

## **NEED FOR THE PROJECT**

Recent analysis undertaken on behalf of the gathering system and Mackenzie Valley Pipeline proponents indicated growth in natural gas use for electrical power generation, and continued growth in residential, commercial and industrial consumption. Between 1999 and 2007, annual natural gas consumption in Canada and the U.S. is projected to expand by 20 to 25%, or between 394 and 493 Mm<sup>3</sup>/d (14.0 and 17.5 Bcf/d). This projected growth in demand is expected to strain the productive capacity of the mature producing regions along the U.S. Gulf Coast, mid-continent and San Juan basin regions, as well as the southern regions of the Western Canada Sedimentary Basin. As a result, production growth is expected to shift to new regions, such as the deeper waters in the Gulf of Mexico, Eastern Canada offshore, new fields in the Rocky Mountains and, ultimately, fields in the Mackenzie Delta and Alaska.

In addition to the projected increase in supply from North American sources, liquefied natural gas (LNG) imports might also be relied on to meet the projected increase in gas demand.

## **MARKET DEMAND FORECAST**

Western Canadian natural gas is delivered to most of the major markets in North America. Currently, the largest markets are:

- Western Canada
- the U.S. Midwest
- the U.S. West Coast

In Western Canada, development of heavy oil and oil sands, and growth in natural gas-fired electric power generation, is expected to account for between 40 and 45% of the projected growth in the current markets for Western Canadian natural gas. The next largest market is expected to be the U.S. Midwest, where natural gas demand is projected to expand by 42.2 Gm<sup>3</sup> (1.5 Tcf) through 2020 and account for 30% of the total growth in the three regions. The third-ranking market is likely to be the U.S. West Coast, where Western Canadian natural gas is likely to encounter competition from LNG imports, increased Rocky Mountain natural gas production, and growing production from central California.

## **OPEN SEASON EXPRESSION OF INTEREST**

The Mackenzie Delta and other areas along or adjacent to the Mackenzie Valley have been, and continue to be, active areas of exploration. Therefore, commitments of natural gas and natural gas liquid (NGL) volumes will be considered in determining the initial capacity of the proposed gathering system

### **OPEN SEASON EXPRESSION OF INTEREST (cont'd)**

and Mackenzie Valley Pipeline. Beyond this initial capacity, further expansion will be possible by adding compression facilities, as required.

A phased approach to the Open Season Expression of Interest process is being used to give companies that are exploring for natural gas additional time to determine what capacity they wish to nominate. A shippers' expression of interest process was completed in July 2002 as a first step to obtaining commitments from shippers interested in transporting natural gas in the Mackenzie Valley Pipeline (the transmission pipeline system).

Responses were received from 20 companies through the Open Season Expression of Interest process. The responses identified the potential need for receipt points in addition to Inuvik. They also identified a range in potential future capacity needs, reflecting uncertainties associated with forecasting the results of future exploration in the Mackenzie Delta and Mackenzie Valley regions. Follow-up meetings with interested shippers were held to clarify their responses and to assess the certainty of the capacity needed for shippers' natural gas fields.

The proponents of the Mackenzie Valley Pipeline intend to work with all interested shippers identified in the Open Season Expression of Interest process to confirm shipper volume, location of receipt and delivery points, timing and natural gas composition.

Transmission pipeline access will be provided to shippers at rates and terms that are subject to NEB review and approval. For information on access to the gathering system, see [Section 2.2](#), Pipeline Tariffs and Tolls.

### **PIPELINE CAPACITY ANALYSIS**

Analysis of the results of the Open Season Expression of Interest supports a 34 Mm<sup>3</sup>/d (1.2 Bcf/d) initial capacity transmission pipeline that could be expanded with additional infill compression to 54 Mm<sup>3</sup>/d (1.9 Bcf/d). This expanded pipeline capacity should accommodate the longer term needs for shippers requiring access to the Mackenzie Valley Pipeline. Given the current limited state of development of most Significant Discovery Licences in the Mackenzie Delta and Mackenzie Valley areas, obtaining binding commitments by 2005 for 34 Mm<sup>3</sup>/d (1.2 Bcf/d) of initial capacity in 2008 will require further work with potential shippers.

Uncertainties in the amount, composition and timing of potential shipper volumes are factors that influence whether separate natural gas and NGL pipelines or a single, two-phase transmission pipeline will be required north of Norman Wells. Project definition work will focus on a system having separate gas and NGL lines with initial capacity of 34 Mm<sup>3</sup>/d (1.2 Bcf/d), expandable to 54 Mm<sup>3</sup>/d (1.9 Bcf/d) with infill compression. Commercial negotiations with each shipper will be

completed to substantiate this capacity or to modify it, as required. The technical design sensitivities will also be assessed for a lower capacity transmission pipeline, which could be reverted to, if projected binding commitments did not materialize.

#### **COMMERCIAL AGREEMENTS**

Precedent agreements, which specify volume commitments and other commercial terms, will be negotiated with individual shippers. These agreements are expected to be submitted with the application for regulatory approval. Final firm service transportation agreements are expected to be executed after regulatory approvals have been received.

The proponents plan to maintain flexibility in line pipe sizing and expansion capability as long as practical in the project schedule, thereby providing increased opportunity to accommodate additional volumes from the development of existing and new field discoveries. Accordingly, precedent agreements might contain conditions that provide for a range of capacity needs.

#### **NORTHERN COMMUNITY ACCESS TO NATURAL GAS SUPPLY**

The proponents plan to provide valve access points on the transmission pipeline system to enable regional communities to purchase natural gas. The communities or local developers will be responsible for providing any transportation, distribution, metering, processing or other facilities needed to bring the natural gas from the transmission pipeline system to users in the communities.

### **TRANSMISSION PIPELINE TOLLS**

The Mackenzie Valley Pipeline tolls will be approved by the NEB. Although the terms of service remain to be established, the principle to be applied is that all shippers will pay the same toll for the same service.

### **GATHERING SYSTEM ACCESS**

Access to the gathering system, including the NGL facility and the NGL pipeline from Inuvik to Norman Wells, will not be subject to regulation under the NEB Act. The gathering system proponents may consider options for ownership in these facilities by interested shippers, or will negotiate a fee-for-service with each shipper for the portion of the gathering and processing facilities that they use.

The need to process natural gas through liquid extraction facilities will be determined by the quality of each producer's gas. Shippers using the NGL facilities will be entitled to receive the liquids extracted from their natural gas in kind.

### **TRANSMISSION PIPELINE TARIFF**

Before transmission pipeline operations begin, Imperial, as operator, will file a tariff with the NEB. The tariff will include the general terms and conditions relating to service on the transmission pipeline.

The general terms and conditions will include:

- provisions for:
  - gas quality
  - scheduling and curtailments
  - gas used by the system, including fuel gas
  - force majeure
- procedures for:
  - balancing actual quantities shipped against quantities nominated
  - invoicing and making payments