

major gas pipelines were only established in Canada in recent years. It was not until 1953 that natural gas was used in provinces as far east as Quebec. Now, however, there is an extensive network of pipelines serving most centres of population from Vancouver to Montreal and delivering gas to several points of export on the United States border.

Since the mid-1950s, when large-volume gas removal was authorized from Alberta, capital expenditures in gas pipeline construction have constituted a significant proportion of the country's total outlay for transportation facilities. In 1965 and 1966, capital expenditures of \$61,000,000 and \$65,000,000, respectively, were made. The cumulative total in the period 1955-66 was \$1,247,000,000 for gathering and transmission systems with an additional \$796,000,000 for distribution systems.

Pipelines are usually categorized under three headings—gathering lines, transmission lines and distribution lines. The gathering lines are those that take gas from the wells or separators to the field gate or some other specified point. Transmission lines are normally the large diameter pipelines that take gas from gathering lines and deliver it to the distributors principally at the 'city gate'. In total there were 43,360 miles of all types of gas pipeline in operation at the end of 1965, of which 5,029 miles were gathering, 13,806 miles were transmission and 24,525 miles were distribution.

Unlike oil pipeline companies which are common carriers—they transport the oil for a fixed charge—gas pipeline companies, with few exceptions, own the gas that is transported. The principal exception is the Alberta Gas Trunk Line Company which delivers virtually all of the gas exported from Alberta to the provincial boundary where main transmission companies accept delivery. This is an important pipeline system because most of the Canadian gas reserves are in Alberta. The right-of-way distance of Alberta Gas Trunk is 1,788 miles.

Some details of the main transmission systems are contained in the following paragraphs.

Trans-Canada Pipeline.—The Trans-Canada pipeline, extending from the Alberta border near Burstall, Sask., makes its way eastward through Saskatchewan and Manitoba to the Ontario Lakehead cities of Port Arthur and Fort William and then follows a broad, northerly-arched route through the clay belt of Ontario, then southward via North Bay to Toronto. There the line divides, one part going to the western region of Ontario and the other, eastward, along the northern shore of Lake Ontario and the St. Lawrence River to Montreal. Lateral pipelines serve communities that are not within the immediate reach of the main pipeline. Trans-Canada is Canada's longest pipeline with a right-of-way distance of 2,384 miles. The maximum amount of gas delivered in any one day by the company in 1965 was 1,249,000 Mcf. Export sales average about 210,000 Mcf. daily.

Westcoast Transmission Company.—The supply of gas for Westcoast comes mainly from fields in northeastern British Columbia but significant quantities are gathered in Alberta. The main line from Fort St. John runs in a southerly direction to Vancouver and to the United States border at Sumas, B.C. An extension to its system from the Fort St. John area to the Fort Nelson area permits the pipeline system to pick up gas from the main areas stretching from Dawson Creek to the Yukon-Northwest Territories border. The right-of-way distance of the Westcoast system is 892 miles.

Alberta Natural Gas Company.—Although the Alberta Natural Gas pipeline is only 107 miles long it forms part of one of the major gas export pipelines that carries Canadian gas as far south as California. The line extends from the Alberta border through the Crowsnest Pass to Kingsgate, B.C., where it crosses the International Border and continues through Idaho.

Other Gas Pipelines.—There are many other natural gas pipelines operating in Canada. Many are gathering systems and others are exclusively distribution systems. They constitute important sectors of the country's gas pipeline industry, as is evidenced by their aggregate pipeline mileage. To mention a few, Canadian Montana pipeline gathers gas