

high-voltage, long-distance transmission lines, however, will carry ever-increasing amounts of power south from hydro-electric stations on northern rivers to help meet the province's constantly growing power demands. Of particular interest is the initial development of the Nelson River system where Kettle Rapids, the latest site being developed, has five of a projected 12 generating units in service with a nominal rating of 102,000 kw per unit. The output of the Kettle station is being transmitted at ± 450 kilovolts to southern Manitoba via a 525-mile high-voltage direct-current (HVDC) transmission line and converted to alternating current at the Dorsey Converter Station 12 miles west of Winnipeg.

The 1971 expansion program in Manitoba continued to stress development of the province's abundant hydro-electric potential. Three 102,000-kw units were added to the Kettle generating station on the Nelson River bringing the plant's capacity at the end of that year to 408,000 kw. Eight units were to be added between 1972 and 1975 at a rate of two per year. Completion of the seventh and final unit (33,750 kw) at another Nelson River development, the Kelsey station, was also scheduled for 1972. This will bring the total capacity of Kelsey to more than 236,000 kw. The next project to be developed will be a 160,000-kw station at the Jenpeg site on the Upper Nelson River north of Lake Winnipeg. It is expected that these additions will be adequate to meet Manitoba's load requirements until the late 1970s. Thereafter, additional capacity will be obtained primarily from undeveloped power sites on both the Nelson and Burntwood rivers in the northern portion of the province.

Manitoba Hydro plans to apply for a licence to divert water from the Churchill River into the Nelson River via the Burntwood River. Such a diversion would not only increase the energy available from the Nelson but would permit development of a number of sites on the Burntwood River.

Thermal-electric expansion in Manitoba is currently restricted to the addition of numerous small internal combustion units in the northern reaches of the province. In aggregate, more than 4,200 kw of new diesel capacity were installed at various communities.

Substantial additions were made to the province's transmission and sub-transmission systems during the year. Atomic Energy of Canada completed two HVDC transmission lines between Radisson (near Kettle) and Dorsey (near Winnipeg). AECL is currently proceeding with 1,080,000 kw of HVDC conversion equipment. Future transmission plans call for a 230-kv line from La Vérendrye to St. Léon to service a rapidly growing industrial load in the south-central portion of the province. Both of these lines should be operational by 1973.

Saskatchewan. The Saskatchewan Power Corporation was established in 1949 by the Power Corporation Act (RSS 1965, c.40, as amended) as a successor to the Saskatchewan Power Commission which had been in operation since 1929. The original functions of the Corporation included the generation, transmission and distribution, sale and supply of electrical energy with the objective of making electricity available to all the people of the province, in abundance and at reasonable rates. Since 1952, the Corporation has also been authorized to produce or purchase and to transmit, distribute, sell and supply natural or manufactured gas.

In 1972, the Corporation served 126 communities with populations of 500 or more, about 875 smaller communities and 106 summer resorts. In addition, bulk power was supplied to Saskatoon, Swift Current and Battleford. A wholly owned subsidiary, North-Sask Electric Ltd., is responsible for providing and improving electrical service to communities in northern Saskatchewan.

At the end of December 1972 the Corporation provided electric service to approximately 277,500 customers, composed of 203,450 "urban" (an urban community is defined as one in which there are at least six customers) and 74,050 "rural" customers. Energy sales totalled 5,300 million kwh with industrial customers accounting for 45% and residential customers for 17% of the total. During 1972, a total of 5,900,000,000 kwh was supplied to the system, almost all of it generated in Corporation plants. In December, the provincial peak load reached a new high of 1,138,000 kw. The Saskatchewan Power Corporation owned and operated 5,450 miles of transmission lines of 72 kv and over and 72,541 miles of less than 72 kv (excluding urban distribution). At the end of 1972, the Corporation had invested, at cost, \$567.8 million in electrical system assets out of a total corporate plant-in-service investment of \$789.1 million.

Large water-power resources exist in the central and northern parts of Saskatchewan, principally on the Churchill, Fond du Lac, and Saskatchewan rivers. Power from Squaw