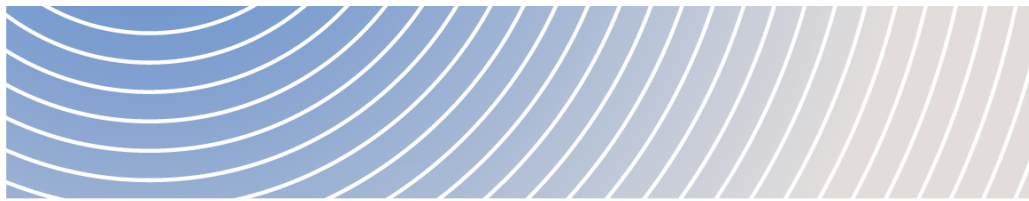


Plain Language Draft Integrated Guidelines



PEACE RIVER NUCLEAR POWER PROJECT

JUNE 2025



The following is a summary and does not provide a full list of requirements found in the draft Integrated Tailored Impact Statement Guidelines (the integrated guidelines). The intention of this document is as a communication tool for participants to support their understanding and review of the draft integrated guidelines.

For the full list of requirements, please refer to the complete draft integrated guidelines on the Canadian Impact Assessment Registry at <https://iaac-aeic.gc.ca/050/evaluations/document/161913>.

Section 1: Introduction

Instructions to Energy Alberta include:

- Prepare the Impact Statement in a way that is ethical, accessible, and respectful
- Provide an Impact Statement that will meet the Impact Assessment Agency's (IAAC) requirements and the Canadian Nuclear Safety Commission's (CNSC) expectations in these integrated guidelines
- Consider Gender-Based Analysis Plus throughout
- Provide a summary of main documents that served as key references and are not publicly available

Section 2: Proponent Information

Instructions to Energy Alberta include:

- Identify the proponent with:
 - Legal name and contact information
 - Corporate structure and affiliations
- Demonstrate qualifications of the people preparing the Impact Statement, including:
 - Experience with similar nuclear or energy projects
 - Technical and financial capabilities to complete the project safely
- Explain management structure for site evaluation activities and roles of consultants, contractors, and partners.

Section 3: Project Description

Instructions to Energy Alberta include:

- Provide a full project overview, including:
 - Purpose and objectives
 - Roles of the government at various levels and their regulations
 - Workforce requirements and development opportunities
 - Project location



- Components and physical activities at each project phase: construction, operation, maintenance, and decommissioning
- Describe key project elements, such as:
 - Reactor design, cooling water systems, water intake and discharge structures, power transmission, security infrastructure, emergency response facilities
 - Temporary and permanent infrastructure (e.g., roads, storage, buildings)
- Provide maps showing:
 - Site boundaries and layout
 - Proximity to key natural features (e.g., watercourses), communities, Indigenous lands, potable water sources, and existing infrastructure (e.g., other projects along the Peace River)
- Explain timelines and schedules for each project phase
- Waste handling, including:
 - Types of waste (low, intermediate, and high-level radioactive, and hazardous waste)
 - Transport, storage, treatment, and disposal plans

Section 4: Purpose, Need, and Alternatives

Instructions to Energy Alberta include:

Purpose and Need:

- Describe why the project is being proposed, including:
 - Energy demand forecasts
 - Policy drivers (e.g., net-zero by 2050)
 - How the project fits within provincial and national energy strategies

Alternatives Assessment:

- Evaluate alternative means of carrying out the project (e.g., different locations or technologies) and present how choices were justified based on:
 - Technical and economic achievability
 - Potential environmental and health effects
 - Impacts on Indigenous Peoples and public interests
- Compare all options by showing the pros and cons of each
- Include reasons for not choosing specific alternatives

Section 5: Public Participation

Instructions to Energy Alberta include:

- Document all engagement with the public, including:



- Who was engaged (individuals, groups, local governments)
- How they were engaged (meetings, surveys, online platforms)
- When these activities took place
- Summarize feedback received, including:
 - Key concerns (e.g., safety, waste, water)
 - Suggestions or alternative ideas from the public
- Explain how public input influenced:
 - Project design
 - Mitigation measures
 - Follow-up plans
- Ensure engagement is accessible, with:
 - Plain language materials
 - Visuals and infographics
 - Multiple formats (digital, print, in-person)
- Continue engagement throughout the project lifecycle, if approved

Section 6: Indigenous Engagement

Instructions to Energy Alberta include:

- Describe engagement activities to date, including:
 - Who was consulted
 - How they were consulted (e.g., community visits, sharing sessions)
 - When and how often engagement took place
 - Specific preferences or protocols followed
- Explain how Indigenous Nations and communities:
 - Helped to define the project scope
 - Informed the baseline studies and impact assessments
 - Influenced project design and mitigation
- Include a record of communications with each Nation and community (meeting notes, written submissions, substantive issues raised) with permission from each Nation or community
- Show efforts made to accommodate Indigenous perspectives and support capacity-building (e.g., funding, translation, expertise)
- Explain how Indigenous Knowledge (IK) was considered:
 - Ensure IK is only included with written consent
 - Respect confidentiality and data ownership
- Report on the status of consent and collaboration agreements



Section 7: Assessment Methodology

Instructions to Energy Alberta include:

- Include the Valued Components listed in Section 7.3 at minimum, which include:
 - Aquatic environment (including the Peace River and Peace Athabasca Delta)
 - Various animals, birds, and fish (e.g., Rainbow Trout)
 - Various plants and natural features
 - Health, social, and economic conditions (including housing, services and infrastructure, education and training, and wellbeing)
 - Indigenous topics (including physical and cultural heritage, current use of lands and resources, and Indigenous rights)
 - Atmospheric environment (e.g., air, noise, light)
- Provide a detailed plan showing:
 - What will be studied (air, water, health, rights, etc.)
 - Where are the study boundaries (geographic area, time period)
 - How the studies will be done (methods, models, tools)
- Describe:
 - Baseline conditions (current state of the environment or community)
 - Assessment endpoints (what's being measured, how it is being measured, and why)
 - Methodology for site evaluation
 - Reason for selecting the site
- Explain how Energy Alberta will:
 - Assess direct and indirect effects
 - Address cumulative effects from past, present, and future projects
 - Consider the context (e.g., sensitivity of the environment or communities)
 - Handle uncertainty in data and predictions
 - Consider the entire life of the facility
- Assess how often and how severely natural or human-made events could impact the safety and security of the reactor facility
- Clearly define “thresholds of significance” (i.e. what counts as a serious effect?)
- Document all assumptions, limitations, and references used in the assessments
- Confirm emergency plans are in place for the reactor’s lifecycle with applicable jurisdictions
- Document a strategy for continuous communication with emergency management agencies throughout the reactor’s lifecycle
- Assess the most severe possible environmental effects to support effective emergency planning



Section 8: Biophysical Environment

Instructions to Energy Alberta include:

Topics:

- Air and weather: emissions, dust, odor, contamination risks
- Water: surface water (Peace River) quality and quantity, groundwater, drinking water, wetlands, flow patterns, temperature
- Land and soil: soil quality, erosion, contamination risks, geology
- Wildlife and plants: migration, nesting, breeding, species at risk, habitat
- Radioactivity: sources of ambient (i.e., “natural”) radioactivity
- Noise and vibration: effects on wildlife and nearby communities
- Light pollution: night-time lighting impacts
- Electromagnetic field: exposure levels and health risks
- Species at risk, birds, and fish. The full list is provided in Section 7.3

Requirements:

- Provide baseline (existing) conditions for each environmental component
- Include maps, including maps showing habitat types, water flow, sensitive areas
- Predict changes from all activities and phases of the project. For example:
 - Construction: clearing land, blasting, trenching
 - Operation: discharges, noise, emissions
 - Accidents: spills, radiation leaks, fires, seismic activity (earthquakes)
- Propose mitigation measures to reduce negative project effects. For example:
 - Change timing to avoid sensitive seasons (e.g., nesting)
 - Barriers, filters, rerouting systems
 - Restoring affected habitats
- Follow federal and provincial guidelines for study methods

Section 9: Health, Social, and Economic Conditions

Instructions to Energy Alberta to include:

Topics:

- Health topics:
 - Physical health (e.g., air quality, noise, radiation)
 - Mental and emotional health (e.g., stress from construction or having a nuclear facility nearby)



- Access to healthcare and safe drinking water
- Country foods
- Access to water for recreational and cultural uses
- Social and infrastructure topics:
 - Housing availability and affordability
 - Cost of living
 - Traffic, road infrastructure, and transportation safety
 - Emergency services, policing, education systems
 - Safety of community members
 - Sense of community and local culture
 - Recreation
- Economic topics:
 - Job creation and workforce needs
 - Employment and training opportunities
 - Gender-based pay disparity
 - Pressure on local businesses and services
 - Impacts on traditional, local, regional, and land-based economies

Requirements:

- Conduct the above requirements for both the local communities and for Indigenous Nations and communities.
- Include vulnerable populations:
 - Elders, children, people with existing health conditions
 - Low-income and racialized communities
 - 2SLGBTQIA+ individuals
- Provide baseline (existing) conditions for each valued component
- Predict changes and effects from all activities and phases of the project
- Propose mitigation measures. For example:
 - Hire locally and equitably
 - Invest in education or training programs
 - Support community programs and infrastructure
- Follow federal and provincial guidelines for methodology and thresholds

Section 10: Indigenous Peoples

Instructions to Energy Alberta include:



Topics:

- Physical and cultural use:
 - Historical and current cumulative effects
 - Indigenous governance, laws, and traditional activities
 - Archaeological sites, protected areas, cultural sites, and efforts to restore traditional practices.
 - Harvesting, recreation, and resource use
- Health, social and economic:
 - Indigenous Nation or community specific health, social and economic concerns.
- Indigenous rights:
 - Project related impacts on the ability to exercise rights identified by Indigenous Nations and communities
 - Cumulative impacts on Indigenous rights

Requirements:

- Work with Indigenous Nations and communities to provide baseline information
- Assess:
 - how the project might affect important heritage sites and structures.
 - how impacts could affect Indigenous Peoples' ability to pass on their culture and knowledge.
 - the potential effects on current use of lands and resources for traditional purposes
- Document and assess the Project's potential impacts on Indigenous rights
- Provide solutions to concerns raised by Indigenous Nations and communities

Section 11: Security Considerations

Instructions to Energy Alberta include:

- Conduct a Site Selection Threat and Risk Assessment (SSTRA) that includes:
 - Evaluation of physical threats, such as terrorism, sabotage, and armed attacks
 - Identification of potential attack pathways, including air, road, rail, and water routes
 - Assessment of response capabilities, including response time and personnel availability
- Describe on-site security measures, including:
 - Fencing, surveillance systems, restricted zones, and controlled access points
 - Cybersecurity protections and procedures for handling insider threats
- Address potential vulnerabilities during:
 - Construction
 - Operations



- Maintenance and decommissioning
- Include any mitigation measures, such as:
 - Design features that improve defense and resilience
 - Collaboration with local police, fire, and emergency response units
- The final SSTR is confidential but must be prepared and ready for regulatory review

Section 12: Effects of Potential Accidents or Malfunctions

Instructions to Energy Alberta include:

- Identify and describe all realistic accident scenarios, including:
 - Equipment failures, fires, explosions, chemical leaks, radiological hazards
 - External hazards: earthquakes, wildfires, ice storms, floods, storms, plane crashes
 - Human error or cyber security incidents
 - Malfunction or failure of upstream hydroelectric facilities
 - Transportation accidents involving hazardous or radioactive materials
 - Potential effects of climate change
- Predict how these events could affect:
 - Public safety
 - Air and water quality
 - Wildlife and habitats
 - Indigenous rights and land use
- Estimate the likelihood and consequences (short and long term) of each event
- Assess the risk to the health and safety of workers and the public over the lifecycle of the project
- Develop and describe mitigation strategies:
 - Emergency response plans (including a description of current emergency response systems)
 - Containment systems
 - Spill control and radiation protection measures
 - Communication protocols with first responders, the public, and Indigenous Nations and communities
 - Long-term monitoring and recovery measures
- Outline financial guarantees to ensure compensation and environmental restoration in the event of a disaster

Section 13: Effects of the Environment on the Project

Instructions to Energy Alberta include:



- Evaluate how the natural environment could damage or disrupt the project, including:
 - Extreme weather (heat waves, extreme rainfall, snowstorms)
 - Flooding, ice buildup, or drought
 - Landslides or erosion
 - Seismic activity (earthquakes)
 - Lightning and wildfires
- Invasive species or biological fouling (e.g., harmful buildup of tiny organisms (plants, algae, etc.) in water intake structures)
- Analyze current and projected future conditions, including those due to climate change. Describe how Energy Alberta will:
 - Design the facility to withstand such events
 - Prevent loss of control or safety issues due to environmental stressors
 - Monitor changes over time and adapt if needed

Section 14: Canada's Environmental Obligations

Instructions to Energy Alberta include:

- Demonstrate how the project affects Canada's ability to meet:
 - Climate commitments, including net-zero (i.e., produce no more than the amount of greenhouse gas that gets removed from the atmosphere) by 2050
 - Nature and biodiversity targets, such as conserving 30% of lands and waters by 2030
 - Other environmental objectives under federal legislation and international agreements (e.g., migratory birds, species at risk)
- Report:
 - Greenhouse gas emissions from all project phases (construction, operation, decommissioning)
 - Carbon sinks (like forests or wetlands) that may be affected or destroyed
- Explain how the project aligns with:
 - Federal climate and environmental plans
 - Regional sustainability strategies

Section 15: Sustainability

Instructions to Energy Alberta include:

- Evaluate the long-term benefits and risks of the project for current and future generations
- Use a sustainability framework that includes:
 - Environmental resilience
 - Economic inclusion
 - Public and Indigenous well-being



- Identify Valued Components (e.g., endangered species, clean water, cultural sites) that are critical to sustainability
- Determine whether the project:
 - Contributes positively to sustainability
 - Has long term impact on future generations and whether impact will extend beyond the project lifecycle
 - Has neutral or uncertain effects
 - Includes risks that must be reduced or managed
 - Propose actions to enhance positive effects and reduce long-term harm, especially in the face of uncertainty

Section 16: Follow-Up Program

Instructions to Energy Alberta include:

- Design a program to:
 - Track if predictions made in the Impact Statement are accurate
 - Monitor whether mitigation and management strategies are working
- Include:
 - Clear objectives and measurable indicators
 - Adaptive management strategies (i.e., adjusting plans based on new information) in case outcomes differ from expectations
 - Regular public reporting and updates to regulators
- Involve:
 - Indigenous Nations and communities in monitoring activities
 - Local stakeholders where relevant
- Plan for:
 - Immediate responses if unexpected impacts occur
 - Long-term commitments for transparency and accountability

Section 17: Summary of the Impact Assessment

Instructions to Energy Alberta include:

- Prepare a clear, concise summary of the entire Impact Statement that is:
 - Accessible to the public and non-technical audiences
 - Free of jargon and uses plain language throughout
 - Balanced, reflecting both positive and negative findings
- Submit the summary in both English and French
- Make the summary available to the public, especially through formats that are easy to access online and printed copies in communities