

APPENDIX

power house drainage system culminates in a common sump from which water is discharged by motor driven centrifugal pumps. Immediately in front of the overflow and surge tanks the three main conduits form distributors, from which steel penstocks varying in diameter from 9 feet to 10 feet 6 inches lead down through shafts excavated in solid rock to the turbines in the power house. Each penstock is furnished with a controlling valve located in a valve chamber immediately underneath the distributors. These valves are all electrically operated, and, in common with all other power operations in connection with the plant, can be controlled from the main control room in the distributing station. The distributing system, from whence the output of the power house is controlled, is located on the hill above the Gorge, and overlooks the Falls. A system of cable tunnels conveys the generator output from the power house to this building, which includes the Executive Offices of the Ontario Power Company, and from which energy is transmitted over the Niagara System. Access to the power house, valve chambers, and distributing station is obtained by means of tunnels and elevator shafts from an entrance building, reached from the roadway above the Gorge, in Queen Victoria Niagara Falls Park.

Erindale Development.—This development, installed in 1910, is situated on the Credit River about 8 miles above Lake Ontario, was taken over by the Hydro-Electric Power Commission in 1917, and included in the Niagara System. The plant includes an earth dam with core wall, 700 feet long and 35 feet high, from which a 900 foot concrete lined tunnel 12.5 feet diameter conveys water to a storage tank immediately adjoining the power house. From the tank water is supplied to two turbines developing 1,000 horse power each under a 50 foot head, of the single runner single discharge type, the runners being located in the bottom of the tank. Each turbine is direct connected to