

## **EIA SCOPING PROCESS FACILITATION**

The *Cooperation Plan for the Environmental Impact Assessment and Regulatory Review of a Northern Gas Pipeline Project through the Northwest Territories* identifies that the Preliminary Information Package offers the project proponents:

*. . . the opportunity to facilitate the environmental assessment scoping process, by presenting the environmental issues it has identified through its own analysis and through its initial public consultation process. This may be presented in the form of a draft scope of the environmental assessment which suggests a scope of the project, outlines the factors to be included in the environmental assessment, and indicates the scope of those factors, in accordance with the Canadian Environmental Assessment Act, the Mackenzie Valley Resource Management Act, the Inuvialuit Final Agreement and other guidance material issued by the parties.*

The project proponents are taking this opportunity to facilitate the environmental assessment scoping process, by providing in this section:

- an outline of the environmental assessment approach and the process that has been used to develop the environmental assessment
- a draft scope of the environmental assessment, including the scope of the project and the environmental factors to be considered in the environmental assessment (see [Section 11.2](#))

## **ASSESSMENT CONSIDERATIONS**

The Environmental Impact Statement (EIS) for the Mackenzie Gas Project will address project-specific effects and the project's contributions to cumulative effects. The EIS will assess the anchor field, gathering system and transmission pipeline system components of the project. However, the regulatory applications will differentiate between the three components in the assessment because of the unique nature of each component.

The assessment of project-specific and cumulative effects will involve:

- identifying and assessing the significance of project-specific effects, including the effects of the:
  - project on the biophysical, social and economic features
  - biophysical, social and economic features on the project

### ASSESSMENT CONSIDERATIONS (cont'd)

- identifying appropriate mitigation measures for project-specific effects and determining the residual effects
- determining if the residual project effects could interact cumulatively with the effects from other projects or activities that have been, or will be, carried out
- identifying mitigation measures and impact management approaches to use on a regional scale, and determining their ability to reduce potential cumulative effects
- assessing the significance of the residual cumulative effects on the social and economic features and biophysical environment

The impact assessment for the project will meet the requirements of the Environmental Impact Statement Terms of Reference for the Mackenzie Gas Project, which will be issued by the Joint EIA Panel in accordance with the Cooperation Plan. The impact assessment will also be guided, in part, by several publications, specifically the:

- *Cumulative Effects Assessment Practitioners Guide*, Canadian Environmental Assessment Agency, 1999
- *Addressing Cumulative Environmental Effects in Environmental Assessments under the Mackenzie Valley Resource Management Act*, September 2000
- *Generic Terms of Reference for the Environmental Assessment of Oil and Gas Developments*, Mackenzie Valley Environmental Review Board, April 2001
- *Cumulative Effects Assessments in the Inuvialuit Settlement Region: A Guide for Proponents*, Inuvialuit Environmental Impact Assessment Review Board, August 2002
- *A Practical Approach to Assessing Cumulative Effects for Pipelines*, National Energy Board Application for the Westpath Expansion, 2002
- *Consolidated Information Requirements for the Environmental Assessment Land Regulatory Review of a Northern Gas Pipeline Project Through the Northwest Territories*, Northern Pipeline Environmental Impact Assessment and Regulatory Chairs' Committee, September 2002

### IMPORTANCE OF TRADITIONAL KNOWLEDGE

Traditional knowledge is cultural knowledge. It is based on direct observation, or information passed on orally from other community members, and can be viewed as a database of information that has been developed from centuries of experience

of living off the land. Traditional knowledge changes and adapts as new information is learned. Therefore, it can provide an accurate picture of the local area in both the present and the past.

Traditional knowledge will be used, together with information from scientific studies, to develop an understanding of existing conditions, important issues and potential effects. Traditional knowledge is expected to influence the project design and the development of environmental management measures. For example, it is expected to be used to help determine pipeline routing and facility siting and to avoid sensitive areas.

Traditional knowledge can be collected and used only with the permission and active participation of those who possess it. Often, these are elders and resource users or harvesters. Consultations are underway to involve those communities whose traditional lands could be affected by the project in the Traditional Knowledge Study Program.

The traditional knowledge studies for the Mackenzie Gas Project will be designed to:

- provide the specific traditional knowledge information needed for the project
- facilitate meaningful participation by community residents in the environmental assessment process
- ensure that the use of traditional knowledge in the environmental assessment complies with regulatory requirements

The methods of collecting and using traditional knowledge will support the documentation requirements of the various regulatory agencies reviewing the project. The data collection method is also likely to be a concern of the affected communities. The actual knowledge collected, and how it is used, will be decided in consultation with the traditional knowledge holders.

## **ISSUES TO BE CONSIDERED**

The identification of issues to be considered in the assessment will be based on consultation with communities, government agencies and other interested parties.

Issues and associated effects will be assessed for the following subject areas:

- biophysical features:
  - air quality
  - noise

**ISSUES TO BE CONSIDERED (cont'd)**

- aquatic features, including hydrogeology, hydrology, water quality and fisheries
- terrestrial features, including geology, terrain, permafrost, soils, vegetation and wildlife
- social and economic features, including:
  - socio-economics
  - traditional lifestyles and culture
  - land and resource use
  - human health
  - heritage resources

Other issue areas that will be considered include:

- the effects on the biophysical and socio-economic environment that might result from potential project incidents and malfunctions
- the effects of the environment, such as permafrost, on project engineering
- the cumulative effects of past, present and reasonably foreseeable human development and activities

**ASSESSMENT COMPONENTS**

**Public Communication and Consultation**

Public communication and consultation will be fundamental to the assessment. The assessment approach will include initiatives, to ensure that interested parties have an opportunity to:

- obtain information about the project and the assessment
- provide input to the project design
- provide input to, and influence, the assessment, particularly the:
  - scope of the assessment
  - methods and conclusions
  - impact management
  - approach for follow-up monitoring

Public participation will be encouraged through:

- a series of community meetings, to encourage input by residents
- assessment workshops on:

- issue identification and scoping
- impact assessment and mitigation

### **Assessment Indicators**

For each socio-economic or biophysical feature considered in the assessment, one or more indicators will be selected. Using indicators in the assessment will help to focus on the issues of greatest concern to communities, the public and government. Indicators will be selected based on clearly defined criteria, such as:

- for socio-economic indicators:
  - importance to the stability and function of economic, social and cultural systems
  - importance to the overall quality of life in northern communities
  - sensitivity to change as a result of the proposed development
- for biophysical indicators:
  - importance to local communities
  - importance to ecosystems
  - rarity, including special status species
  - sensitivity to human disturbance

Traditional knowledge and scientific data will be used in selecting the socio-economic and biophysical indicators.

### **Spatial Boundaries**

Spatial boundaries will be developed using traditional knowledge, scientific and technical information, and input from the public. The spatial boundaries for the assessment will differ among biophysical features, to reflect the different geographic extent of project-specific effects on the key environmental indicators.

#### **Project-Specific Effects**

For socio-economic impacts, the spatial boundary for the project will encompass the northern communities from which permanent residents might be drawn to work on the project, as well as communities that might receive benefits from, or might be affected by, the project.

Spatial boundaries for assessing biophysical impacts will typically be established by determining the relevant spatial extent of an effect from all activities or structures that will be required for project construction and operations.

### **Cumulative Effects**

Generally, the spatial boundary for the cumulative effects assessment will encompass the area or population affected by:

- a specific project effect
- similar effects from other projects or activities that overlap the project effect

Spatial boundaries for the assessment of cumulative socio-economic effects will consider a wide geographic range of communities from which individuals might be drawn for employment, as well as the dispersal of economic benefits and social impacts to these communities.

Spatial boundaries for the assessment of cumulative biophysical effects will reflect the nature of each effect, as well as the nature of the environmental features, both of which can be stationary or mobile. Each subject area will have to develop specific approaches that take into account the spatial nature of the effects and the indicators for that subject area.

### **Temporal Boundaries**

The temporal boundaries for the impact assessment will be specific to the issue being considered. Different temporal boundaries may be used for specific subject areas and for different issues within a subject area, to reflect:

- the nature and duration of the effect
- the characteristics of the indicator
- the types of actions and projects that will need to be considered within the cumulative effects assessment

### **Managing Effects**

An environmental management plan will be developed, which will include mitigation measures for the socio-economic and biophysical impacts.

### **Social and Economic Features**

Mitigation for socio-economic impacts will be reviewed and modified during ongoing public communication and consultation with local communities. This process is intended to lead to the development of a socio-economic plan.

The project proponents will develop and implement a socio-economic plan with the input, cooperation and coordination of key interested parties, including:

- affected communities and regions

- the GNWT
- public agencies and institutions responsible for delivering education, training, law enforcement, health care and other public services

Because of the nature of socio-economic issues, many causal factors are beyond the control of the project proponents. Therefore, the plan will emphasize the need to identify the responsibilities of the project proponents, governments, and affected communities and residents for managing the potential impacts.

### **Biophysical Features**

An environmental management plan for biophysical effects will be developed. This plan will describe:

- the project design
- conventional on-site mitigation measures for construction and operations
- any further measures required to address unique or unusual northern environmental conditions and community concerns

Traditional knowledge and scientific information will be used in developing the environmental management plan.

Existing regional initiatives will be evaluated, such as the:

- Mackenzie Valley Cumulative Impact Monitoring Program
- NWT Cumulative Effects Assessment and Management Strategy and Framework

### **Evaluating Significance**

All socio-economic or biophysical components are influenced by multiple human and natural pressures. Therefore, the importance of any project-specific change to a socio-economic or biophysical feature must be placed in the context of other effects influencing that component. In most cases, impact significance should be based on the project's contribution to cumulative effects and the significance of cumulative effects. The exception would be if a project-specific effect did not result in a cumulative effect. In this case, the significance of the project effect would be determined.

For most socio-economic effects, impact significance will be discussed in a regional context that considers all relevant pressures and influences. This is particularly important in northern communities, where individuals working on the project and associated developments are likely to be drawn from communities

### Evaluating Significance (cont'd)

directly adjacent to, as well as some that are geographically remote from, the project. Although economic benefits are likely to accrue to these communities, social impacts could also occur in the North. Therefore, the socio-economic impact assessment is expected to consider a broad geographic context and the full range of impacts from all sources.

The significance of residual effects for the biophysical environment will be characterized through interpreting conventional impact attributes, such as the geographic extent, direction, magnitude, duration, frequency and likelihood of an effect, and the recovery potential. Significance will then be evaluated based on considering those attributes and the condition of the socio-economic or biophysical component relative to:

- any applicable and known thresholds
- known and likely long-term trends of change of the component
- the possible contravention of any applicable act, land claim agreement, guide, policy, treaty or convention
- the displacement of a protected environmental feature
- the contribution to acute or chronic health effects

The significance will then be quantitatively evaluated if thresholds are available. If appropriate thresholds are absent, significance will be qualitatively evaluated, based on professional judgment. Although the evaluation of significance will be based on this approach, the approach will be modified, as appropriate, to meet the unique conditions for each subject area.

## SCOPE OF THE PROJECT

The project to be assessed will exclude environmental field studies and other activities of a preliminary investigative or evaluative nature. The scope of the project will consist of the various undertakings proposed by the project proponents, or likely to be carried out in relation to the physical works proposed by the proponents of the specific components of the project, such as construction, operation, decommissioning and abandonment of:

- facilities at the Taglu natural gas field, including:
  - about 10 to 15 production wells
  - one well-site and production pad
  - one or two waste disposal wells
  - flow lines
  - production, processing and compression facilities
- facilities at the Parsons Lake natural gas field, including:
  - about 10 to 15 production wells
  - a waste disposal well
  - two major well-site and production pads and one or more smaller well-site and production pads
  - flow lines
  - production, processing and compression facilities
- facilities at the Niglintgak natural gas field, including:
  - about six to 10 production wells
  - three or four well site pads
  - one or two waste disposal wells
  - one production facility pad
  - flow lines
  - production, processing and compression facilities
- gathering pipelines from the outlets of the Taglu, Parsons Lake and Niglintgak production facilities to the outlet of the compressor at the Inuvik facility. The gathering pipeline system would include the compressor station, line heating and pigging facilities, metering equipment, valves and other associated pipeline facilities.

**SCOPE OF THE PROJECT (cont'd)**

- a pipeline system from Inuvik to Norman Wells, consisting of one of the following design concepts:
  1. a single-phase design, which would include:
    - an NGL facility near Inuvik
    - an NGL pipeline from Inuvik to Norman Wells. This would include pumping stations, line heaters, pigging facilities, metering equipment, valves and other associated pipeline facilities.
    - a single-phase transmission pipeline system from Inuvik to Norman Wells. This would include compressor stations, line heaters, pigging facilities, metering equipment, valves and other associated pipeline facilities.
  2. a two-phase design, which would include:
    - a two-phase transmission pipeline system from Inuvik to Norman Wells. This would include compressor stations, line heaters, pigging facilities, metering equipment, valves and other associated pipeline facilities.
    - an NGL facility near Norman Wells
- a transmission pipeline system from Norman Wells to northwestern Alberta. This would include compressor stations, line heaters, pigging facilities, metering equipment, valves and other associated pipeline facilities.
- ancillary undertakings in relation to the previously described physical works, including:
  - access roads
  - barge landing sites
  - airstrips and related facilities
  - stockpile and staging sites
  - borrow sites
  - construction camps
  - communications equipment
  - electrical power supply
  - waste management facilities, including sewage treatment systems

## **FACTORS TO BE CONSIDERED**

The assessment will include consideration of the factors described in the Canadian Environmental Assessment Act, the Mackenzie Valley Resource Management Act, and the Inuvialuit Final Agreement, including:

- the impact of the project on the environment, including the impact of malfunctions or incidents that may occur in connection with the project, and any cumulative impacts that are likely to result from the project in combination with other developments
- the significance of the impacts of the project
- comments submitted by members of the public
- mitigative or remedial measures that are technically and economically feasible
- the purpose of the project
- the nature and extent of the project
- the rationale for site selection
- alternative means of carrying out the project that are technically and economically feasible, and the environmental effects of such alternative means
- the need for, and any requirements of, any follow-up environmental programs
- the impact of the project on present or future wildlife harvesting, including the assessment of a realistic worst case scenario for facilities and activities within the Inuvialuit Settlement Region
- the capacity of renewable resources that are likely to be significantly affected by the project to meet existing and future needs
- the need for the project
- alternatives to the project
- a description of the current environment that might reasonably be expected to be affected, directly or indirectly, by the project, including adequate baseline characterization
- measures to enhance any beneficial environmental effects
- a proposal for contingency and emergency response plans
- effects of the environment on the project

**SCOPE OF FACTORS TO BE CONSIDERED**

The assessment will consider the potential effects of the project within temporal and spatial boundaries that encompass the periods and areas during and within which the proposed project may potentially interact with, and have an effect on, components of the environment. The boundaries will vary with the issues and factors considered.