

## RIVER ERNE GENERATING STATIONS.

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The hydro-electric development of the Erne, construction on which began in 1946, takes advantage of the 100 foot fall in the river between Belleek and Ballyshannon. The development comprised fourteen major works including two power stations, dams and fish passes at Cathaleen's Fall and Cliff, the removal of the old bridge in Ballyshannon and the construction of a new bridge and approaches, protection embankments and several road and stream diversions. It also involved the purchase and flooding of approximately 1,000 acres of land and the creation of a storage basin or small lake about 2 miles long between the two stations.

The station at Cathaleen's Fall has two 22,500 kW generating sets in commission and provision has been made for the installation of a third generating set later on.

The Cliff station is designed for two generating sets of 10,000 kW capacity each. The first set has been in commission since 1950 and the second set will be operating in 1954. When completed the two stations will have a combined output estimated at 215 million units a year.

The development also involves works in and around the Erne Loughs in Co. Fermanagh and these are being carried out under an agreement made between the Electricity Supply Board and the Northern Ireland Ministry of Finance at an estimated cost to the E.S.B. of £750,000. In addition, a scheme which aims at reducing the flooding of lands around the Erne Loughs during the months of April to September, is being carried out at an estimated cost of £340,000, which is being borne by the Northern Government.

Nearly 250 miles of 110 kV transmission lines have been erected to carry the output of the Erne Power Stations to transformer stations at Carrick-on-Shannon, Drogheda and Dublin where the power is fed into the national network. In addition, a 38 kV line from Ballyshannon to Letterkenny has been built and is in operation.

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ADDITIONAL FACTS ABOUT  
RIVER ERNE DEVELOPMENT

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The River Erne rises in Co. Cavan; flows through the Upper and Lower Loughs Erne in Co. Fermanagh and from Lower Lough Erne for a distance of about 8 miles to its point of discharge into the sea at Ballyshannon. It has a catchment area of 1,530 sq. miles with an average rainfall of about 41.4 inches.

The distance between the Cathaleen's Fall Station and Cliff Station is about 3 miles.

The salmon pass at the Cliff Station has 36 pools, each pool 24 feet long and 12 feet wide and the normal depth of water in each pool is 7 feet.

The Dam at Cliff is 200 feet wide and the Dam at Cathaleen's Fall is 1,000 feet wide and 80 feet high. The tail race from Cathaleen's Fall Station is a channel 4,500 feet long excavated in the bed of the river. This channel is about 60 feet wide and 26 feet deep.

During the construction 32,000 tons of cement and 2,200 tons steel reinforcement were used. The amount of earth and rock excavated totalled about 2,500,000 tons.

The work involved under the agreement between the E.S.B. and the Northern Ireland Ministry of Finance includes the building of embankments at certain points along the Loughs, the deepening of the river channel over certain stretches, the building of new road bridges over the Erne at Belleek and at Carry, and the strengthening of road bridges at Rosscor and Enniskillen and the railway bridge at Killyhevlin.

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