	Population.			
	1881.	1891.	1901.	1906.
Alberta	18,075	26,277,	68,376	185,412
Saskatchewan	19,679	40,522	90,564	257,7630
	37,754	66,799	158,940	443,175

The above table shows that, the coal consumption is increasing at a much more rapid rate than the population. In considering, therefore, the future needs of the northwest provinces, it is quite evident that in a few years—unless new mines are opened—the present plants will be taxed to their full capacity.

The first need of the population is domestic fuel, and much of this is being supplied from the lignite belt. Transportation and manufacture next demand fuel for power production. Thus the per capita coal consumption will increase with added population.

The coal available in Alberta is of all grades, from lignite to anthracite, and mines producing each kind have been opened up. In Saskatchewan the lower grades only have been found.

STRUCTURAL AND HISTORICAL GEOLOGY.

The structure of the region can only be briefly outlined. The subsidence during Palæozoic times of parts of the central continental area is shown in the marine limestones outcropping in Manitoba and the Rocky mountains. Afterward the depressions in which the Mesozoic rocks were deposited first appeared in the longitude of the Rocky mountains, and Triassic and Jurassic deposits are there found. Early Cretaceous depositions occur in the same district following a shallowing of the sea, in which very little of the present continent was submerged. The unconformity between the Cretaceous and the Palæozoic floor, on which it was laid down, is shown in the fact that, varying time intervals are there recorded. Thus, in Manitoba, Dakota beds lie on upper Devonian, and in the Rainy River district possibly on Archæan. In Stearns county, Dakota, the floor is Archæen; but on the southwest border, Jurassic, and probably lower Cretaceous, are separated by a probable unconformity. On the Athabaska river, marine beds of Dakota age rest on Devonian; while in the Rocky mountains there seems no visible break in the section through Carboniferous, Triassic and Jurassic, to the lowest known horizon of the Cretaceous. The floor then, on which the Cretaceous was laid down, was probably a place of erosion, in which the formations occupy successive bands, the newer beds being those on the west.

The Cretaceous covering appears to have been deposited also in a somewhat irregular manner owing to crustal movements. The Jurassic and lower Cretaceous do not appear to have covered the whole area, and indicate that the Jurassic sea invaded the area along a narrow depression, now elevated in the foothills and Rocky mountains. Land conditions prevailed throughout portions of the early Cretaceous, but the occasional submergence extended a short distance east of the mountains; and in the United States to the south, appears to have gone as far as the Black hills, and part of Montana. The greatest amount of detrital matter is to be found, and evidence also of an abundant flora, along the western portion of the early Cretaceous depression.

A more general subsidence brought the sea farther northeast during Benton times, and covered the sandy deposits of the Dakota by a series of dark marine shales. In the western sections there is evidence of a possible shallowing at the top of the Benton; but in the east the sea continued to the close of the Niobrara.