Natural Resources Conservation Board
PIP	participant involvement program
SO_2	sulphur dioxide
TFO	transmission facility owner

1 Definitions and application

1.1 Application

This rule applies to applications for the construction, alteration, operation, and the discontinuation, dismantling and removal of hydro developments, power plants, substations, transmission lines and industrial system designations, pursuant to the *Hydro and Electric Energy Act*, and for approvals of a needs identification document, pursuant to the *Electric Utilities Act* and *Transmission Regulation*.

1.2 Definitions

In this rule:

(a) "Commission" means the Alberta Utilities Commission;

(b) "regional land use plan" means a regional plan adopted and in force pursuant to the *Alberta Land Stewardship Act*.

1.3 Application required

Any person intending to construct, connect, operate, or alter hydro developments, power plants, substations, transmission lines or industrial system designations, including ownership changes, must file an application with the Commission in accordance with this rule, unless otherwise directed by the Commission.

Hydro development applications must be made pursuant to sections 9 and 10 of the *Hydro and Electric Energy Act*.

Power plant applications must be made pursuant to Section 11 of the *Hydro and Electric Energy Act*.

Transmission line applications must be made pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*. Pursuant to the definition of transmission line found in the *Hydro and Electric Energy Act*, any reference to transmission line in this rule shall be as defined except where the context of the particular provision of the rule makes it clear that the Commission is only referencing a component of the transmission line (e.g., the transmission circuit or substation).

Connection applications for power plants, substations and transmission lines must be made pursuant to Section 18 of the *Hydro and Electric Energy Act*.

Applications for a time extension to complete the construction or alteration of a power plant, hydro development, substation or transmission line must be made pursuant to Section 19 of the *Hydro and Electric Energy Act*.

Applications, or notification, as the case may be, to discontinue the operation of, or dismantle or remove any work or installation forming part of an approval, permit or licence with respect to a hydro development, power plant, substation or transmission line must be made pursuant to sections 21 and 22 of the *Hydro and Electric Energy Act*.

Needs identification document[1] applications by the independent system operator (ISO) must be made pursuant to Section 34 of the *Electric Utilities Act*, the *Transmission Regulation* and the *Transmission Deficiency Regulation*.

Unless an exemption under Section 1.4.1 of this rule applies, the transmission facility owner (TFO) or market participant is required to have prior approval from the ISO under the abbreviated needs approval process, or Commission approval of the needs identification document before an application for a new transmission facility or a significant extension or alteration to an existing facility may be considered. Alternatively, the needs identification document application may be submitted concurrently with the facility application under Section 15.4 of the *Hydro and Electric Energy Act*.

Before making an application to the Commission for electric facilities, an applicant must have regard for the following provisions in the *Electric Utilities Act*:

(a) Pursuant to Section 101(1) of the *Electric Utilities Act*, if the applicant wishes to obtain electricity for use on a property, the applicant must make arrangements for the purchase of distribution access service from the owner of the electric distribution system in whose service area the property is located.

(b) Pursuant to Section 101(2) of the *Electric Utilities Act*, if the applicant wants to receive electricity directly from the transmission system, the applicant may enter into an arrangement directly with the ISO, provided that the applicant can obtain approval from the ISO and the owner of the electric distribution system in whose service area the property is located.

When the ISO direct assigns a project to a TFO or market participant, a written confirmation of the direct assignment from the ISO must accompany the application.

1.4 Exemptions

1.4.1 Needs identification documents

A needs identification document application is not required for:

(a) Maintenance upgrades, enhancements or other modifications to a transmission facility proposed by a TFO or market participant if the maintenance upgrade, enhancement, or other modification improves the efficiency or operation of the transmission facility but does not materially affect transmission facility capacity.

(b) Minor additions, upgrades, enhancements or other modifications to a transmission facility pursuant to a request to the ISO for system access service that are approved by the ISO pursuant to an abbreviated needs approval process established under ISO Rules Section 501.3.

[1] Needs identification document may also refer to an abbreviated needs identification document, as applicable in the circumstances, unless otherwise stated.

(c) Minor system (less than $2 million) additions, upgrades, enhancements or other modifications to a transmission facility, not made pursuant to a request for system access service, that are approved by the ISO pursuant to an abbreviated needs approval process established under ISO Rules Section 501.3.

1.4.2 Minor alterations

If an applicant is proposing alterations to existing electric facilities and considers the alterations to be minor, the applicant must comply with sections 11, 12 and 18.2 of the *Hydro and Electric Energy Regulation*. The Commission's guidance is provided in the Electric Power Plant Facilities Process Guidelines, as amended, and in the Electric Transmission Facilities Process Guidelines (revised February 1, 2016), as amended.

The guidelines provide direction whether:

(a) The approval holder may proceed with the alterations without an application.

(b) The approval holder must file an enquiry proposal application in which case the proposal would proceed by letter of enquiry.

(c) The approval holder must file an application for a new approval, permit or licence to carry out the proposed alterations.

1.4.3 Power plants

If an owner plans to generate electric energy solely for the owner's own use, and the power plant rating is 10 megawatts or greater, the owner must file information to demonstrate that no person is directly and adversely affected, the power plant complies with AUC Rule 012: *Noise Control*, and there is no adverse effect on the environment, thereby meeting the requirements for exemption. The Commission will determine whether an approval must be issued or whether the plant is exempt.

If an owner plans to generate electric energy solely for the owner's own use, and the power plant rating is less than 10 megawatts, the owner may proceed without filing an application if all of the following conditions are satisfied: no person is directly and adversely affected, the power plant complies with Rule 012, and there is no adverse effect on the environment. If the unit is connected to the distribution or transmission system, the owner must contact the wire owner to determine if adequate protection has been installed to isolate the unit from the wire owner's system or obtain an operating agreement with the wire owner, thereby meeting the requirements for an exemption.

If the power plant is less than one megawatt and the owner is not planning to generate electric energy solely for the owner's own use, the owner may proceed without filing an application if the requirements of Section 18.1(2) of the *Hydro and Electric Energy Regulation* are met.

If the power plant is an isolated generating unit with a capability of less than 10 megawatts the owner may proceed without filing an application if the

requirements of Section 18.3(2) of the *Hydro and Electric Energy Regulation* are met.

If none of the above exemptions for power plants are applicable or the planned use of the power plant has changed such that the exemption is no longer applicable, the owner must file a power plant application containing all the information required by this rule and Rule 012. The Commission's guidance with respect to power plant exemptions pursuant to Section 13 of the *Hydro and Electric Energy Act* and sections 18.1 and 18.3 of the *Hydro and Electric Energy Regulation* is provided in the Electric Power Plant Facilities Process Guidelines, as amended.

If a customer, within the meaning of Rule 024, is proposing a micro-generation generating unit, the customer must refer to AUC Rule 024: *Rules Respecting Micro-Generation* to determine whether the proposed micro-generation generating unit (power plant) meets the requirements for an exemption or an application is required under this rule.

Even if an owner of a power plant is exempt from filing an application under this rule, the Commission retains the jurisdiction to investigate issues in relation to compliance with this rule and Rule 012, and to confirm that the requirements for exemption are satisfied and continue to be satisfied.

1.4.4 Other

If an applicant plans to transmit electric energy over the applicant's own land and solely for the applicant's own use or within an industrial system that has been designated by Commission approval, the applicant must contact the Commission and explain the nature of the proposal. The Commission determines whether the applicant must file an application for a permit and licence or whether the facilities can be exempted.

If an applicant plans to distribute electric energy over the applicant's own land and solely for the applicant's own use, and applies to the Commission for exemption from Part 3 of the *Hydro and Electric Energy Act*, the applicant must, prior to filing the application, contact the electric distribution utility in whose service area the applicant is proposing to distribute electric energy and explain the nature of the proposal.

If the requested exemption relates to a proposed or anticipated industrial system designation (ISD), the distribution facilities constructed pursuant to the exemption may be subject to transfer to the distribution facility owner (DFO) at a later date, if the ISD is not perfected in a reasonable period of time.

1.5 Application process

An applicant must follow the steps set out below.

Step 1: Preparation of an application

Prior to filing an application, an applicant must follow the participant involvement program guidelines set out in Appendix A1 – Participant involvement program guidelines and/or Appendix A2 – ISO participant involvement program guidelines.

An applicant must include documentation describing its notification and consultation program in its application.

As described more fully in subsequent sections, for certain electric facilities, the applicant must also obtain specific approvals and referrals from other entities prior to filing its application, as these are to be submitted as attachments to the Commission application. Once the applicant has completed and documented the participant involvement program, obtained all other approvals and referrals, and compiled all the information required, it may proceed to file its application with the Commission.

Alternatively, if certain approvals and referrals (e.g., a signed renewable energy referral report from Alberta Environment and Parks (AEP) Wildlife Management) have not been obtained, the applicant must clearly identify them and provide details regarding their status to assist the Commission in deciding how to proceed with its consideration of the application.

In addition to other requirements, the applicant must identify any emergency orders issued by Environment Canada which apply to the project area (e.g., the Emergency Order for the Protection of the Greater Sage-Grouse). The applicant must include as part of its application: information regarding the emergency order, the impacts the emergency order has on the application, and discussions the applicant has had with Environment Canada and AEP regarding the emergency order, including any mitigation required and information addressing actions that will be taken by the applicant to ensure compliance with the emergency order.

The Commission does not process any application that contains major deficiencies. If the application contains major deficiencies, it will be closed and the applicant will receive an explanation via electronic mail. An example of a major deficiency is the omission of key information, such as neglecting to include participant involvement information or a noise impact assessment when applying to build a power plant in proximity to residences.

If the application has minor deficiencies, or where clarification of information provided in the application is required, the Commission may request further information from the applicant. Failure to respond in the stated time frame may result in the Commission closing the application with written notification of the reason for the rejection.

If the applicant is proposing a major development, such as a large power plant, with a capability of 100 megawatts or greater, that uses a non-gaseous fuel or hydroelectric energy, the information requirements in this rule may not be sufficient to assess the full impact of the project. In that case, the applicant should consult with AEP to determine if an environmental impact assessment is required. For other projects not requiring an environmental impact assessment, the applicant can contact the Commission in the initial stages of preparing the application to determine the level of detail required.

The Commission requires applicants to address all concerns raised by potentially directly and adversely affected persons.

If the applicant concludes that further discussion is unlikely to resolve issues, it should inform the Commission, outlining the concerns and the steps it has taken to resolve issues.

Under the *Alberta Land Stewardship Act* and the Alberta Land Use Framework, the province of Alberta is divided into seven land use regions and for each region, a regional land use plan has or will be adopted.

If the project site occurs within the plan boundaries of a regional land use plan which is in force, the applicants for transmission lines and power plants must include information confirming the project is being developed in accordance with the regional land use plan and any impacts on the management frameworks developed pursuant to the applicable regional land use plan.

Step 2: Filing

An applicant must file its application electronically using the AUC's eFiling System that is accessible via the Commission website at www.auc.ab.ca. Please refer to the eFiling System User Guide for instruction on how to obtain access to the eFiling System and how to submit applications electronically.

If an applicant's electronic application contains maps or drawings that are difficult to view on a computer screen, the applicant may be required to provide paper copies of these documents. If the application proceeds to a hearing or is otherwise complex, the applicant may be asked to provide additional paper copies.

The Commission may choose to hold an electronic hearing. Any party wishing to intervene in an electronic proceeding should register to participate through the eFiling System. Parties wishing to participate should refer to the eFiling System User Guide for instruction on how to obtain access to the electronic filing system and how to register to participate.

Pursuant to AUC Rule 001: *Rules of Practice*, all documents filed in respect of a proceeding, including any application submissions or other documents filed prior to the commencement of the proceeding, must be placed on the public record unless otherwise ordered by the Commission. Please ensure that all application submissions are free of information that the applicant does not want to appear on a public record.

1.6 Electronic application structure

All applicants must request a proceeding and submit an electronic application. Electronic applications are structured as an electronic form that the applicant fills out using the eFiling System, together with a set of electronic attachments that the applicant uploads and submits to the eFiling System. The following sections of this rule have been arranged to specify the information that is required for each type of electric facility application.

2 General information

Instructions for completion of the electronic application can be found in the eFiling System User Guide. Questions and issues regarding use of the eFiling System should be directed to the filing services support staff at 403-592-4500 or by email to info@auc.ab.ca.

3 Power plant applications one megawatt or greater

3.1 Application requirements

If an applicant is applying to construct and operate a new power plant or to alter an approved plant, the application must include the information outlined below.

If an applicant is applying to discontinue, dismantle or remove an approved power plant, the application must include the relevant information outlined as follows. These information requirements do not apply to a notice of discontinuance of operations.

For power plants with a capability of less than 10 megawatts, an application is only required if the applicant does not satisfy the requirements for exemption under Section 13 of the *Hydro and Electric Energy Act*, sections 18.1 or 18.3 of the *Hydro and Electric Energy Regulation*, or AUC Rule 024: *Rules Respecting Micro-Generation*.

If an applicant is applying for an exemption for a power plant that has a capability of 10 megawatts or greater, the application must include the relevant information outlined in Section 3.2 of this rule to demonstrate that the applicant plans to generate electric energy solely for the applicant's own use, no person is directly and adversely affected, the power plant complies with Rule 012 and there is no adverse effect on the environment. The Commission will determine whether an approval must be issued or whether the plant is exempt.

For an application to construct and operate a wind power plant or to alter an approved wind power plant, see Section 3.4 of this rule. Section 3.4 specifies which of the power plant requirements outlined in Section 3.2 of this rule apply to wind power plant applications and also sets out different application approaches available for a wind power plant application.

To file an application in the eFiling System, begin by requesting a proceeding, add the application by selecting the power plant application type, complete the electronic application form, upload attachments to meet the information requirements below (as applicable) and then register the proceeding.

3.2 Information requirements

PP1) Identify the sections of the *Hydro and Electric Energy Act* under which the application is made.

PP2) Identify any other acts (e.g., *Environmental Protection and Enhancement Act, Water Act*, and *Wildlife Act*) that may affect the project.

PP3) State the approvals that are being applied for from the Commission, and provide a draft of the approval being requested.

PP4) Provide a list of existing approvals for facilities directly affected by this project, if any.

PP5) Provide details and outcome of consultation with local jurisdictions (e.g., municipal districts, counties).

PP6) Provide a list of parties that may be affected by the project, confirm that these parties have no concerns regarding the application, and indicate which other agreements are necessary to carry out the project.

PP7) For wind power plants, provide a copy of approval from Transport Canada for any structures 20 metres or taller and an evaluation from NAV CANADA.

PP8) For wind power plants, provide a copy of an assessment from Environment Canada regarding the potential for interference with weather radars. For assessments in which Environment Canada has identified the potential for significant interference with a weather radar, also provide a copy of a mitigation agreement to be concluded with Environment Canada prior to operation of the wind power plant. No wind power plant will be permitted within a five-kilometre radius, or as otherwise agreed to by Environment Canada, of a federal weather radar station due to the significant interference to Environment Canada's ability to accurately forecast the weather.

PP9) Provide a copy of the approval from Alberta Transportation if a wind power plant that is within 300 metres of a numbered highway is being applied for.

PP10) For all applications for thermal power plants greater than one megawatt, confirm that an *Environmental Protection and Enhancement Act* industrial approval application has been submitted to AEP and indicate the status of that approval. Additionally, list all other government departments and agencies from which an approval is required (e.g., AEP for a *Water Act* approval), and indicate the status of those approvals. A local AEP wildlife biologist should be consulted unless the project is located within an urban area with no nearby wildlife habitat.

For all solar and wind power plants, submit a signed renewable energy referral report from AEP Wildlife Management. Additionally, list all other government departments and agencies for which an approval is required (e.g., AEP for a *Water Act* approval), and indicate the status of those approvals.

Alternatively, if the applicant is unable to provide a renewable energy referral report for a solar or wind power project at time of application, the applicant must clearly identify the reason and provide details of its status to assist the Commission in deciding how to proceed with its consideration of the application.

PP11) With respect to new facilities or alterations that may have historical, archaeological or paleontological impacts, confirm that a *Historical Resources Act* approval has been obtained or is being applied for. If a historical impact assessment is required, briefly describe any historical, archaeological or paleontological sites close to the power plant site. Please ensure that any summary provided protects the confidential location of any historical, archaeological or paleontological resources.

PP12) Provide the ISO assigned asset identification code, if available.

PP13) Provide the legal description of the proposed power plant site (Legal Subdivision [LSD], Section, Township, Range, Meridian and/or Plan, Block, Lot, municipal address for urban parcels) and connection point, if applicable.

PP14) For wind power plant applications, provide the longitude and latitude coordinates for the centre of each structure supporting a wind-powered generator. If, after approval is granted, the location of any supporting structure has to be relocated more than 50 metres from the coordinates stated in the application, the power plant proponent must reapply to the Commission for approval to relocate the structure prior to construction. For movement of less than 50 metres, the applicant is not required to reapply unless there is an adverse impact on the permissible sound level or wildlife setback distances.

PP15) Describe the number of generating units and the total capability (kilovolt-ampere [kVA], or megavolt-ampere [MVA]) for the project.

PP16) Describe the existing environmental and land use conditions in the local study area, and discuss potential siting and land use issues. Also, describe the regional setting of the development including regional land use plans in force (e.g., the Lower Athabasca Regional Plan). If applicable, include maps showing important environmental features and sensitive areas in the local study area.

PP17) For all types of power plants, at a level of detail commensurate with the size and type of potential effect(s) of the project, complete and submit an environmental evaluation of the project.

For all power plant applications that are not solar or wind power, provide a summary of feedback received to date from AEP addressing the environmental aspects of the project that AEP is satisfied with and any mitigation measures and monitoring activities recommended by AEP.

For all solar and wind power projects, submit a signed renewable energy referral report from AEP Wildlife Management as stated in PP10. Alternatively, if the applicant is unable to provide a renewable energy referral report at time of application, the applicant must clearly identify the reason and provide details of its status to assist the Commission in deciding how to proceed with its consideration of the application.

An environmental evaluation describes and predicts a project's effects on the environment before the project is actually carried out, and the measures to avoid or mitigate the project's predicted adverse environmental effects and any monitoring proposed to evaluate the efficacy of those measures. The purpose of an environmental evaluation is to ensure that enough information is provided by the applicant to inform the public and government agencies about the applicant's understanding of the consequences of its project, and to help the AUC determine if the project is in the public interest. The environmental evaluation should be conducted or overseen by an individual or individuals who possess appropriate environmental experience related to the type and scale of development. An environmental evaluation should:

- describe the present (pre-project) environmental conditions in the local study area[2]
- identify and describe the project activities and infrastructure that may adversely affect the environment
- identify what specific ecosystem components (i.e., terrain and soils, surface water bodies and hydrology, groundwater, wetlands, vegetation species and communities, wildlife species and habitat, aquatic species and habitat, air quality and environmentally sensitive areas) within the local study area may be adversely affected by the project
- describe the potential adverse effects of the project on the ecosystem components during the life of the project[3]
- describe the mitigation measures the applicant proposes to implement during the life of the project to reduce these potential adverse effects
- describe the predicted residual adverse effects of the project and their significance[4] after implementation of the proposed mitigation
- describe any monitoring activities the applicant proposes to implement during the life of the project to verify the effectiveness of the proposed mitigation
- describe the methodology used to identify, evaluate and rate the adverse environmental effects and determine their significance, along with an explanation of the scientific rationale for choosing this methodology

If the power plant project requires preparation of a federal environmental assessment report or a provincial environmental impact assessment report, then that report should be submitted as an appendix to the application as required by PP38,

[2] "local study area" as defined on page 8 of the Government of Alberta's Glossary of Environmental Assessment Terms and Acronyms Used in Alberta Updated February 2010.

[3] "life of the project" as defined on page 8 of the Government of Alberta's Glossary of Environmental Assessment Terms and Acronyms Used in Alberta Updated February 2010.

[4] "significance" as defined on page 12 of the Government of Alberta's Glossary of Environmental Assessment Terms and Acronyms Used in Alberta Updated February 2010.

and a separate environmental evaluation report satisfying the requirements of PP17 need not be prepared for the project. In such cases, the federal environmental assessment or the provincial environmental impact assessment report is sufficient to also satisfy the environmental requirements outlined in PP17.

PP18) If the project site occurs within the plan boundaries of a regional land use plan in force:

i. Confirm that the proposed project is being developed in accordance with the applicable regional land use plan.

ii. Confirm if the proposed project is in a conservation area or provincial recreation area established in the applicable regional land use plan. Provide submissions describing how the activity may be considered incidental to a previously-approved activity.

iii. Indicate what, if any, management frameworks in place under the applicable regional land use plan are applicable to the project, the reason why any management frameworks are not applicable to the project, and summarize discussions held with AEP and any other government department required to be consulted under the management frameworks regarding the project and its impacts in terms of the management frameworks. Include details on any actions or mitigation measures recommended as a result of the discussions and describe how these actions or mitigation measures will be incorporated into the project.

PP19) Describe the participant involvement information. (See Appendix A1– Participant involvement program guidelines).

PP20) List all occupants, residents and landowners on lands within the appropriate notification radius as determined using Appendix A1– Participant involvement program guidelines, as well as other interested persons that were consulted as part of the participant involvement program. If there are populated areas just outside the minimum notification distance, applicants should consider including those areas in the participant involvement program.

PP21) Supply a list of mailing addresses, with corresponding land locations and two sets of printed mailing labels of those parties mentioned in PP20 above.

PP22) Identify any persons who expressed concerns about the project and the specifics of their concerns.

PP23) Summarize discussions held with potentially directly and adversely affected persons.

PP24) If potentially directly and adversely affected persons raised any concerns, describe how these concerns were dealt with or are being dealt with.

PP25) For those potentially directly and adversely affected persons identified above, include a confirmation of resolution of the concerns, if applicable.

PP26) If the power plant is to be located within an oil and gas facility, confirm the power plant will comply with the standards outlined in Section 8.090 of the *Oil and Gas Conservation Rules*.

PP27) Provide a noise impact assessment, in accordance with the current Rule 012.

PP28) For an application where no changes to the major components of the power generating equipment are contemplated after filing the application, provide details of the power generating equipment and associated facilities, such as make, model and nominal capability.

PP29) For an application where vendors which are to supply the major components of the power generating equipment have not been selected, provide the nominal capability of the applied-for power plant and the design and maximum operating parameters, and characteristics specified for the power generating equipment and associated facilities.

PP30) Present the estimated power plant heat rates, efficiency of the power plant and details of the cooling system for the power plant.

PP31) State the fuel requirements of the power plant, including type, source, method of handling, transportation, processing, storage and environmental effects.

PP32) Provide a legible plant site drawing showing all major equipment components.

PP33) Provide a legible map showing the power plant site boundaries and land ownership, including any residences and dwellings within the appropriate notification radius as determined using Appendix A1– Participant involvement program guidelines, as well as any additional energy-related facilities within the project area.

PP34) Provide a legible map of the project area suitable for use in a public notice.

PP35) Supply the expected in-service dates, and describe ramifications if the approval date cannot be met.

PP36) Indicate the plant's emission rates, in kilograms per megawatt-hour (kg/MWh) of nitrogen oxides (NO_x), sulphur dioxide (SO_2), and primary particulate matter, and state whether the emissions will comply with the current Alberta *Air Emission Standards for Electricity Generation* and any other emission standards or guidelines that are applicable to the proposed project.

PP37) State whether the proposed plant will comply with the Alberta *Ambient Air Quality Objectives and Guidelines* and any other standards or guidelines that are applicable to the proposed project for ground-level concentrations of pollutants.

PP38) Provide the federal environmental assessment or provincial environmental impact assessment as an appendix to the application, if one was required by a federal or provincial authority.

The provincial environmental assessment process begins when the Environmental Assessment Director is made aware of a new project. The Director determines if the project requires an Environmental Impact Assessment report to be prepared based on the *Environmental Assessment (Mandatory and Exempted Activities) Regulation*. The regulation lists specific activities that are either mandatory and will require an Environmental Impact Assessment report, or are exempted and do not require such a report. Activities that are not on either list are considered discretionary and the Director decides whether further consideration under the environmental assessment process is required.

Under the Alberta *Environmental Protection and Enhancement Act* an environmental impact assessment is mandatory for thermal power plant facilities that use non-gaseous fuel and are greater than 100 megawatts in total capability.

PP39) If the power plant is to be connected to the transmission system of the Alberta Interconnected Electric System, irrespective of voltage level, provide the following information:

- An electrical single-line diagram obtained from the ISO or sanctioned by the ISO showing the transmission development plan for the interconnection.
- A map with one or more conceptual layouts showing possible routes and general land locations for facilities that would be used to interconnect the power plant to the Alberta Interconnected Electric System.

PP40) If the power plant is to be connected at distribution voltage level to the Alberta Interconnected Electric System (generally less than 69 kV), the applicant must provide a statement from the distribution facility owner indicating that it is willing to connect the generating facilities.

PP41) For a municipality or a subsidiary of a municipality to hold an interest in a generating unit, documentation confirming compliance with Section 95 of the *Electric Utilities Act* is required.

PP42) For a wind power plant application, provide legible maps and/or air photo mosaics upon which the proposed collector power line route or routes have been imposed and showing the residences, landowner names, and major land use and resource features (e.g., vegetation, topography, soil type, existing land use, existing rights-of-way, and superficial and mineable resources).

3.3 Power plant application attachments

The eFiling System User Guide provides guidance on when to file information requirements as separate attachments.

3.4 Wind power plant applications

An applicant may submit one of the following types of applications to construct and operate a wind power plant. These are:

- An application where no changes are anticipated after the filing of the application, and the applicant has identified a specific wind turbine, including type and model, and proposes a specific layout or a specific location for each turbine.
- An application where changes in turbines or layout are anticipated after the filing of the application.
- An application that indicates more turbine locations than are needed for the wind power plant which may be removed from the application, prior to a decision of the Commission on the application.
- Buildable area applications; a phase 1 application and a phase 2 application where an approval for phase 1 has been issued.

3.4.1 Application requirements for the different types of wind power plants

Application requirements PP1 to PP29, PP32 to PP35, and PP38 to PP42 set out in Section 3.2 of this rule apply to wind power plant applications other than the buildable area applications.

For buildable area applications, application requirements PP1 to PP12, PP15 to PP27, PP33 to PP35, and PP38 to PP42 apply to an application for a buildable area phase 1 application. Additional requirements are set out below for this type of application. Application requirements PP1 to PP29, PP32 to PP35 and PP38 to PP42 apply to a phase 2 buildable area application. Additional requirements are set out below.

3.4.2 Application where changes in turbines or layout are anticipated after the filing of the application

In this application, the applicant proposes a layout with a specific wind turbine, make, model and type. After filing the application, the applicant may amend its application to change its choice of wind turbine, make, model, type, or to change the layout or any other aspect of the application related to the change in wind turbine.

The applicant must update its consultation and re-submit a revised project proposal and inform other agencies from whom it has obtained an approval or referral for the proposed wind power plant of any major amendments.

However, if the amendments made during the application process are minor, the applicant must describe the proposed changes and explain why it considers the changes to be minor and why consultation is not needed.

3.4.3 Application that proposes more turbine locations than are needed for the wind power plant

In this application, the applicant proposes more wind turbine locations than are required for the wind power plant for a specific wind turbine, model, make or type. Because the proposed layout has more turbine locations than required, during the application process, the applicant may remove proposed turbine locations before the Commission makes a decision on the application.

3.4.4 Buildable area applications

An applicant may identify an area in which it proposes to construct a wind power plant and apply for approval of that area as a phase 1 application. In the application, the buildable area is identified, along with specified thresholds for turbine size, noise levels and other factors. The buildable area concept allows developers to have flexibility to change turbine type, within a specific physical dimension, e.g., maximum turbine height, maximum rotor length, maximum number of turbines, maximum noise level, without requiring an amendment application. Individual buildable areas may vary in size but most areas are expected to be several acres. A noise impact assessment under Rule 012 is not required for a phase 1 application. Applicants should obtain and submit a renewable energy referral report from AEP Wildlife Management for a phase 1 application.

If a phase 1 application is approved, an applicant may file a phase 2 application for an approval to construct and operate a wind power plant on the approved buildable area. A final turbine layout is required. In addition, a final sign-off or approval of a specific wind turbine and/or layout is required from other agencies and stakeholders (e.g., NAV CANADA, Transport Canada, Alberta Culture and Tourism, and AEP).

Buildable area phase 1 application – additional requirements

An applicant for a buildable area phase 1 application must file the following information in addition to the power plant requirements identified in Section 3.4.1:

BA1) Explain whether the proposed buildable area meets the requirements of other government departments, municipal governments and agencies in relation to wind power plants, including applicable setback distances and the status of any approvals or comments received from other government departments, municipal governments and agencies or persons who may be directly and adversely affected by the proposed application.

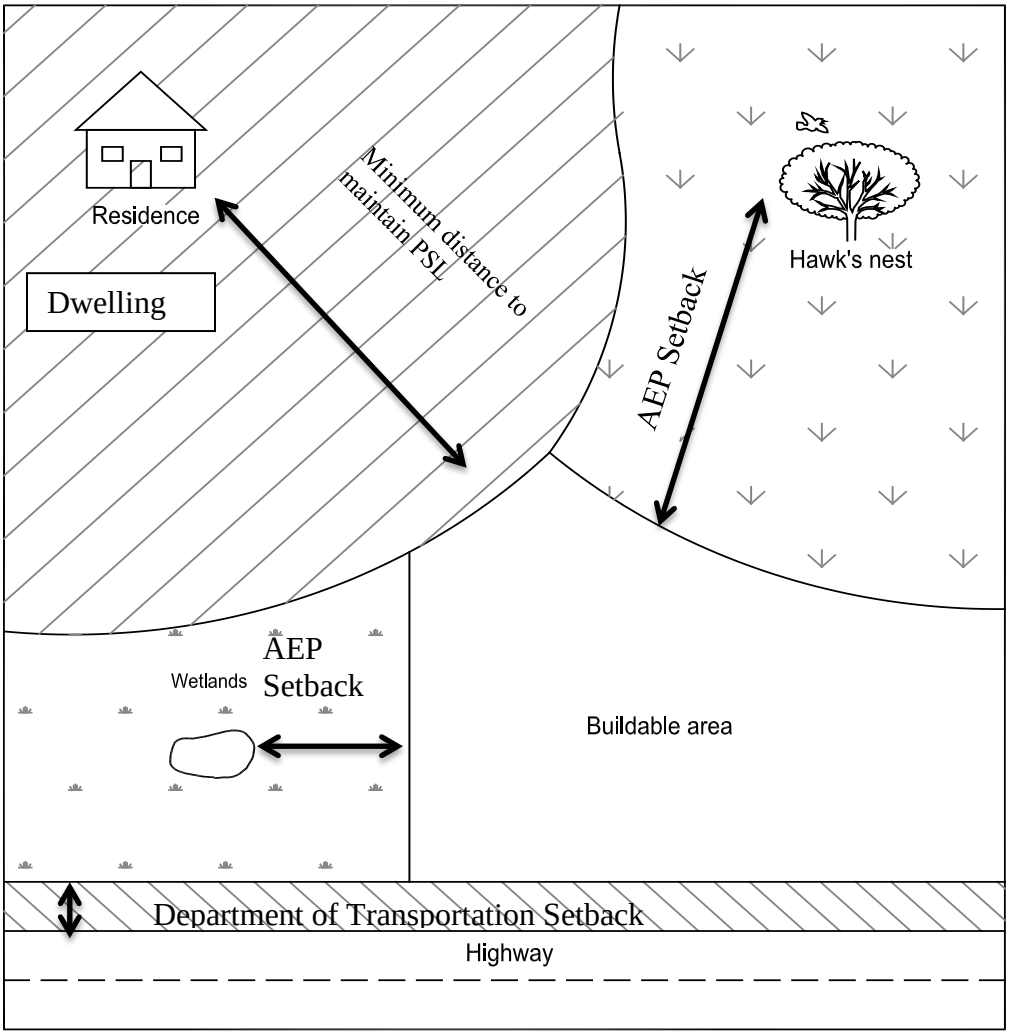
BA2) Illustrate the unconstrained buildable areas on maps of the project area as conceptually illustrated below.

BA3) List the potential size and height range of the type of turbines anticipated to be installed.

BA4) An applicant must include in its public consultation program the potential size and height range of the type of turbines anticipated to be installed, in conjunction with the approximate tower locations within the buildable area space. As part of its consultation program, an applicant must identify potentially directly and adversely affected persons, and maintain a record

of discussions with them regarding any concerns related to the buildable area.

Conceptual illustration of buildable area



Buildable area phase 2 application

An applicant for a buildable area phase 2 application must file the following information in addition to the power plant requirements identified in Section 3.4.1. A phase 2 application must be filed within 36 months of the issuance of the phase 1 approval unless an extension is approved by the Commission.

BA5) Indicate the date and approval number of the phase 1 application.

BA6) If the phase 1 approval includes conditions that are contingent upon final turbine locations, explain in the phase 2 application how these conditions have been met.

BA7) Specify the turbine selected and provide a drawing with specific locations. The specific locations must fall within the buildable areas established in the phase 1 approval.

BA8) Complete and file a noise impact assessment in accordance with Rule 012.

BA9) Public consultation must be conducted with persons notified and consulted during the public consultation for the phase 1 application and any other persons that may be directly and adversely affected that have moved into the area, in accordance with the public consultation requirements set out in Appendix A1 – Participant involvement program guidelines.

BA10) Update any environmental or wildlife studies that may no longer be current as required by AEP Wildlife Management (e.g., raptor nest survey, sharp-tailed grouse lek survey, burrowing owl survey, etc.).

BA11) Provide a phase 2 renewable energy referral report from AEP Wildlife Management.

3.5 Amendments to approved wind power plant

A licensee may apply for an amendment to an approved wind power plant. Except for minor amendments, the licensee must initiate public consultation if the amendment requested has the potential to directly and adversely affect a person initially consulted about the wind power plant and must file information relevant to the request set out in Section 3.4.2.

A licensee may file a letter of enquiry for minor amendments which are those that:

- Have no adverse effect to the environment.
- Do not have the potential to directly and adversely affect persons in the vicinity of the approved wind power plant.
- Do not materially affect conditions imposed by the Commission in the approval, or approvals or sign-offs from other agencies.

4 Small power plant applications less than 10 megawatts

4.1 Small power plant applications information requirements

An application is only required if the applicant does not satisfy the criteria for an exemption under Section 13 of the *Hydro and Electric Energy Act*, sections 18.1 or 18.3 of the *Hydro and Electric Energy Regulation*, or AUC Rule 024: *Rules Respecting Micro-Generation*.

When submitting an application for a small power plant, an application is made pursuant to sections 11 and 18 of the *Hydro and Electric Energy Act*. Therefore, the legal land description of the interconnection location must be specified in the application. An accompanying interconnection application is not required.

To file an application in the eFiling System, begin by requesting a proceeding, add the application by selecting the power plant application type, complete the electronic application form, upload attachments to meet the information requirements in Section 3.2 (as applicable) and then register the proceeding.

4.2 Small power plant application attachments

The eFiling System User Guide provides guidance on the nature of information that should be filed in separate documents.

5 Interconnection applications

An application is required pursuant to Section 18 of the *Hydro and Electric Energy Act* for the interconnection of a power plant to the Alberta Interconnected Electric System or for interconnection of two transmission elements owned by different parties.

To file an interconnection application in the eFiling System, begin by requesting a proceeding, add the application by selecting the interconnection application type, complete the electronic application form, upload attachments to meet the information requirements below (as applicable) and then register the proceeding.

5.1 Information requirements

5.1.1 Connection at voltage level less than 69 kV

IC1) Provide a statement that the local distribution company has agreed to interconnection, the LSD of the interconnection point, and an electric single-line diagram showing the interconnection point with the company. This agreement must reflect that the interest of current customers of the distribution company are served, that provision for future customer load has been made, and that both parties (generator and wire owner) are satisfied with the arrangement and its implications.

5.1.2 Connection to the transmission system – voltage level 69 kV or greater

The power plant proponent has to obtain the information required for this section from the ISO or provide the information prepared by qualified in-house personnel or consultants and endorsed by the ISO.

IC2) Provide local area load flow studies, including contingency analysis, with sufficient detail to demonstrate that the proposed interconnection would conform with current accepted planning criteria. Present the report of these studies with sufficient graphical outputs, which should be labelled and indexed to provide clarity as to what was studied.

IC3) For connection of power plants with total capability of 70 megawatts or larger, provide dynamic studies to determine the impact of the new generation on the transient and dynamic stability of the Alberta Interconnected Electric System. These dynamic studies should include system response to close-in and worst-case three-phase faults with and without the new plant addition to show the relative system performance. Study results should include macro-system quantities, such as machine angles, major bus voltages, major line active and reactive power flows, and system frequency. Present the report for the studies with sufficient graphical outputs labelled and indexed to provide clarity as to what was studied. For power plants with total capability over 10 megawatts but less than

70 megawatts, the Commission, in consultation with the ISO, will assess the need for dynamic studies.

IC4) For connection of wind farms, provide details of how dynamic voltage control and "low voltage ride through" are able to conform with the current accepted standard at the point of interconnection. Details should include control block diagrams of the voltage control system and time domain responses to illustrate dynamics and stability of the voltage control system.

IC5) Provide short-circuit levels at substations near the proposed connection.

IC6) Provide the most up-to-date functional specifications when the application is filed and the final functional specification before construction of the project begins.

IC7) Include a cost estimate for the connection and required system upgrades.

IC8) Explain the proponent's contribution, if any, toward the capital cost of the interconnection.

5.2 Interconnection application attachments

The eFiling System User Guide provides guidance on the nature of the information that should be filed in separate documents.

6 Needs identification document applications to construct or alter a substation or transmission line

The ISO is responsible for determining the need for the construction of new projects or alterations to existing facilities. This obligation is set out in Section 34 of the *Electric Utilities Act* and is further clarified in the *Transmission Regulation* and the *Transmission Deficiency Regulation*. That obligation is referred to in this rule as the needs identification document[5] application. The process and the required elements of the needs identification document application are further described in this section.

Pursuant to the *Transmission Regulation*, the *Transmission Deficiency Regulation* and Section 1.4.1 of this rule, needs identification documents are not required for minor additions, upgrades, enhancements or other modifications to a transmission facility proposed by a TFO or market participant if the project meets the requirements for exemption.

Pursuant to Section 11(5.1) of the *Transmission Regulation*, the Commission may omit any requirement pertaining to a needs identification document set out in the *Transmission Regulation* or modify how any such requirement applies in respect of an abbreviated needs identification document. In accordance with this provision, the Commission has determined that the requirements in sections 11(3), 11(4) and 11(5) of the *Transmission Regulation* do not apply to an abbreviated needs identification document unless it directs otherwise. However, the Commission has set out below the requirements for abbreviated needs identification documents.

[5] Needs identification document may be referred to as NID in this rule.

The ISO may submit an abbreviated needs identification document application for the following two types of transmission development:

(a) A project responding to a generation or load system access service request at an estimated cost of less than $5 million for system-related cost.[6]

(b) A project for developing telecommunication sites and towers at an estimated cost of less than $5 million for system-related cost.

For projects that require a needs identification document, or an abbreviated needs identification document, the application process for system enhancement and upgrade projects and for generation and load system access service requests respectively is detailed below.

(a) Where a new transmission facility is required, the ISO will normally prepare the needs identification document, which can be submitted either as a stand-alone application or jointly with the TFO's or market participant's facility application.

(b) Interconnection proposals for generator and load customers may also be submitted as stand-alone applications or jointly with the TFO's or market participant's facility application.

(c) In a joint application, the two documents will be dealt with in a single Commission proceeding. However, the ISO will remain responsible for any concerns raised with respect to the need and the proposed method of system enhancement, upgrade or interconnection. An approval, if granted, will be issued to the ISO for the needs identification document or abbreviated needs identification document prior to or at the same time as a permit and licence, if granted, to the TFO or market participant.

(d) Where the preparation of a needs identification document application or an abbreviated needs identification document application has been delegated by the ISO to a TFO or a DFO in accordance with Section 13 of the *Transmission Regulation*, the TFO or DFO will submit the needs identification document application or abbreviated needs identification document application as part of the transmission facility application to the Commission. The ISO will submit a letter to the Commission endorsing the needs identification document or abbreviated needs identification document presented by the TFO or DFO.

Unless the Commission has specifically omitted requirements for an abbreviated needs identification document, a needs identification document application or an abbreviated needs identification document application must contain the information set out in the requirements listed in the *Transmission Regulation*, and other information requirements set out in this rule. If the information required is not provided, the application must contain an explanation of the reason for omitting the information.

6.1 ISO needs identification document application information requirements

For projects that require a needs identification document pursuant to Section 11(3) of the *Transmission Regulation*, the needs identification document must describe

[6] System-related cost is the "SYSTEM" portion of the TOTAL PROJECT" cost as shown in Appendix B1 on page 58.

the timing and nature of the need, constraint or condition affecting or that will affect the operation, efficiency and reliability of the transmission system, including the following:

NID1) An assessment of current transmission system capability and the record of the last five-year summer and winter peak substation loads applicable to the development area.

NID2) The planning criteria used for the assessment of transmission system capability.

NID3) A forecast for at least 20 years of the load on the interconnected electric system.

NID4) A forecast for at least 20 years of generation capability and the reserves required to meet the forecast load.

NID5) The studies and analysis performed in identifying the timing and nature of the need affecting or that will affect the identified constraint or condition.

NID6) The options considered for alleviating the constraint or condition.

NID7) The technical analyses (by way of load flow studies, stability studies, reactive power and other necessary studies) and respective economic, environmental and land use effect comparisons of the options considered, including the following:

(1) the impact on generation must-run requirements described in Section 30(2)(a)(ii) of the *Electric Utilities Act*;

(2) how the options relate to the transmission system plan prepared by the ISO;

(3) the evaluation of operational efficiency and reliability, and the improvements provided by each option;

(4) an evaluation of each option with respect to economics, reliability standards and the planning criteria used for the assessment of transmission system capability, which may include, for example, changes to the magnitude of the transfer-in and/or transfer-out capability of the portions of the transmission system affected by the proposed development;

(5) rationale for the following determinations or assumptions:

(a) conductor[7] sizes for new transmission lines or alterations to existing transmission lines used in the above mentioned technical analyses;

[7] Conductor is the catch-all term for common conductors and bundling arrangements used for overhead electric power transmission lines, for example, different sizes of “aluminum-conductor-steel-reinforce (ACSR)”

(b) the proposed transmission line conceptual configurations for each option;

(c) applicable ratings/capability for major elements; and

(d) the electrical conceptual configuration of proposed new substations or amendments to existing substations for breaker arrangements, line terminations and other major equipment.

(6) the evaluation of factors for the implementation of each option, including the timing and risks during construction;

(7) short-circuit levels of all substations in the area under consideration before and after the proposed expansion or enhancements are completed;

(8) transmission system losses before and after the proposed expansion or enhancements are completed;

(9) environmental and land use effects by way of a desktop evaluation within a development area defined by the ISO to identify areas where the development of transmission facilities may be prohibited, and to evaluate the effects of the options considered.

If the applied-for option is within a specific corridor with limited routing flexibility options or at a specific facility location (e.g., new substation location), identify any area within the corridor or facility location where the development of transmission facilities may be prohibited, to an appropriate level of detail, and evaluate the effects of the options considered.

In evaluating the options considered, use the information referred to below, as applicable:[8]

(a) land assessment: public and private, federal, First Nations' reserve land, and transportation utility corridor considerations;

(b) agricultural and other land use features including native grassland;

(c) environmental features such as:

(i) wildlife sensitivity areas that may be assessed from AEP wildlife sensitivity maps;

(ii) provincially-protected areas such as provincial parks, wilderness areas, ecological reserves, wildland parks, Willmore Wilderness Park, provincial recreation areas, heritage rangelands and natural areas;

conductors, or "all-aluminum-alloy (AAAC)" conductors, arranged in two or four conductor bundles. In the case of an underground transmission system, conductor is the catch-all term for common types of underground cables, such as different sizes of "Cross-Linked Polyethylene (XLPE)" cables.

[8] The information in NID7 may refer to the TFO's or market participant's facility application if one is being considered jointly with the NID.

(iii) provincially-designated environmentally-significant areas where maps are available from AEP;

(iv) federally-protected areas such as national parks, wilderness areas and areas subject to special orders such as the Emergency Order for the Protection of Greater Sage-Grouse;

(d) applicable regional land use plans adopted under the *Alberta Land Stewardship Act* and whether the proposed development meets the requirements of the plans.

NID8) With respect to the costs for system developments, a detailed cost breakdown for the applied-for option and other viable options considered with an accuracy tolerance within a range of plus 20 to plus 50 per cent and minus 15 to minus 30 per cent. This cost breakdown must be provided in the format shown in Appendix B1, which reflects the summary page of the cost template used in the ISO cost estimating framework (ISO Rule 504.5 and AACE International Recommended Practice No.18R-97).

NID9) The ISO's recommendation of a preferred option, including:

(1) the rationale for the ISO's determination of its preferred development option after having evaluated the relevant technical, economic, environmental and land use factors described in NID7;

(2) the implementation schedule for the preferred option including an in-service date as well as potential limitations or constraints, such as completion of wildlife or other studies, that may be encountered in achieving that in-service date, having regard for the above factors.

NID10) Indicate the date by which the transmission development described in the proposed needs identification document approval must be direct assigned to a transmission facility owner or market participant. In the event that all or any part of the transmission development described in the proposed needs identification document approval has not been direct assigned by the date indicated, the ISO must confirm in writing that the need to expand or enhance the transmission system described in the needs identification document continues and that the technical solution described in the needs identification document approval continues to be the ISO's preferred technical solution.

NID11) Describe the participant involvement program conducted by the ISO for the needs identification document application, the rationale used to develop the participant involvement program and to determine the extent of participant involvement set out in Appendix A2 – ISO participant involvement program guidelines. A summary of how the ISO addressed the issues raised by participants should be included in the needs identification document application.

6.2 ISO abbreviated needs identification document application information requirements

6.2.1 ISO abbreviated needs identification document application information requirements for system access service requests for loads

NID12) An assessment of current transmission system capability, including the record of the last five-year summer and winter peak substation loads applicable to the development area.

NID13) The planning criteria used to assess the impact of the system access service request on the system.

NID14) The options considered for responding to the system access service request.

NID15) The technical analyses (by way of load flow studies, stability studies, reactive power and other necessary studies) prior to and following connection of the applied-for load, and respective economic, environmental and land use effect comparisons of the options considered, including the following:

(1) rationale for the following determinations or assumptions:

(a) the proposed transmission line configurations for each option;

(b) applicable ratings/capability for major elements; and

(c) electrical configuration of proposed new substations or amendments to existing substations for breaker arrangements, line terminations and other major equipment.

(2) environmental and land use effects by way of a desktop evaluation within a development area defined by the ISO to identify areas where the development of transmission facilities may be prohibited, and to evaluate the effects of the options considered.

If the applied-for option is within a specific corridor with limited routing flexibility options or at a specific facility location (e.g., new substation location), identify any area within the corridor or facility location where the development of transmission facilities may be prohibited, to an appropriate level of detail, and evaluate the effects of the options considered.

In evaluating the options considered, use the information referred to below, as applicable:[9]

(a) land assessment: public and private, federal, First Nations' reserve lands, and transportation utility corridor considerations.

[9] The information in NID 15 may refer to the TFO's or market participant's facility application if one is being considered jointly with the NID.

(b) agricultural and other land use features including native grassland.

(c) environmental features such as:

(i) wildlife sensitivity areas that may be assessed from AEP wildlife sensitivity maps;

(ii) provincially-protected areas such as provincial parks, wilderness areas, ecological reserves, wildland parks, Willmore Wilderness Park, provincial recreation areas, heritage rangelands and natural areas;

(iii) provincially-designated environmentally-significant areas where maps are available from AEP.

(iv) Federally-protected areas such as national parks, wilderness areas, and areas subject to special orders such as the Emergency Order for the Protection of Greater Sage-Grouse;

(d) applicable regional land use plans adopted under the *Alberta Land Stewardship Act* and whether the proposed development meets the requirements of the plans.

NID16) With respect to the cost for the system access service project, a detailed cost breakdown for the applied-for option and other viable options considered with an accuracy tolerance within a range of plus 20 to plus 50 per cent and minus 15 to minus 30 per cent. This cost breakdown must be provided in the format shown in Appendix B1, which reflects the summary page of the cost template used in the ISO cost estimating framework (ISO Rule 504.5 and AACE International Recommended Practice No.18R-97).

NID17) The ISO's recommendation of a preferred option, including:

(1) the rationale for the ISO's determination of its preferred development option after having evaluated the relevant technical, economic, environmental and land use factors described in NID15;

(2) the implementation schedule for the preferred option including an in-service date as well as potential limitations or constraints, such as completion of wildlife or other studies, that may be encountered in achieving that in-service date, having regard for the above factors.

NID18) Indicate the date by which the ISO must confirm in writing that the need to expand or enhance the transmission system described in the abbreviated needs identification document continues and that the technical solution described in the abbreviated needs identification document approval continues to be the ISO's preferred technical solution, in the event that all of the transmission facilities related to the abbreviated needs identification document are not in service.

NID19) A description of the participant involvement program conducted by the ISO, the rationale used to develop the participant involvement program

and to determine the extent of participant involvement in accordance with the requirements for abbreviated needs identification documents set out in Appendix A2 – ISO participant involvement program guidelines. A summary of how the ISO addressed the issues raised by participants should be included in the application.

6.2.2 ISO abbreviated needs identification document application information requirements for system access service requests by generators

NID20) An assessment of current transmission system capability applicable to the development area.

NID21) The planning criteria used for the assessment of transmission system capability.

NID22) The options considered for responding to the system access service request.

NID23) The technical analyses (by way of load flow studies, stability studies, reactive power and other necessary studies) prior to and following connection of the applied-for generators and respective economic, environmental and land use effect comparisons of the options considered, including the following:

(1) rationale for the following determinations or assumptions:

(a) the proposed transmission line configurations for each option;

(b) applicable ratings/capability for major elements; and

(c) electrical configuration of proposed new substations or amendments to existing substations for breaker arrangements, line terminations and other major equipment;

(2) for connection options causing or exacerbating local area congestion, include a connection assessment and the details of any operating procedures or RAS, generation must-run or constraint management protocols that may be implemented to meet reliability requirements for the interim period, prior to the necessary transmission system enhancement of expansion being implemented;

(3) environmental and land use effects by way of a desktop evaluation within a development area defined by the ISO to identify areas where the development of transmission facilities may be prohibited, and to evaluate the effects of the options considered.

If the applied-for option is within a specific corridor with limited routing flexibility options or at a specific facility location (e.g., new substation location), identify any area within the corridor or facility location where the development of transmission facilities may be prohibited, to an appropriate level of detail, and evaluate the effects of the options considered.

In evaluating the options considered, use the information referred to below, as applicable:[10]

(a) land assessment: public and private, federal, First Nations' reserve lands, and transportation utility corridor considerations;

(b) agricultural and other land use features including native grassland;

(c) environmental features such as:

(i) wildlife sensitivity areas that may be assessed from AEP wildlife sensitivity maps;

(ii) provincially-protected areas such as provincial parks, wilderness areas, ecological reserves, wildland parks, Willmore Wilderness Park, provincial recreation areas, heritage rangelands and natural areas;

(iii) provincially-designated environmentally-significant areas where maps are available from AEP;

(iv) federally-protected areas such as national parks, wilderness areas, and areas subject to special orders such as the Emergency Order for the Protection of Greater Sage-Grouse;

(d) applicable regional land use plans adopted under the *Alberta Land Stewardship Act* and whether the proposed development meets the requirements of the plans.

NID24) With respect to the cost for the system access service project, a detailed cost breakdown for the applied-for option and other viable options considered with an accuracy tolerance within a range of plus 20 to plus 50 per cent and minus 15 to minus 30 per cent. This cost breakdown must be provided in the format shown in Appendix B1, which reflects the summary page of the cost template used in the ISO cost estimating framework (ISO Rule 504.5 and AACE International Recommended Practice No.18R-97).

NID25) The ISO's recommendation of a preferred option, including:

(1) the rationale for the ISO's determination of its preferred development option after having evaluated the relevant technical, economic, environmental and land use factors described in NID23;

[10] The information in NID 23 may refer to the TFO's or market participant's facility application if one is being considered jointly with the NID.

(2) the implementation schedule for the preferred option including an in-service date as well as potential limitations or constraints, such as completion of wildlife or other studies, that may be encountered in achieving that in-service date having regard for the above factors.

NID26) Indicate the date by which the ISO must confirm in writing that the need to expand or enhance the transmission system described in the abbreviated needs identification document continues and that the technical solution described in the abbreviated needs identification document approval continues to be the ISO's preferred technical solution, in the event that all of the transmission facilities related to the abbreviated needs identification document are not in service.

NID27) A description of the participant involvement program conducted by the ISO, the rationale used to develop the participant involvement program and to determine the extent of participant involvement in accordance with the requirements for abbreviated needs identification documents set out in Appendix A2 – ISO participant involvement program guidelines. A summary of how the ISO addressed the issues raised by participants should be included in the application.

6.2.3 ISO abbreviated needs identification document application information requirements for telecommunication sites and towers

NID28) Information on the current telecommunication system configuration and capability of the proposed development area; the nature and timing of the need; and rationales for the technology and system/configuration chosen to respond to the need.

NID29) The options considered for responding to the need.

NID30) For a new location, outside an existing substation, evaluate environmental and land use effects by way of a desktop evaluation within a development area defined by the ISO to identify areas where the development of transmission/telecommunication facilities may be prohibited, and to evaluate the effects of the options considered.

If the applied-for option is at a specific facility location (e.g., new substation location), identify any area within the facility location where the development of transmission/telecommunication facilities may be prohibited, to an appropriate level of detail, and evaluate the options considered.

In evaluating the options considered, use the information referred to below in the evaluation, as applicable:[11]

[11] The information in NID30 may refer to the TFO's or market participant's facility application if one is being considered jointly with the needs identification document.

(1) land assessment: public and private, federal, First Nations' reserve lands, and transportation utility corridor considerations;

(2) agricultural and other land use features including native grassland;

(3) environmental features such as:

(a) wildlife sensitivity areas that may be assessed from AEP wildlife sensitivity maps;

(b) provincially-protected areas such as provincial parks, wilderness areas, ecological reserves, wildland parks, Willmore Wilderness Park, provincial recreation areas, heritage rangelands and natural areas;

(c) provincially-designated environmentally-significant areas where maps are available from AEP;

(d) federally-protected areas such as national parks, wilderness areas, and areas subject to special orders such as the Emergency Order for the Protection of Greater Sage-Grouse;

(4) applicable regional land use plans implemented under the *Alberta Land Stewardship Act* and whether the proposed development meets the requirements of the plans.

NID31) With respect to the cost for the development, a detailed cost breakdown for the applied-for option with an accuracy tolerance within a range of plus 20 to plus 50 per cent and minus 15 to minus 30 per cent. This cost breakdown must be provided in the format shown in Appendix B1, which reflects the summary page of the cost template used in the ISO cost estimating framework (ISO Rule 504.5 and AACE International Recommended Practice No.18R-97).

NID32) The ISO's recommendation of a preferred option, including:

(1) the rationale for the ISO's determination of its preferred development option after having evaluated the relevant technical, economic, environmental and land use factors described in NID30;

(2) the implementation schedule for the preferred option including an in-service date as well as potential limitations or constraints, such as completion of wildlife or other studies, that may be encountered in achieving that in-service date having regard for the above factors.

NID33) Indicate the date by which the ISO must confirm in writing that the need to expand or enhance the transmission system described in the abbreviated needs identification document continues and that the technical solution described in the abbreviated needs identification document approval continues to be the ISO's preferred technical solution, in the event that all of the transmission facilities related to the abbreviated needs identification document are not in service.

NID34) A description of the participant involvement program conducted by the ISO, the rationale used to develop the participant involvement program and to determine the extent of participant involvement in accordance

with the requirements for abbreviated needs identification documents set out in Appendix A2 – ISO participant involvement program guidelines. A summary of how the ISO addressed the issues raised by participants should be included in the application.

6.3 ISO needs identification document application attachments

The eFiling process requires the ISO or the delegated TFO or DFO to upload the needs identification document application or abbreviated needs identification document application containing the information indicated above.

7 Transmission line / substation applications

If an applicant is applying to construct or alter a substation or transmission line, the applicant must include the background and technical requirements outlined below.

If an applicant is applying to discontinue, dismantle or remove an approved substation or transmission line, the application must include the relevant requirements also outlined below.

Fill out the transmission line and/or substation application electronic application form, and upload the required transmission line and/or substation attachments.

To file an application in the eFiling System, begin by requesting a proceeding, add the application by selecting the transmission line application type or substation application type, complete the electronic application form, upload attachments to meet the information requirements below (as applicable) and then register the proceeding.

7.1 Information requirements

TS1) Identify the sections of the *Hydro and Electric Energy Act* or *Transmission Deficiency Regulation* under which the application is made.

TS2) Identify any other acts (e.g., *Environmental Protection and Enhancement Act*, *Water Act*, and *Wildlife Act*) that may affect the proposed project.

TS3) State the approvals that are being applied for from the Commission, and provide a draft of the permit(s) and licence(s) being sought.

TS4) Where existing facilities are being altered, discontinued, dismantled or removed state the existing order/authority (e.g., approvals, permits and licences) for each facility.

TS5) Provide details and outcome of consultation with local jurisdictions (e.g., municipal districts, counties).

TS6) Provide a list of companies that may be affected by the project, confirm that these companies have no concerns regarding the application, and indicate which other agreements are necessary to carry out the project.

TS7) Provide a description of the proposed project.

TS8) Provide a copy of the ISO direct assignment letter pursuant to the *Electric Utilities Act*. Alternatively, if a needs identification document was not required, provide a copy of the ISO approval letter pursuant to the abbreviated needs approval process, or a statement that the project was exempt pursuant to Section 1.4.1(a) of this rule.

TS9) Give the dates by which both the approval and the proposed facilities are required; state the ramifications if they are not available at that time.

TS10) Describe any transmission line routing alternatives to the proposal and compare the relative effects (environmental, social and economic) of these alternatives with the proposal.

TS11) Describe the participant involvement program that you have conducted (see Appendix A1 – Participant involvement program guidelines).

TS12) List all occupants, residents and landowners, and other interested parties that were contacted as part of the participant involvement program, with corresponding land locations.

TS13) Supply a list of mailing addresses, and two sets of printed mailing labels of those parties mentioned in TS12 above.

TS14) Identify any persons who expressed concerns about the project and the specifics of their concerns.

TS15) Summarize discussions held with potentially directly and adversely affected persons.

TS16) If potentially directly and adversely affected persons raised any concerns, describe how the concerns were dealt with or will be dealt with.

TS17) For those potentially directly and adversely affected persons identified above, include a confirmation of resolution of the concerns, if applicable.

TS18) Describe the design and operating voltage of the transmission line and/or substations.

TS19) Provide the continuous and maximum ratings of the transmission line for the various operating conditions as stipulated by the ISO and the expected transmission line losses. Describe changes, if any, proposed by the TFO or market participant.

TS20) If the ISO requires the TFO or market participant, who has been directly assigned for the proposed project, to determine the choice of conductors, describe conductor size and arrangement selected and the basis for conductor selection.

TS21) Describe the proposed transmission line structure type, including height and spacing; if more than one type of structure is proposed, state where each type will be used.

TS22) State the right-of-way width and the basis for determining the width.

TS23) Describe all major substation equipment being applied for and list the final major equipment in the substation.

TS24) Describe the switching and protection features of the proposed transmission facilities.

TS25) Describe the electrical interaction of proposed lines with other facilities, such as pipelines, telephone, radio and television transmission facilities, and other surface structures.

TS26) Describe the changes to existing facilities that would be required to accommodate the proposed facilities.

TS27) Provide a legible map defining the study area and state the reasons for the chosen area.

TS28) Provide legible maps and drawings of the proposed facilities showing:

- the preferred transmission line route and any alternative routes
- right-of-way widths
- location of the transmission line on the right-of-way
- location of the transmission line relative to property lines
- mile (kilometre) points along each transmission line route

TS29) Provide legible maps and/or air photo mosaics upon which the proposed transmission line route or routes have been imposed and showing the residences, landowner names, and major land use and resource features (e.g., agricultural crops or pasture, topography, soil type, existing land use, existing rights-of-way, existing or potential historical, archaeological or paleontological sites, and superficial and mineable resources).

TS30) Provide a legible map of the project area suitable for use in a public notice.

TS31) Provide an electric single-line diagram or switching map showing new facilities in place in the system. In the case of a substation, provide an electric single-line diagram and a substation layout, including major items of equipment and the fenced boundaries of the station.

TS32) Discuss the construction schedule, equipment and method of construction, and method of eventual right-of-way maintenance.

TS33) Provide the most up-to-date functional specifications when the application is filed and the final functional specification before construction of the project begins.

TS34) Provide a noise impact assessment in accordance with the current Rule 012 for new substations and transformer additions within an existing substation, clearly indicating the impact of the new substation and/or transformer addition.

7.1.1 Environmental and land use information

Approval from AEP may be required (e.g., a *Water Act* approval for loss of wetland habitat or function). The applicant should contact AEP directly to ascertain if AEP approval is required. All applications must state that the applicants will comply with AEP's *Environmental Protection Guidelines for Transmission Lines*, pursuant to the *Environmental Protection and Enhancement Act* and the regulations under that act.

Each application must include environmental and land use information at a level of detail commensurate with the size and type of potential effects of the project. The Commission will determine the level of detail on a project-by-project basis.

Commission guidance with respect to environmental information requirements of applications is provided in the following documents:

- Transmission Line Developments – Environmental Guidelines Checklist for Applicants
- Substation Developments – Environmental Guidelines Checklist for Applicants

The Commission expects applications for higher-voltage transmission lines of significant length will be more detailed. If the ISO has provided information in the related needs identification document, the TFO or market participant should expand on that information by way of route site-specific information for the applied-for route and alternatives, if any. Notwithstanding, the information listed in TS35 through TS42 below must be provided.

TS35) Describe the clean-up and reclamation plan that will be carried out following commissioning, including any temporary workspace areas and temporary access roads.

TS36) Visual aesthetics and screening – indicate those areas that have been identified as significant viewpoints, describe how the project is predicted to adversely affect those viewpoints, and describe the measures proposed to minimize the visual effects of towers and the right-of-way within the viewpoint areas including the identification of project components and locations that require screening and the screening measures (e.g., fences, earth berms, painting, landscaping) to be used.

TS37) Tower location – indicate the flexibility available in locating towers to reduce the inconvenience to residents and their day-to-day activities.

TS38) Confirm that a *Historical Resources Act* approval has been obtained or has been applied for. If a historical resource impact assessment is required, briefly describe any historical, archaeological or paleontological sites along the routes, with emphasis on major features close to or traversed by the route. Please ensure that any historical, archaeological or paleontological

resources described exclude confidential site location, type and content information.

TS39) For proposed route(s) and possible alternatives that would result in an adverse effect to the environment, applicants should provide a summary of feedback received to date from AEP addressing the environmental aspects of the project, and confirmation that AEP is satisfied with any proposed mitigation measures and monitoring activities, or identify any unresolved project aspects where agreement with AEP was not achieved.

Provide the following information at a level of detail commensurate with the size and type of potential effects:

i) Describe the present (pre-project) environmental and land use conditions in the local study area. Describe the regional setting of the project, including any regional land use plans and policies that apply to the development.

ii) Describe how the proposed route(s) and possible alternatives and/or proposed substation are predicted to adversely affect the environment. Describe the potential adverse effects on soils, terrain, vegetation species and communities, wetlands, wildlife species and habitat, aquatic species and habitat, groundwater, surface water bodies and hydrology, environmentally sensitive areas, and land use within the local study area, following and referencing published AEP guidelines if applicable. Describe how the environmental effects of the project will be avoided or mitigated and any monitoring proposed to evaluate the efficacy of those measures. Additionally, describe the methodology used to identify, evaluate, and rate any adverse environmental effects and determine their significance, along with an explanation of the scientific rationale for choosing this methodology.

Provide supporting written discussion with other government agencies related to the adverse effects upon each major environmental, land use and resource component for each route. For example, if the project will potentially affect wildlife, fisheries, wildlife habitat or fisheries habitat, a local AEP wildlife biologist must be consulted prior to route selection of alternatives to ensure that fisheries and wildlife habitat values have been considered. Details and outcomes of the consultation, with the local wildlife biologist at AEP, including the name and contact information, and with personnel from other agencies or groups must be provided.

iii) Show the major environmental features (e.g., native vegetation communities, rare plants, wetlands, topography, unique terrain features, sensitive soils, wildlife species setbacks and habitat, and environmentally significant areas), land use and resource features (e.g., agricultural, residential, recreational, forestry, trapping and hunting areas, protective notations, and existing or potential archaeological sites) for each route in a table in the correct units (by kilometre, total number, etc.).

iv) Present an overall comparison of the environmental effects and costs associated with the alternative routes and proposed route and identify the environmentally preferred route.

v) Summarize any discussions held with municipalities to ensure compatibility of the proposed facility with various municipal services if a proposed transmission line passes through or immediately adjacent to an urban centre.

TS40) If the project site occurs within the plan boundaries of a regional land use plan in force:

i) Confirm that the proposed project is being developed in accordance with the applicable regional land use plan.

ii) Confirm if the proposed project is in a conservation area or provincial recreation area established in the applicable regional land use plan. Provide submissions describing how the activity may be considered incidental to a previously-approved activity.

iii) Indicate what, if any, management frameworks in place under the applicable regional land use plan are applicable to the project, the reason why any management frameworks are not applicable to the project and summarize discussions held with AEP and any other government department required to be consulted under the management frameworks regarding the project and its impacts in terms of the management frameworks. Include details on any actions or mitigation measures recommended as a result of the discussions and describe how these actions or mitigation measures will be incorporated into the project.

TS41) If the project is to be constructed within an area of a substation for which approval is being sought where, upon appropriate assessment, the proponent is aware of or ought to be aware that a substance that may cause, is causing or has caused an adverse effect to the environment has been released, indicate the nature of the reportable release, how the release was administered and reported, and how any resultant or ongoing effects will be administered or contained with regard to the proposed project.

TS42) For applications to discontinue service, dismantle or remove a transmission line provide information on: the salvage, remediation and reclamation work to be performed; assessment of contamination; legislative requirements or other published guidelines that will be adhered to or considered.

7.1.2 Economic assessment

TS43) Provide a detailed cost breakdown of all alternatives on a common basis with an accuracy tolerance within a range of plus 10 to plus 30 per cent and minus 10 to minus 20 per cent. This cost breakdown must be provided in the format shown in Appendix B2, which reflects the summary page of the cost template used in the ISO cost estimating framework (ISO Rule 504.5 and AACE International Recommended Practice No.18R-97). Where identifiable, include costs to be borne by persons other than the applicant and the applicant's customer(s) in the comparison. This information

requirement may not be applicable to market participant choice and merchant line applications.

7.1.3 Market participant choice

TS44) If the applicant is a market participant, the applicant must (i) provide confirmation that all required agreements are in place with the TFO including the asset transfer agreement, the written agreement with the TFO for the temporary operation of the transmission facility, if available, and confirmation of ISO approval of the connection proposal; and (ii) specify the temporary period for which the market participant expects to hold the operating licence, which period may not exceed the term specified in the written agreement with the TFO for the temporary operation of the transmission facility. If the written agreement with the TFO for the temporary operation of the transmission facility is not available at the time of filing the application, the market participant must provide confirmation that the agreement is in place prior to energization.

For the subsequent transfer of the operating licence from a market participant to a TFO please refer to Section 10 of this rule.

7.2 Transmission line and substation application attachments

The eFiling System User Guide provides guidance on when to file information requirements as separate attachments.

8 Industrial system designation (ISD) applications

To file an application in the eFiling System, begin by requesting a proceeding, add the application by selecting the industrial system designation application type, complete the electronic application form, upload attachments to meet the information requirements below (as applicable) and then register the proceeding.

8.1 ISD information requirements

ISD1) Identify the sections of the *Hydro and Electric Energy Act* under which the application is made.

ISD2) State the approvals that are being applied for from the Commission.

ISD3) Provide a list of existing approvals for facilities directly affected by this project, if any.

ISD4) Provide a list of companies that may be affected by the project, confirm that these companies have no concerns regarding the application, and indicate which other agreements are necessary to carry out the project.

ISD5) Provide a detailed description of the overall industrial process, and include a list of the companies that own or operate different aspects of the industrial process.

ISD6) Explain how the industrial operations process a feedstock, produce a primary product, or manufacture a product. Describe the integration of the industrial system, showing how the output of each component within the industrial operation is used by that operation and is necessary to constitute its final products.

ISD7) Demonstrate that there is a high degree of integration of the electric system with one or more industrial operations that the electric system forms part of and serves.

ISD8) Explain the degree of integration of the management of the components and processes of the industrial operations.

ISD9) Provide block diagrams showing electrical, natural gas, steam, water and feedstock flows between the different blocks representing processes. Correct units of measurement should indicate flows (e.g., megawatts for electric flows, and cubic metres per second for gas and water flows). Also include in these diagrams the volumes consumed or produced by each process block.

ISD10) Provide a complete list of all electric facilities and equipment of 25 kV or more to be included in the industrial system designation.

ISD11) Provide an electrical single-line diagram of the entire industrial complex. This diagram should clearly show existing facilities, future facilities and their ownership.

ISD12) Verify that the electric system includes at least one generating unit that has substantial capacity in comparison with the on-site load and is located on the property of one or more industrial operations it is intended to serve.

ISD13) Explain how the designation supports both (a) the development of the economical supply of generation to meet the requirements of integrated industrial processes and (b) the efficient exchange with the interconnected electric system of electric energy that is in excess of the industrial system's own requirements.

ISD14) Demonstrate, by way of an economic comparison, that the internal supply through on-site generation is the most economic source of power for the industrial complex. For example, if the industrial complex uses cogeneration to produce electric and thermal energy, the applicant should provide a comparison of the costs of the internal supply of electricity and process heat with the alternative of contracting electrical supply from the Alberta Interconnected Electric System and installing in situ heat exchangers or boilers to satisfy the thermal requirements of the industrial process.

ISD15) Explain how the proposal meets the principle that the designation supports the location of generation and consumption so that the efficiency of the interconnected electric system is improved, including improved voltage stability and reduction of losses and congestion on

transmission. Elaborate on how the application achieves this principle and provide an assessment of losses and congestion on transmission lines due to the electric power that the industrial complex would supply to the Alberta Interconnected Electric System. The assessment should also take into account other existing generation and generation under construction.

ISD16) Provide a thermal energy balance to demonstrate that there is significant and sustained increase in efficiency in the process of the industrial operation or in the production and consumption of electric energy by the industrial operation as a result of the integration of the electric system with the industrial operations the electric system forms part of and serves.

ISD17) Demonstrate that the designation does not facilitate the development of independent electric systems that attempt to avoid costs associated with the interconnected electric system, and does not facilitate uneconomical bypass of the interconnected electric system.

ISD18) Demonstrate that the designation would not result in duplication of the interconnected electric system where it is more economical to use the transmission facilities or electric distribution system owned by persons in whose service area the industrial system is or will be located.

ISD19) Demonstrate that there is significant investment in either the expansion or extension of the industrial operations processes and the development of the electricity supply.

ISD20) If the industrial operation extends beyond the contiguous property of the industrial complex, provide information to satisfy the Commission that the overall cost of providing the owner's own distribution or transmission facilities to interconnect the integral parts of the industrial operation is equal to or less than the tariffs applicable for distribution or transmission in the service area where the industrial operation is located.

ISD21) Describe the participant involvement program that has been conducted (see Appendix A1– Participant involvement program guidelines).

ISD22) List all stakeholders that were contacted as part of the participant involvement program.

ISD23) Supply a list of mailing addresses, with corresponding land locations and two sets of printed mailing labels of those parties mentioned in ISD22, above.

ISD24) Identify any persons who expressed concerns about the application and the specifics of their concerns.

ISD25) Summarize discussions held with potentially directly and adversely affected persons.

ISD26) If potentially directly and adversely affected persons raised any concerns, describe how the concerns were dealt with or will be dealt with.

ISD27) For those potentially directly and adversely affected persons identified above, include a confirmation of resolution of the concerns, if applicable.

ISD28) Provide a legible plant site drawing showing all major components of the industrial operation.

ISD29) Provide a legible map showing the location of major electric facilities, such as power plants, transmission lines and substations.

ISD30) Provide a legible map of the project area suitable for use in public notice.

8.2 ISD application attachments

The eFiling System User Guide provides guidance on when to file the information required in separate attachments.

9 Hydro developments

If an applicant is applying to construct or alter a hydro development, or an associated hydroelectric power plant, the application must include the hydro development information outlined below in addition to the power plant requirements. Hydro developments and hydroelectric power plants are as defined in the *Hydro and Electric Energy Act*.

To file an application in the eFiling System, begin by requesting a proceeding, add the application by selecting the hydro development application type, complete the electronic application form, upload attachments to meet the information requirements below (as applicable) and then register the proceeding.

9.1 Information requirements

Application requirements PP1 to PP7, PP9 to PP12, PP14 to PP34, PP37 to PP40 and PP42 set out in Section 3.2 of this rule, apply when hydro development and associated hydroelectric power plant applications are filed jointly.

An applicant for a hydro development must also file the following information in addition to the power plant information indicated above:

HE1) Describe and summarize consultation with First Nations, Métis, landowners, municipalities, non-government organizations and all other stakeholders. Because a hydro development may affect parties located at significant distances upstream and downstream of the facility, identifying directly and adversely affected parties may require a broader interpretation than in other facility review processes.

HE2) Provide a summary of potential environmental effects and advise if an environmental impact assessment will be required pursuant to the *Environmental Assessment (Mandatory and Exempted Activities) Regulation*. Hydroelectric plants with a capacity greater than 100 megawatts are not discretionary and will require an environmental impact assessment.

Note: a hydro development project for which an environmental impact assessment has been ordered is classified as a water management project and is a project reviewable by the Natural Resources Conservation Board

(NRCB) under the *Natural Resources Conservation Board Act*. Submit proposed terms of reference and project information to AEP and the public that will form the basis for the environmental impact assessment report, if required. The Commission, NRCB and AEP will provide feedback on the proposed terms of reference to AEP. If the project triggers federal involvement, other agencies including the Canadian Environmental Assessment Agency (CEAA), Fisheries and Oceans Canada, and Transport Canada may become involved in the review of the environmental impact assessment. Federal and provincial agencies work cooperatively through the Canada-Alberta Agreement for Environmental Assessment Cooperation. Due to its jurisdiction over areas such as fisheries, navigable waters and migratory birds, the federal government will likely be involved in any joint review process for significant hydro development projects in Alberta.

HE3) Prepare an environmental impact assessment or comprehensive study as required by AEP and the CEAA. When the study is deemed complete by AEP, submit it as part of the Commission application.

HE4) Provide a noise impact assessment in accordance with the current Rule 012 clearly identifying the impact of the hydro development.

HE5) Provide a description of the hydro development, including technical and engineering details relied on in the assessment of social, economic and environmental effects.

HE6) Provide an assessment of the social and economic effects of the development and the adverse effects of the development on the environment.

9.2 Hydro developments application attachments

The eFiling System User Guide provides guidance on when to file information requirements as separate attachments.

10 Other applications

If an applicant is applying for an ownership change or time extension with respect to a power plant, transmission facility, or industrial system designation, the applicant must include the relevant information from the list below applicable to the approval being sought.

Minor alterations

If an applicant is applying for a minor alteration (pursuant to the letter of enquiry process set out in the *Hydro and Electric Energy Regulation* and the Commission's guidance provided in the Electric Power Plant Facilities Process Guidelines, as amended, and in the Electric Transmission Facilities Process Guidelines, as amended) the applicant must include the relevant information from the list below applicable to the approval being sought. For minor alterations, the applicant may submit a completed checklist in accordance with the Commission's process guidelines.

Transfer of licence from market participant to a TFO

If a market participant is applying to transfer an operating licence for a transmission facility to a TFO, pursuant to the *Transmission Deficiency Regulation* and the *Hydro and Electric Energy Act*, the market participant must notify the AUC of the transfer prior to the end of the temporary period for which the market participant expects to hold the operating licence. In the event for any reason the market participant does not, or is unable to, apply regarding the transfer of the operating licence to the TFO, the TFO may apply for the transfer prior to the end of the temporary period during which the market participant may hold the operating licence.

To file an application in the eFiling System, add the application by selecting the relevant application type (e.g., power plant ownership change, transmission stipulation, transmission enquiry proposal), complete the electronic application form, upload attachments to meet the information requirements below (as applicable) and then register the proceeding.

10.1 Information requirements

The applicant should provide the following information as part of its application, as applicable:

OTH1) Identify the sections of the *Hydro and Electric Energy Act* and *Hydro and Electric Energy Regulation* under which the application is made.

OTH2) State the approvals that are being applied for from the Commission.

OTH3) Provide a list of existing approvals for facilities directly affected by the application, if any.

OTH4) For a minor alteration, provide details regarding the work being proposed.

OTH5) Provide a list of companies that may be affected by the project, confirm that these companies have no concerns regarding the application, and indicate which other agreements are necessary to carry out the project.

OTH6) Describe the participant involvement program that has been conducted, if any.

OTH7) List all occupants, residents and landowners, as well as other interested parties that were contacted as part of the participant involvement program, if any.

OTH8) If potentially directly and adversely affected persons raised any concerns, describe how the concerns were dealt with or will be dealt with.

OTH9) For a change of ownership application, the applicant shall provide details of the ownership structure, including the names of all companies having an ownership interest in the project and their ownership share, and if applicable, the name of the operator of the facilities for which they are seeking to acquire the approval, permit or license. The details should

include confirmation of whether and in which of the following category the owner, and if applicable, the operator falls:

(a) Registered under the *Companies Act*.

(b) Registered, incorporated or continued under the *Business Corporations Act*.

(c) Registered, incorporated or continued under the *Cooperatives Act*.

(d) Incorporated by an ordinance or an act of the legislature that empowers it to engage in the business of generation or transmission of electricity.

(e) A bank.

(f) A railway company incorporated under an act of the Parliament of Canada.

(g) A loan corporation or trust corporation.

(h) An insurer licensed under the *Insurance Act*.

(i) A municipal corporation.

(j) A co-operative association.

OTH10) For a transfer of an operating licence from a market participant to a TFO the application shall include:

(a) Confirmation by the ISO that there has been satisfactory completion of all activities and requirements as required by the ISO connection process.

(b) Confirmation by the TFO of its readiness to accept the facilities.

(c) The date the transfer is to take effect.

OTH11) For a time extension to a solar or wind power plant approval, the application shall include:

(a) Confirmation from AEP Wildlife Management that the renewable energy referral report remains valid. If not, an updated renewable energy referral report from AEP Wildlife Management should be submitted.

(b) Confirmation from AEP Wildlife Management that the project's wildlife surveys remain current and do not require updating.

(c) Confirmation that the participant involvement program has been updated.

OTH12) For a time extension to a power plant approval that is not solar or wind power, the application shall include:

(a) Confirmation from AEP Wildlife Management that the project's wildlife surveys remain current and do not require updating.

(b) Confirmation that the participant involvement program has been updated.

10.2 Other application attachments

The eFiling System User Guide provides guidance on which information requirements should be filed as separate documents.

Appendix A1 – Participant involvement program guidelines

1 Purpose

1.1 Purpose of the participant involvement program guidelines

These guidelines list the factors that an applicant should consider when creating its participant involvement program (PIP). The Commission expects that an applicant will adhere to these guidelines when developing its PIP. However, the Commission recognizes that there may be circumstances where it may be appropriate for an applicant to deviate from these guidelines. In those circumstances, the Commission expects the applicant to provide the circumstances and reasoning which led to the deviation.

The precise extent and scope of an applicant's PIP cannot be predetermined because each application is unique and may present circumstances that must be addressed on an individual basis.

A PIP must be conducted before an electric facility application can be submitted to the Commission. An applicant should consider these guidelines in relation to new electric facility projects, and also when it is modifying, salvaging, or decommissioning an existing electric facility.

The Commission requires the applicant to assume responsibility for informing the various stakeholders of, and involving them in, the applicant's project.

1.2 Purpose of the participant involvement program

It is paramount that effective communications take place among stakeholders (the public, local authorities, agencies, industry and government) so that concerns may be raised, properly addressed, and if possible, resolved. All persons whose rights may be directly and adversely affected by a proposed development must be informed of the application, have an opportunity to voice their concerns and an opportunity to be heard.

2 Electric facility development: a cooperative venture

Stakeholders are strongly encouraged to participate in ongoing issue identification, problem solving and planning with respect to local electric facility projects. Early involvement in informal discussions with an applicant may lead to greater opportunity to influence project planning and mitigation of potential impacts. The creation of landowner groups with common concerns and issues at an early stage of the PIP, especially in highly developed areas, may be an efficient way to interact and discuss concerns with the applicant.

3 Planning a participant involvement program

In its PIP, the applicant is expected to consider how to effectively communicate and interact with stakeholders whose rights may be directly and adversely affected by the nature and extent of the proposed project. These stakeholders include the public, local authorities, agencies, industry and government and may also include other groups that have a stake in electric facility projects, should such groups make themselves known to the applicant.

As mentioned above, the development and implementation of the PIP must occur prior to the filing of an application with the Commission. The elements of the PIP must include:

i) Project-specific information.

ii) A response to questions and concerns.

iii) A discussion of options, alternatives and mitigation measures.

Local authorities and various provincial departments have a role in ensuring orderly land use and development. Applicants should consider whether it is appropriate to involve these groups at an early stage in the planning of the electric facility and PIP.

The Commission encourages an applicant to be sensitive to the timing constraints of the various stakeholders (e.g., planting, harvesting, calving seasons and statutory holidays) when developing and implementing its PIP.

4 Information to be provided

Comprehensive project-specific information must be developed and made available to all stakeholders included in the PIP. Distribution of project-specific information to stakeholders may include, but is not limited to, website content, email, and addressed or unaddressed postal mail.

At a minimum, all stakeholders must be given the following basic information about the project and options for accessing more detailed information in the format of their choice (e.g., postal mail, website or electronic communication):

a) All stakeholders included in the PIP must have access to information regarding the project and the applicant is required to create an effective way to provide project-specific information to those stakeholders. The applicant's project-specific information must provide the specific details of the proposed project development. The applicant must use appropriate language and terminology in all written, electronic and website materials so that stakeholders can clearly understand the details of the proposed project and the impact(s) it may have upon them.

b) The following details should be included in the applicant's project-specific information:

   i) Applicant name and contact numbers for further information.

   ii) Location of proposed electric facilities, including site specific map.

   iii) The general nature of potential impacts and need for the proposed transmission facilities and explanation of how it fits with existing and future plans.

   iv) Discussion of the potential restrictions on the development of lands adjacent to the proposed project, such as setbacks.

   v) Description of proposed on-site equipment.

   vi) Proposed project schedule for the Commission application, construction and start-up.

vii) The information package must include the most recent version of the following Commission public information document:

Public involvement in a proposed utility development

c) The applicant is also expected to include any other information that would assist the stakeholder in understanding the proposed project.

d) If the proposed project is part of a larger project, the applicant is expected to discuss the entire project and explain how it complements other development in the area.

5 Consultation and notification

Who to include – facility applications

The Commission recommends minimum notification and consultation as outlined in the following table.

Type of facility application	Notification	Consultation
Overhead transmission line and new substation development – rural or industrial setting[12]	Public notification to occupants, residents and landowners within 800 metres measured from the edge of the proposed right-of-way for the transmission line and/or the edge of the proposed substation site boundary. (Utilizing the edge of the right-of-way will facilitate an opportunity for flexibility to adjust the final placement of the tower structures by up to 15 metres side-to-side within the right-of-way, provided that the conductor remains within the right-of-way, with the agreement of the right-of-way landowner, as well as adjacent landowners or residents. Measurement from the edge of the right-of-way is intended to provide flexibility to the applicant without introducing new participants into the PIP notification zone.) Notice of project-specific information to postal code addresses is generally sufficient to satisfy this communication requirement. If the applicant considers that certain landowners that should be notified of the proposed project may be missed because they do not reside at the property, additional efforts to notify them should be considered.	Personal consultation with occupants, residents and landowners on or directly adjacent to the proposed right-of-way for the transmission line and/or proposed substation site location.

[12] Rural communities are outside the municipal boundaries of cities, towns and villages or inside the municipal boundaries where no subdivision development exists within 800 metres of the proposed facility. Industrial areas are within 800 metres of a single large industrial/commercial complex or numerous small or medium industrial/commercial facilities where no residential development exists.

Type of facility application	Notification	Consultation
Overhead or underground transmission line and/or new substation development and/or substation upgrades and/or minor transmission line replacements within the original right-of-way – urban[13]	Provide notification to occupants, residents and landowners within the first row of development surrounding the proposed project. Alternatively, notice of project-specific information to postal code addresses is sufficient to satisfy this communication requirement. If the applicant considers that certain landowners that should be notified of the proposed project may be missed because they do not reside at the property, additional efforts to notify them should be considered.	Personal consultation with occupants, residents and landowners on or directly adjacent to the right-of-way or substation site location.
For minor transmission line replacements within the original right-of-way – rural and industrial	Public notification to occupants, residents and landowners within 200 metres from the edge of the existing right-of-way. Alternatively, notice of project-specific information to postal code addresses is sufficient to satisfy this communication requirement. If the applicant considers that certain landowners that should be notified of the proposed project may be missed because they do not reside at the property, additional efforts to notify them should be considered.	Personal consultation with occupants, residents and landowners on or directly adjacent to the existing right-of-way.
For substation developments within existing facilities, where there is a change in the substation fenceline or which create visual or noise impact – rural and industrial	Public notification to occupants, residents and landowners within 800 metres from the edge of the existing substation site boundary. Alternatively, notice of project-specific information to postal code addresses is sufficient to satisfy this communication requirement. If the applicant considers that certain landowners that should be notified of the proposed project may be missed because they do not reside at the property, additional efforts to notify them should be considered.	Personal consultation with occupants, residents and landowners on or directly adjacent to the existing substation site location.
For substation developments within existing facilities, where there is no change in the substation fenceline and which create minimal visual or noise impact – rural and industrial	Public notification to occupants, residents and landowners within 200 metres from the edge of the existing substation site boundary. Alternatively, notice of project-specific information to postal code addresses is sufficient to satisfy this communication requirement. If the applicant considers that certain landowners that should be notified of the proposed project may be missed because they do not reside at the property, additional efforts to notify them should be considered.	Consult with substation landowners.

[13] Urban communities are within the municipal boundaries of cities, towns and villages where subdivision development exists within 800 metres of the proposed facility.

Type of facility application	Notification	Consultation
For new substation facilities for customers that are wholly contained within the customer's industrial complex	Public notification to occupants, residents and landowners within 200 metres from the edge of the proposed substation site boundary. Alternatively, notice of project-specific information to postal code addresses is sufficient to satisfy this communication requirement. If the applicant considers that certain landowners that should be notified of the proposed project may be missed because they do not reside at the property, additional efforts to notify them should be considered.	Personal consultation with occupants, residents and landowners on or directly adjacent to the proposed substation site location.
For new underground transmission lines or burying of existing transmission lines-rural	Public notification to occupants, residents and landowners within 200 metres measured from the center of the proposed right-of-way for the transmission line. Alternatively, notice of project-specific information to postal code addresses is sufficient to satisfy this communication requirement. If the applicant considers that certain landowners that should be notified of the proposed project may be missed because they do not reside at the property, additional efforts to notify them should be considered.	Personal consultation with occupants, residents and landowners on or directly adjacent to the right-of-way for the transmission line.
Power plants, 10 megawatts or greater, urban and rural	Public notification to occupants, residents and landowners within 2,000 metres measured from the edge of the proposed power plant site boundary. For major power plant applications, if there are populated areas just outside the 2,000 metre distance, applicants should consider including those areas in the public notification. Alternatively, notice of project-specific information to postal code addresses is sufficient to satisfy this communication requirement. If the applicant considers that certain landowners that should be notified of the proposed project may be missed because they do not reside at the property, additional efforts to notify them should be considered.	Personal consultation with occupants, residents and landowners within 800 metres measured from the edge of the proposed power plant site boundary.
Power plants, less than one megawatt – urban	Provide notification to occupants, residents and landowners within the first row of occupied properties surrounding the proposed development, and consider including areas beyond the first row of occupied properties	N/A

Type of facility application	Notification	Consultation
	surrounding the proposed development, as the circumstances require.	
Power plants, less than one megawatt – rural (large rural industrial parks or large residential multi-parcel acreage subdivisions in this category can be administered as urban)	Provide notification to occupants, residents and landowners within a 1,500 metre radius of the proposed development, as the circumstances require.	N/A
Power plants, one to ten megawatts – urban	Provide notification to occupants, residents and landowners within the first row of occupied properties surrounding the proposed development, and consider including areas beyond the first row of occupied properties surrounding the proposed development, as the circumstances require. Alternatively, notice of project-specific information to postal code addresses is sufficient to satisfy this communication requirement. If the applicant considers that certain landowners that should be notified of the proposed project may be missed because they do not reside at the property, additional efforts to notify them should be considered.	Applicants should consider consultation to occupants, residents and landowners within the first row of occupied properties surrounding the proposed development, as the circumstances require
Power plants, one to ten megawatts – rural (large rural industrial parks in this category can be administered as urban)	The applicant must provide notification to occupants, residents and landowners within a 1,500 metre radius, as the circumstances require.	N/A
Decommissioning, salvage and abandonment – transmission facilities	Provide notification to occupants, residents and landowners on or directly adjacent to the existing facility right-of-way. Notice of project-specific information to postal code addresses is sufficient to satisfy this communication requirement. If the applicant considers that certain landowners that should be notified of the proposed project may be missed because they do not reside at the property, additional efforts to notify them should be considered.	N/A
Decommissioning, salvage and	Provide notification to occupants, residents and landowners on or directly adjacent to the existing facility.	N/A

Type of facility application	Notification	Consultation
abandonment – power plant		

For clarity:

- "directly adjacent" means any adjacent property that is within 100 metres of the right-of-way, substation site or power plant site boundary, as applicable, and would include property across the road from a right-of-way, but would exclude the property that is across a major divided highway.

- "first row of development surrounding" means the first row of houses surrounding or other developments facing the proposed development that are also within 200 metres of the right–of-way boundary and includes property that is across the road from the right-of-way.

- "minimal visual or noise impact" is a visual or noise impact that is not reasonably expected to interfere with stakeholders' use and enjoyment of property.

- For the installation of fibre optic facilities where a direct and adverse effect may occur, the applicant should consult with the landowner on whose land the fibre optic work is proposed, and notify those persons directly adjacent if their rights may be directly and adversely affected. In a situation where no impact is expected, such as, for example, an insertion into an existing conduit, no consultation is required.

- Telecommunication facilities should be treated similarly to a substation development or upgrade from whatever situation is applicable from the table in Section 5.

6 General considerations for notification and consultation

It is an applicant's responsibility to assess the area potentially impacted by the project and determine whether the distance of notification recommended in these guidelines should be altered to include a greater area. It may be necessary to change the distance to include stakeholders who have expressed an interest in development in the area. An applicant should explain the basis of its decision to change the distance of notification recommended in these guidelines.

During the planning of its PIP, the applicant should assess its need to reach the broader public and determine whether an information session or public open house meeting is required. When holding such information sessions, the applicant must disclose the same project-specific information it would disclose to those individuals involved in personal consultation and notification.

The applicant must allow notified stakeholders a minimum of 14 calendar days to receive, consider and respond to the PIP for the proposed project prior to filing a facility application.

The applicant must make reasonable attempts to contact stakeholders, provide information about the project, discuss the project, and address any questions and concerns. If the applicant is unable to contact a stakeholder, it should be able to demonstrate reasonable attempts to establish contact.

The applicant is accountable for the outcomes of personal notification and consultation, including consultation and notification completed on its behalf by all personnel (including contracted personnel). Consequently, the applicant must ensure that individuals conducting personal notification and consultation:

i) Possess a sound understanding of regulatory requirements and expectations for participant involvement.

ii) Possess full knowledge of the overall plan and direction of future development options.

iii) Use appropriate language and terminology in conversations and in written and electronic materials so that the stakeholders can clearly understand the details of the proposed project and the impact it may have on them.

iv) Have sufficient training and experience in conducting public consultations including customer service, courtesy, and respect.

The applicant must provide its project-specific information to those stakeholders described in the "Who to include" section above. The required information may be made available electronically or forwarded by courier, mail, fax, email or other means as agreed upon by the applicant and stakeholders consulted.

If the stakeholder does not wish to receive the project-specific information or declines to consult with the applicant, the applicant must document the refusal for audit purposes.

The applicant must keep a log containing information on the dates personal consultation occurred or was attempted, whether project information was provided, and to whom the project information was given.

6.1 Specific considerations for consultation

The applicant is expected to conduct one-on-one consultation with occupants, residents and landowners as outlined in the "Who to include" section above.

Where there is more than one landowner or occupant at an address, a consultation with an adult at that address will normally be sufficient, unless a request is made to meet with more than one landowner or occupant.

The applicant should use the method of consultation preferred by the occupant, resident or landowner, which could include face-to-face meetings, phone, email, or other electronic media.

Questions raised during the discussion of the proposed project should alert the applicant to potential concerns or objections. The applicant should attempt to address concerns raised about the proposed project during consultation.

7 Changes in the project or circumstances affecting a participant involvement program

The applicant is expected to make reasonable attempts to close the participant involvement loop, even if the application is withdrawn. Stakeholders included in the PIP should continue to be included in correspondence and information updates, except in cases where:

i) The participant is no longer within the project notification distance due to a change in the location of the facilities under consideration (such as a rejected route). Participants removed from project communications for these reasons must be advised by the applicant that they will no longer be receiving communications relating to the project.

ii) The participant is not within the notification distance of a localized change to the facilities under consideration (such as a minor route deflection). In these cases, only participants within the notification zone surrounding the localized change require communications related to the change.

When a change in circumstances does not allow previous commitments to stakeholders to be met, the Commission expects the applicant to provide notification to all stakeholders impacted by the change in circumstances.

8 Extended absences

In some instances occupants, residents and landowners may be away for extended periods, such as on vacation, or they may reside out of the province. An applicant is expected to attempt to contact these stakeholders regardless of these extended absences.

When the applicant is expected to consult with stakeholders but is unable to do so, it is expected to send letters and project information to the address indicated on the most up-to-date land title documents.

If the applicant is unable to fulfill all PIP requirements, it must demonstrate the efforts made to contact all necessary stakeholders.

9 Documenting the participant involvement program

When submitting an application, the applicant must indicate any outstanding objections or concerns that it is aware of, attach a written summary of the outstanding objections or concerns, and its responses and follow-up to these objections and concerns.

It is in the applicant's best interest to understand the audit requirements for the PIP. The applicant should develop an audit documentation package early and build it throughout the process. For audit purposes, the applicant is encouraged to retain communication logs, registered mail and courier tracking information, as well as personal consultation and notification documents.

The applicant must retain documentation of potential mitigation for concerns or objections that were received through the notification and consultation process prior to filing an application.

The applicant is expected to document commitments made during its PIP and have a process in place to monitor and follow up on those commitments.

Appendix A2 – ISO participant involvement program guidelines

1 Purpose of the participant involvement program

This appendix sets out the process that must be followed by the ISO when notifying stakeholders and members of the public prior to submitting a needs identification document application or an abbreviated needs identification document application to the Commission.

2 ISO notification

2.1 Needs identification document application

Prior to submitting a needs identification document application for Commission approval:

a) The ISO must notify stakeholders in the area where the ISO has reasonably determined that facilities could be installed to implement the ISO's preferred option to meet the need, including but not limited to:

   i) occupants, landowners or residents;

   ii) local authorities, agencies and government which have responsibilities related to electric transmission line development;

   iii) First Nations; and

   iv) market participants.

(collectively, stakeholders)

b) The notification to stakeholders must be in writing (stakeholder notification). Unaddressed distribution of the stakeholder notification to postal code addresses is sufficient to satisfy this requirement.

c) Where the ISO identifies other stakeholders outside the notification area, such as industry market participants, that may have an interest in a needs identification document, the ISO must notify those parties of the need for development and the ISO's preferred option to meet the need by way of concise and informative communication materials.

d) No stakeholder notification is required unless the ISO identifies stakeholders.

2.2 Abbreviated needs identification document application

For abbreviated needs identification document applications, the ISO is not required to notify stakeholders other than those stakeholders notified in the TFO's participant involvement program, except where the ISO identifies other stakeholders outside of the TFO's participant involvement program, such as market participants, that may have an interest in an abbreviated needs identification document application, in which case the ISO must notify those other stakeholders of the need for development and the ISO's preferred option to respond to the system access service request by way of concise and informative communication materials.

3 Content of the ISO stakeholder notification

3.1 Needs identification document application

For needs identification document applications:

a) The ISO's stakeholder notification must, at a minimum, include:

i) a description of the need for transmission development;

ii) the ISO's preferred option to meet the need;

iii) the general area where facilities could be installed to implement the ISO's preferred option to meet the need;

iv) the ISO's proposed timing for submitting its needs identification document to the Commission; and

v) contact information, including telephone, email and website, for further information.

b) The ISO must consider the nature and extent of the needs identification document application when determining the content, scope and timing of its stakeholder notification. The ISO must use clear and plain language and, non-technical terminology in the stakeholder notification.

c) The ISO must allow a minimum of fourteen (14) calendar days from the date that the stakeholder notification is distributed before publishing its filing notification (described below).

d) The ISO is not required to initiate consultation with stakeholders.

3.2 Abbreviated needs identification document applications

For abbreviated needs identification document applications:

a) The ISO stakeholder notification must, at a minimum, notify stakeholders regarding its intention to submit an abbreviated needs identification document application to the Commission. The notification requirement may be fulfilled by posting material on the ISO website and other stakeholder notifications (if applicable) a minimum of fourteen (14) calendar days before publishing its filing notification (described below). The ISO is not required to provide stakeholder notification independent of the TFO's participant involvement program. However, the ISO must ensure that the following items are addressed in the TFO's project-specific participant involvement program packages:

i) a description of the preferred transmission development responding to the system access service request;

ii) the general area where facilities could be installed to implement the ISO's preferred option to respond to the system access service request; and

iii) contact information, including telephone, email and website, for further information.

b) The ISO is not required to initiate consultation with stakeholders.

4 Subsequent changes to the ISO stakeholder notification

For both the needs identification document application and abbreviated needs identification document application:

a) If the ISO revises the information provided in a stakeholder notification subsequent to the ISO's issuance of a stakeholder notification, the ISO must notify stakeholders of those changes in writing.

b) In the event that the ISO decides not to proceed with a needs identification document application or an abbreviated needs identification document application for which a stakeholder notification has been distributed, the ISO must notify stakeholders of this decision in writing.

5 Filing notification

5.1 Needs identification document application

For needs identification documents:

a) The ISO must publish a notice on the ISO's website, and in local newspapers in the area where facilities could be installed to implement the ISO's preferred option to meet the need (filing notification). The filing notification should include a description of the area where facilities could be installed, a telephone number to contact for additional information and a website location where the stakeholder notification may be downloaded and where the needs identification document may be downloaded once submitted to the Commission.

b) The ISO must allow a minimum of fourteen (14) calendar days from the date the filing notification is published before filing the needs identification document, for stakeholders to consider and respond to the filing notification, and must be prepared to discuss as necessary.

5.2 Abbreviated needs identification document application

For abbreviated needs identification document applications, the ISO must notify stakeholders of its intention to submit an abbreviated needs identification document to the Commission. The notification requirement may be fulfilled by posting material on the ISO website and other stakeholder notifications (if applicable) a minimum of fourteen (14) calendar days before filing the abbreviated needs identification document.

6 Responding to questions and concerns

The ISO must be prepared to respond to stakeholder questions and concerns regarding a needs identification document application or an abbreviated needs identification document application. The needs identification document application or an abbreviated needs identification document application filed with the Commission must include a written

summary of the ISO's stakeholder notification process, any concerns or objections received, and whether the concerns or objections have been resolved or remain outstanding.

7 Alternative approach

Notwithstanding the foregoing, where the ISO has determined that an alternative approach to the stakeholder notification or filing notification for a needs identification document application or an abbreviated needs identification document application is reasonable, the ISO may notify stakeholders and the public in accordance with this alternative approach. The ISO should explain the basis for pursuing an alternative approach to the stakeholder notification or filing notification when filing a needs identification document application or an abbreviated needs identification document application with the Commission.

Appendix B1 – Cost breakdown formats – requirements NID8, NID16, NID24 and NID31

Project Name & No.	<Project Name>		<Project Number>	Transmission Project Estimate Summary
Prepared by:	<Market Participant>			
AACE Class: (future use)	4	Estimate Basis	NID	
High Range	+20% to +50%	Low Range	-15 % to -30%	
Date of Estimate:		Base Year Used		
	SYSTEM	CUSTOMER	TOTAL	ASSUMPTIONS
TRANSMISSION LINE				
Material	$ 0	$ 0	$ 0	
Labour	$ -	$ -	$ -	
Supply & Install	$ -	$ -	$ -	
TOTAL TRANSMISSION LINE	$ 0	$ 0	$ 0	
SUBSTATION				
Material	$ -	$ -	$ -	
Labour	$ -	$ -	$ -	
Supply & Install	$ -	$ -	$ -	
TOTAL SUBSTATION	$ -	$ -	$ -	
TELECOMMUNICATION				
Material	$ -	$ -	$ -	
Labour	$ -	$ -	$ -	
Supply & Install	$ -	$ -	$ -	
TOTAL TELECOMMUNICATIONS	$ -	$ -	$ -	
OWNERS				
Pre-PPS Cost			$ -	
Proposal to Provide Service			$ -	
Facility Applications			$ -	
Regulatory & Compliance				
Land Rights – Easements			$ -	
Land - Damage Claims			$ -	
Land – Acquisitions			$ -	
Other			$ -	
TOTAL OWNERS COST	$ -	$ -	$ -	
DISTRIBUTED				
Procurement Management	$ -	$ -	$ -	
Project Management	$ -	$ -	$ -	
Construction Management	$ -	$ -	$ -	
Contingency	$ -	$ -	$ -	
Escalation	$ -	$ -	$ -	
TOTAL DISTRIBUTED	$ -	$ -	$ -	
SALVAGE				
Transmission Line Labour			$ -	
Substation Labour			$ -	
Land Remediation and Reclamation			$ -	
TOTAL SALVAGE	$ -	$ -	$ -	
OTHER COSTS				
AFUDC			$ -	
E&S/Overhead			$ -	
TOTAL OTHER	$ -	$ -	$ -	
TOTAL PROJECT	$ 0	$ 0	$ 0	

Appendix B2 – Cost breakdown formats – requirements TS43

Project Name & No.	<Project Name>		<Project Number>	Transmission Project Estimate Summary	Capital Maintenance (if applicable)
Prepared by:	<Market Participant>				
AACE Class: (future use)	3	Estimate Basis	Facility		
High Range	+10% to +30%	Low Range	-10% to -20		
Date of Estimate:		Base Year Used			
	SYSTEM	CUSTOMER	TOTAL	ASSUMPTIONS	
TRANSMISSION LINE					
Material	$ 0	$ 0	$ 0		$
Labour	$ -	$ -	$ -		$
Supply & Install	$ -	$ -	$ -		$
TOTAL TRANSMISSION LINE	$ 0	$ 0	$ 0		$
SUBSTATION					
Material	$ -	$ -	$ -		$
Labour	$ -	$ -	$ -		$
Supply & Install	$ -	$ -	$ -		$
TOTAL SUBSTATION	$ -	$ -	$ -		$
TELECOMMUNICATION					
Material	$ -	$ -	$ -		$
Labour	$ -	$ -	$ -		$
Supply & Install	$ -	$ -	$ -		$
TOTAL TELECOMMUNICATIONS	$ -	$ -	$ -		$
OWNERS					
Pre-PPS Cost			$ -		$
Proposal to Provide Service			$ -		$
Facility Applications			$ -		$
Regulatory & Compliance					
Land Rights - Easements			$ -		$
Land - Damage Claims			$ -		$
Land - Acquisitions			$ -		$
Other			$ -		$
TOTAL OWNERS COST	$ -	$ -	$ -		$
DISTRIBUTED					
Procurement Management	$ -	$ -	$ -		$
Project Management	$ -	$ -	$ -		$
Construction Management	$ -	$ -	$ -		$
Contingency	$ -	$ -	$ -		$
Escalation	$ -	$ -	$ -		$
TOTAL DISTRIBUTED	$ -	$ -	$ -		$
SALVAGE					
Transmission Line Labour			$ -		$
Substation Labour			$ -		$
Land Remediation and Reclamation			$ -		$
TOTAL SALVAGE	$ -	$ -	$ -		$
OTHER COSTS					
AFUDC			$ -		$
E&S/Overhead			$ -		$
TOTAL OTHER	$ -	$ -	$ -		$
TOTAL PROJECT	$ 0	$ 0	$ 0		$