

Highway pipeline. The government subsequently accepted the finding of the NEB, favouring the Alaska Highway route supported by the Lysyk report. This pipeline would transport only US gas from the north slope of Alaska along the Alaska pipeline right-of-way to Fairbanks, then follow southeast through Alaska across the Yukon Territory to Dawson City to be joined later with a 76-centimetre pipeline linking the Mackenzie Delta to Whitehorse, northeastern BC, and northwestern Alberta. This system will join existing pipelines in BC and Alberta for distribution in US and, at a later date, Canadian markets. The route will generally parallel the Alaska-Canada Highway south of Whitehorse.

The Canadian pipeline legislation was adopted in early 1978. Foothills Pipelines (Yukon) Ltd. will be the parent company for the Canadian portion (about 823 km). The Foothills consortium includes Westcoast Transmission Co. Ltd., Alberta Gas Trunk Line Co. Ltd., TransCanada Pipelines Ltd. and Alberta Natural Gas Ltd.

The Polar Gas Project, which proposes construction of a 120-cm island-hopping pipeline to deliver natural gas to southern markets from the Arctic islands, came closer to realization in 1976 with the discovery of substantial new gas reserves in that area. The problem is not so much in constructing the line, but rather in establishing gas reserves large enough to sustain the economic operation of the line long enough to justify the capital expenditures. Current industry estimates place this "threshold" at a minimum of 707 750 million cubic metres. There are strong indications that about half of this reserve requirement has already been found.

If sufficient reserves can not be found to justify building such a high-cost pipeline, other transportation such as ice-strengthened liquefied natural gas tankers may be considered as an alternative. Although this is a relatively expensive method of transporting gas, it involves a smaller initial capital cost than pipelines and a more rapid rate of return on investment. In 1976, Petro-Canada contributed \$7 million to Polar Gas, partly in support of engineering and economic studies to identify preferred ways of transporting gas from the Arctic.

Founding participants of the group were Panarctic Oils, TransCanada Pipelines, Canadian Pacific Investments, Tenneco Texas Eastern and Pacific Lighting. Polar Gas filed an application with the NEB late in 1977 to build a pipeline.

The TransCanada system, Canada's longest pipeline, begins at the Alberta border near Burstall, Sask., where it receives gas bought in Alberta from Alberta Gas Trunk Line. It receives gas from four Saskatchewan locations, then passes south of Regina to a point south of Winnipeg where it branches into two lines. The original line goes east to Thunder Bay, North Bay and south to Toronto. At Toronto this line again divides with the westward branch serving the Hamilton area as well as delivering gas to the US at Niagara Falls; the eastward branch follows the Lake Ontario shore and the St. Lawrence River to Montreal before terminating at Philipsburg, Que., on the international border. The largest gas pipeline construction project in 1976 was carried out by TransCanada Pipelines Ltd. on its main line between Toronto and Montreal with the completion of 77 km of a 61-cm line and in addition 27 km of a 40-cm lateral to Ottawa.

Alberta Gas Trunk Line Co. Ltd. transports most of Alberta's export gas from producing fields to the provincial boundaries for delivery to interprovincial carriers. Its two main segments are the Foothills Division and the Plains Division. The former transports gas for the Alberta Natural Gas, Alberta and Southern, and Westcoast Transmission systems; the latter for TransCanada and Consolidated pipelines. In the northwest of the province a smaller system, the Northern Division, delivers gas to the main Westcoast Transmission trunk line.

The Westcoast Transmission Co. Ltd. large-diameter line extends from Fort Nelson in the northeastern corner of BC to Sumas on the Canada-US border, near Vancouver. The system includes a number of lateral lines gathering gas from producing areas in BC, western Alberta and the Pointed Mountain field in the Northwest Territories. In addition to serving Vancouver and communities along its route, Westcoast delivers gas to Pacific Northern Gas Ltd., a distribution company serving communities and industries along an 805-km route between the Westcoast main line at Summit Lake and the Pacific Coast communities of Prince Rupert and Kitimat. It also