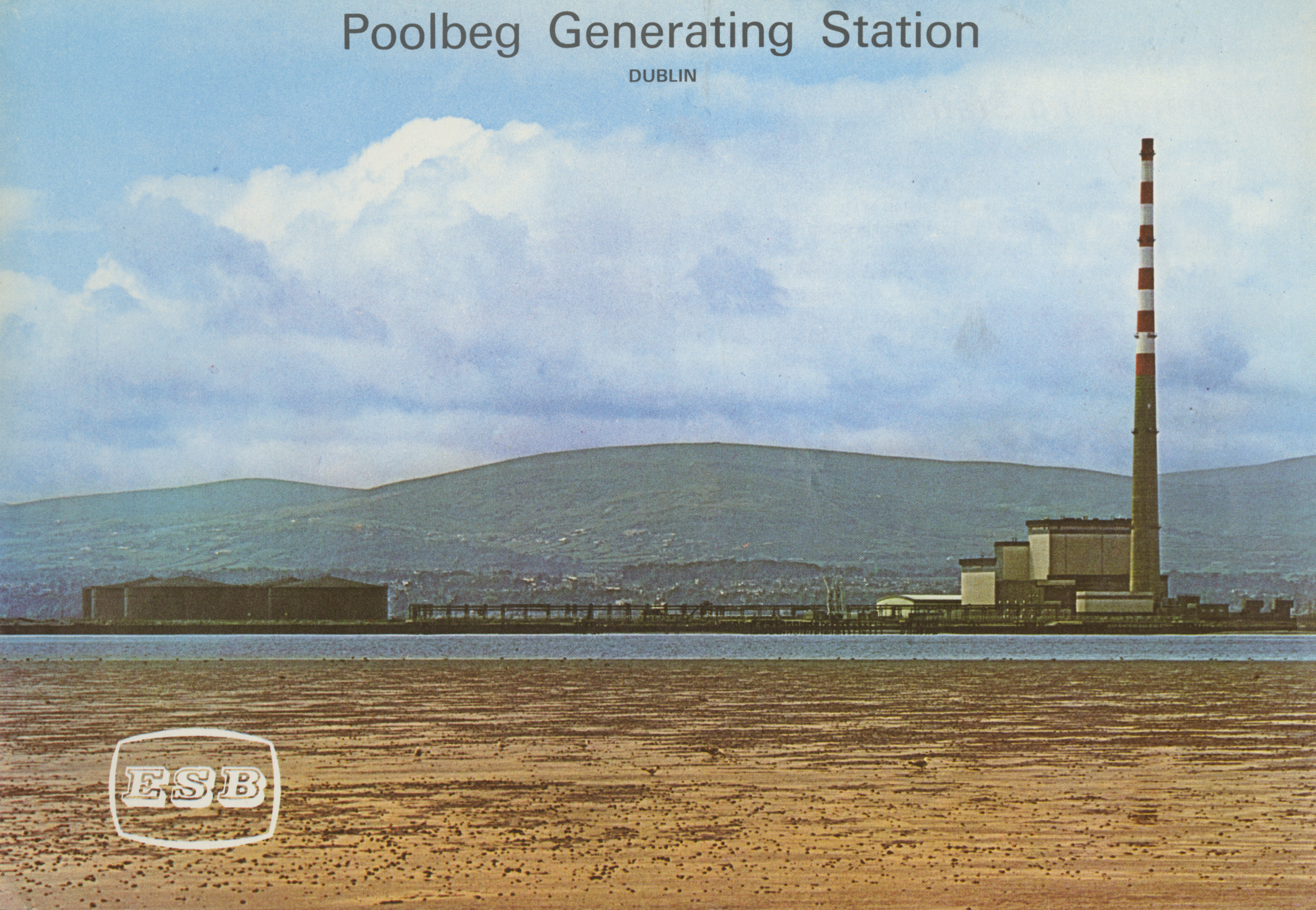


Poolbeg Generating Station

DUBLIN

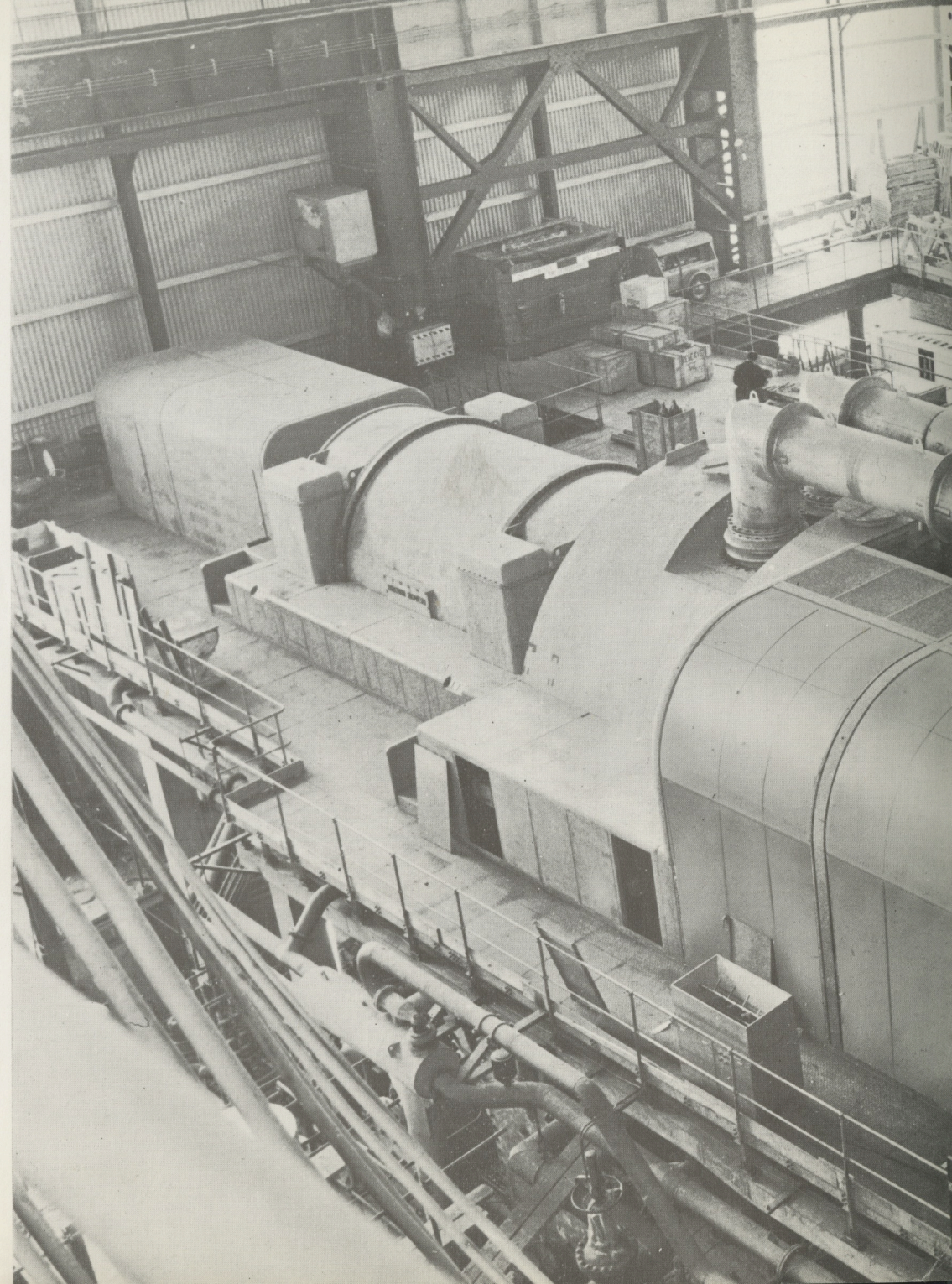


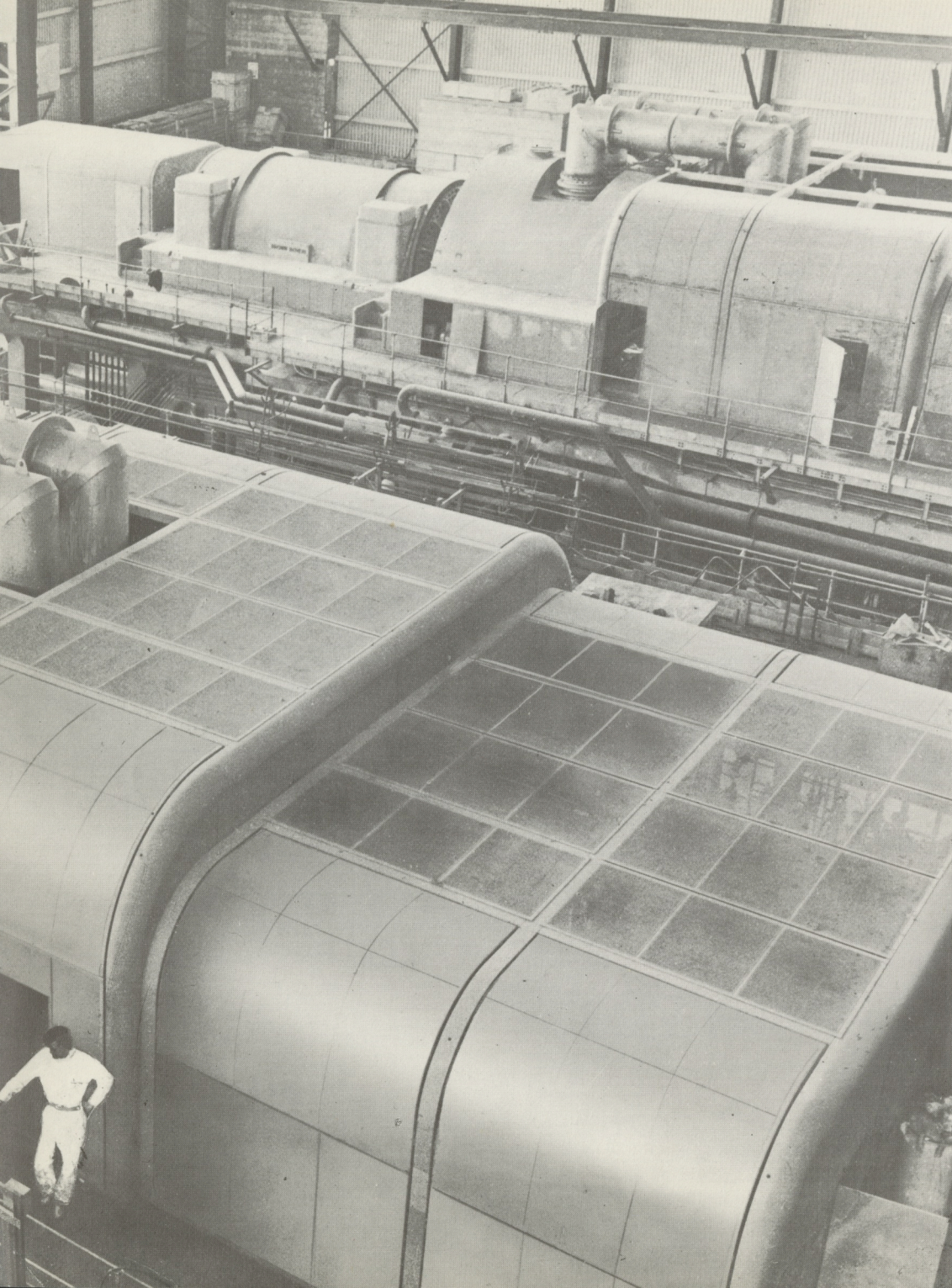
Poolbeg *Generating Station*

The initial development of the £19 million oil-fired Poolbeg Generating Station was completed in December, 1971 when the second 120 megawatt generating set went on full load. The first 120 MW set was commissioned in August, 1971. The station occupies an area of about 80 acres at the mouth of the River Liffey, much of the area having been reclaimed from the sea. A bank has been constructed and it is estimated that some 750,000 tons of sand have been dredged from Dublin Harbour and pumped in to fill the site. A feature of the station is the open-piled jetty which is unique for the Port of Dublin. It is capable of accommodating oil tankers of up to 35,000 ton capacity. Heavy oil is stored in 4 tanks each having a capacity of 25,000 tons. In addition, there are two tanks each holding 1,500 tons of diesel oil. Poolbeg Generating Station is the second of the E.S.B. stations to have a completely centralised control room. It consists in the combination of the electrical control equipment with the thermal plant control equipment for up to six boiler-turbine units and two gas-turbine units in one centralised room in the station. The most eye catching item at Poolbeg Station is the 680 ft. chimney stack, the tallest structure in Ireland, built at a cost of £350,000 and specially designed to ensure minimum concentration of pollution at ground level in the city area.

Overall control and design of the station was carried out by Project Department and the civil engineering design was done by Civil Works Department, E.S.B.

GENERATING HALL





TECHNICAL PARTICULARS

Fuel

Oil (Heavy) :	
nett calorific value	17,400 Btu per lb.
Fuel storage capacity :	
Heavy Oil :	100,000 tons
Diesel Oil :	3,000 tons
Oil Tanks :	Whessoe (Ireland) Ltd.

Boilers

Maker	1 and 2
Type	Fives-Penhoet
Firing	Natural Circulation with Reheat
M.C.R.	Oil
Pressure	370,000 kg/hr
Temperature	130/29 kg/cm ²
	538/538°C

Turbo Alternators

Maker	1 and 2
Type	Brown Boveri
M.C.R.	Impulse Reaction : Reheat
Speed	120 MW
Pressure	3,000 r.p.m.
Temperature	127 kg/cm ²
Voltage	535°C
Power Factor	13.8 kV
	0.8

Gas Turbines

Maker	1 and 2
Type	English Electric — AEI
	Rolls Royce API Gas Turbine/AEI
	Generator Units
Rating	14 MW
Voltage	10.5 kV
Power Factor	0.8

Electrical Equipment

13.8/220kV Transformers	— Lepper
10/110 kV Transformers	— AEG
Unit and House Transformers	— Unidare Ltd., Ireland
13.8 kV Switchgear	— Brown Boveri
10 kV and 6.6 kV Switchgear	— Laur Knudsen
380 V Switchgear	— Brown Boveri & Laur Knudsen
6.6 kV Motors	— AEG
380 V Motors	— ASEA

Control Room Equipment

Unit Desk & Panels	— Controle Bailey
Mosaic Panels	— Siemens

AVON

One of our many Stations

Of the 28 generating stations 9 are hydro, 4 operate on milled peat, 6 on sod peat, 1 on native coal, 6 on oil, 1 on sod/milled peat and 1 on coal or oil.

HYDRO STATIONS *Capacity Mw.*

River Shannon:	Ardnacrusha	85
River Liffey:	Pollaphuca	30
	Golden Falls	4
	Leixlip	4
River Erne:	Cathleen's Fall	45
	Cliff	20
River Lee:	Inniscarra	19
	Carrigadrohid	8
River Clady:	Clady	4
		219

UNDER CONSTRUCTION

Pumped Storage		
Turlough Hill, Co. Wicklow		292

STEAM STATIONS *Capacity Mw.*

Pigeon House (Dublin City)	oil	90
North Wall (Dublin City)	oil	48
Ringsend (Dublin City)	coal/oil	270
Marina (Cork City)	oil	120
Poolbeg (Dublin City)	oil	268
Great Island (Co. Wexford)	oil	240

STEAM STATIONS *Capacity Mw.*

Portarlington (Co. Laois)	sod peat	38
Tarbert Island (Co. Kerry)	oil	120
Tarbert	(under construction)	500
Allenwood (Co. Kildare)	sod peat	40
Ferbane (Co. Offaly)	milled peat	90
Lanesborough (Co. Longford)	sod and milled peat	60
Rhode (Co. Offaly)	milled peat	80
Bellacorick (Co. Mayo)	milled peat	40
Shannonbridge (Co. Offaly)	milled peat	40
Shannonbridge	(under construction)	40
Arigna (Co. Roscommon)	native coal	15
Miltown-Malbay (Co. Clare)	sod peat	5
Screed (Co. Galway)	sod peat	5
Cahirciveen (Co. Kerry)	sod peat	5
Gweedore (Co. Donegal)	sod peat	5
		1,579

**Total Capacity,
Hydro and Steam 1,798 Mw.**

CENTRAL CONTROL ROOM

