

Ample provision should be made in constructing a power dam, for the passage of any possible flood water, and in future, if necessary, for increasing the pondage to meet larger demands for Power. Provisions may be made for increasing the low water flow by storage at convenient points up River. The power dam at Keewatin already has a considerable influence in this respect.

The available heads of water at the sites referred to are :—

Seven Portages... .. 30 ft.

Point du Bois... .. 45 to 48 ft.

If found advisable in the future, the Fall at Point du Bois can be increased some 3 to 5 feet by the removal of a ledge of rock which now obstructs the Channel below the Falls. It is not considered necessary or desirable, however, to incur any expenditure in this direction at present.

The estimated lengths of transmission lines are as follows:

Winnipeg to Seven Portages..... 55 miles

Winnipeg to Point du Bois... .. 75 miles

| | Water Cubic Feet per Second. | Head Feet | Approximate Hydraulic Horse Power | Approximate Horse Power Low Tension Bus-bars at Power House | Approximate Horse Power Low Tension Bus-bars Sub Station Win- nipeg Ready for Distribu- tion. |
|-----------------|------------------------------------|--------------|---|---|--|
| *Seven Portages | **11000 | 32 | 39000 | 28000 | 24000 |
| Point Du Bois | 1900 | 48 | 104,000 | 75000 | 65000 |

* The 3 upper falls only are here taken into account.

** After deducting a probable 8000 cu. ft. per second to be diverted by the Winnipeg Electric Ry. Company.

In accordance with your instructions the above data together with the plans and detailed information were submitted to a committee of Engineers composed of Cecil B. Smith, Wm. Kennedy, Jr., and the undersigned, who spent several days in a careful study of the whole subject, and whose report is submitted herewith—

It will be remembered that last fall, 1905, an examination of the Winnipeg River was made by Mr. Smith under instructions from your Committee, and that preliminary reports were made by him on the general characteristics of the several water power sites from White Mud to Point du Bois. These reports are on file and need not be further referred to here.

The following is a short description of the Works which it is proposed to construct.

The dam from the left bank across the deep water to the Island will be of Rockfill. From the Rockfill dam across the island and along the left bank of the Canal, the dam will be of concrete, intended for the greater part of its length to form the overfall for the surplus flow of the River.