Other Pipelines.-The Federated pipeline connects the relatively new Swan Hills field with Edmonton. Deliveries were started in January 1959 and expansion of the system continued during 1960. The main line, of 10- and 12-inch pipe, is 123 miles long and, in addition, about 100 miles of lateral and gathering lines serve the Judy Creek, Judy Creek West and Virginia Hills fields. The Pembina pipeline system connects the large Pembina field to delivery points at Edmonton. The Britamoil Pipe Line Company operates a pipeline that originates 140 miles south of Edmonton in the Drumheller area and gathers crude from a number of fields en route to Edmonton. The Edmonton Pipe Line Company transports crude from the Camrose and Joarcam fields 40 miles south of Edmonton. The Imperial Pipe Line Company serves the Leduc-Woodbend, Acheson, Golden Spike and Redwater fields in the Edmonton area. The Rangeland Pipe Line Company gathers oil from the Sundre and Innisfail areas 60 miles north of Calgary. Texaco Exploration Company operates a pipeline that serves several fields southwest of Edmonton. In Saskatchewan, Producers Pipelines Limited and Westspur Pipe Line Company gather crude from most of the fields in the southeastern part of the province and carry it to the Interprovincial pipeline at Cromer, Man. Trans-Prairie Pipelines Limited has one system that serves the Weyburn field in southeastern Saskatchewan and a second system that serves fields in southwestern Manitoba.

Pipeline Tariffs.—Interprovincial Pipe Line Company reduced its tariff rate on crude oil transported from Edmonton to Sarnia and Toronto by six cents a barrel in 1960. There was no change in Trans Mountain pipeline tariffs. Some examples of tariffs for the two major systems follow.

Route	Transmission Distance	Tariff
	miles	cts. per bbl.
Edmonton, Alta.; to-		-
Regina, Sask	438	20
Superior, Wis., U.S.A.	1.074	37
Sarnia. Ont		50
Port Credit, Ont		54
Vancouver, B.C	718	40
Ferndale, Wash., U.S.A	740	42

Natural Gas Pipelines.—Although no large gas pipelines were constructed in 1960, it was an important year for Canadian gas producers as the National Energy Board granted permission to Canadian pipeline companies to export slightly more than 1,000,000 Mcf. per day to the United States and the United States Federal Power Commission gave permission for the importation of most of this gas. This led, during the latter part of the year, to a renewal of pipeline construction activity. Natural gas deliveries to California are expected to start by 1962 through a new Alberta-to-California pipeline which will have an initial capacity of 400,000 Mcf. per day. Parts of this system were under construction by the end of 1960.

The National Energy Board in 1960 granted export permits to the following companies:---

Alberta and Southern Gas Company Limited: 458,750 Mcf. per day for export at Kingsgate, B.C. Westcoast Transmission Company Limited: 152,000 Mcf. per day for export at Kingsgate, B.C. Canadian-Montana Pipe Line Company: 36,000 Mcf. per day for export near Cardston, Alta. Trans-Canada Pipe Lines Limited: 204,000 Mcf. per day at Emerson, Man. Trans-Canada Pipe Lines Limited: 204,000 Mcf. per day of interruptible gas at Niagara

Trans-Canada Pipe Lines Limited: 204,000 Mcf. per day of interruptible gas at Niagara Falls, Ont.

Gas pipeline construction in 1960 was highlighted by the completion in October of a 30-inch pipeline by Trans-Canada Pipe Lines Limited from its main line at Winnipeg to the United States border at Emerson, Man., a distance of 51 miles. By the end of the year, communities in the Great Lakes region of the United States were being served with Canadian gas. About 800 miles of new gas pipeline were added to existing systems throughout Canada in 1960, bringing the total length of gathering, transmission and distribution lines to about 31,200 miles.