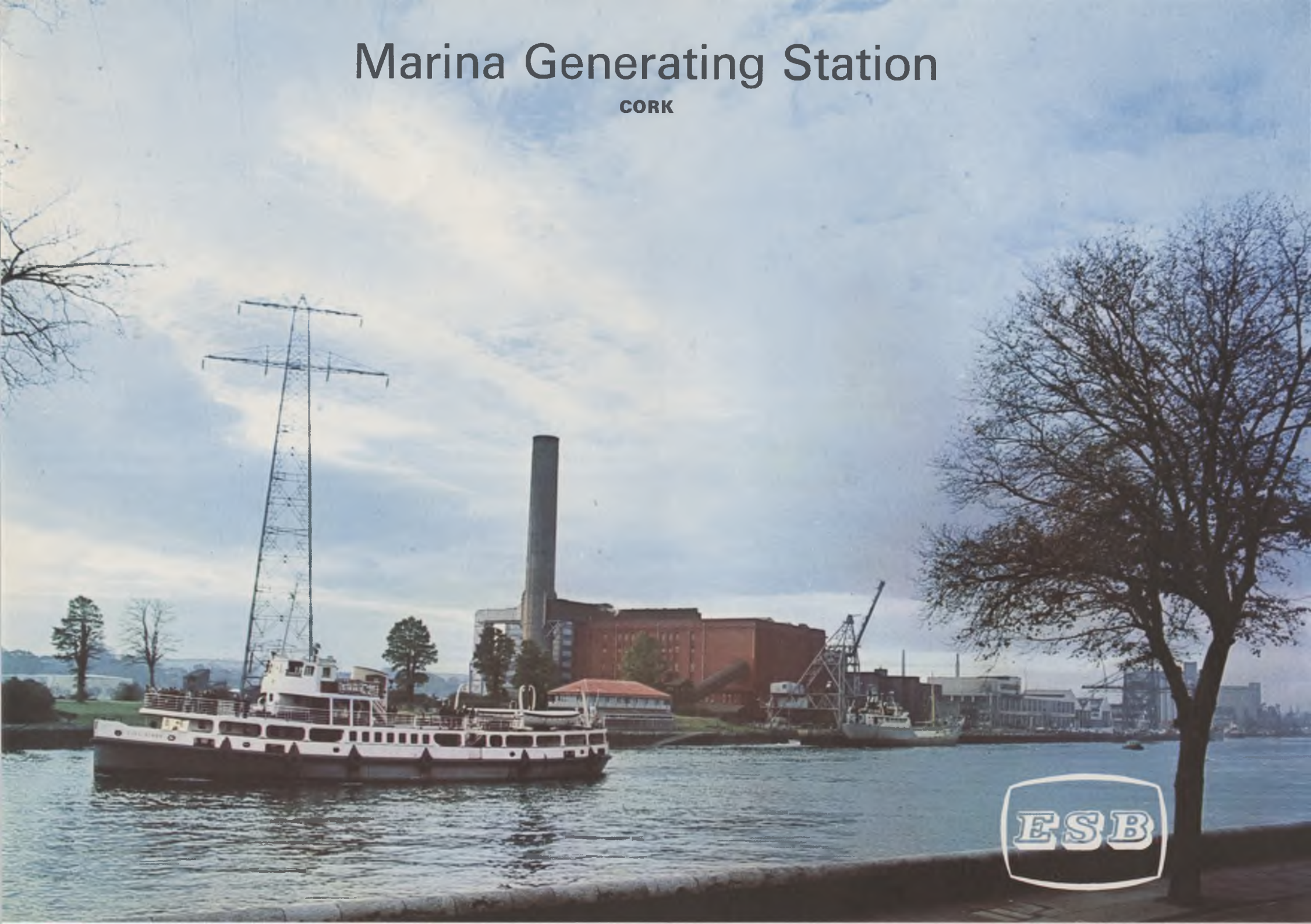


Marina Generating Station

CORK



Marina Generating Station

The Marina station is on the eastern side of Cork City, in the industrial estate on the south bank of the River Lee. The first development of the station was commissioned in 1954; it comprised three oil fired boilers, and two 30 MW turbo-alternator sets.

In 1964 the station was extended by the installation of a fourth boiler, oil-fired, and a 60 MW turbo-alternator. The total capacity of the station is now 120 MW. It is of historical interest that the capacity of the old Cork generating station at Albert Road was only 5 MW.

The alternators generate current at 10.5kV. This is stepped-up through transformers to 110kV and fed into the national transmission grid and also into Cork City's distribution network.



Above: Electrical Control Room



Below: Section of Generating Hall

PRINCIPAL TECHNICAL PARTICULARS

Fuel

Oil: nett calorific value 17,400 B.t.u./lb
Storage Capacity: oil 48,000 tons

Boilers

	No. 1, 2 and 3	No. 4
Maker	B & W	V.K.W.
Firing	Coal or oil	Oil
Economic rating	klb./hr. 160	410
M.C.R.	klb./hr. 200	550
Pressure	p.s.i. 625	1,175
Temperature	°F 865	960

Turbo-Alternators (There is no turbo-alternator No. 3)

	No. 1 and 2	No. 4
Maker	S.S.W.	B.B.C.
Type	Impulse reaction, twin-cylinder	Impulse reaction, twin-cylinder
Economic rating	MW 24	50
M.C.R.	MW 30	60
Speed	r.p.m. 3,000	3,000
Pressure	p.s.i. 600	1,150
Temperature	°F 850	950
Voltage	kV 10.5	10.5
Power factor	0.8	0.8
Alternator cooling	Air	Hydrogen

Electrical Equipment

Two A.C.E.C. 10/110kV Trafo 35 M.V.A.
One A.C.E.C. 10/110kV Trafo 70 M.V.A.
Two A.E.G. 10/110kV Trafo 20 M.V.A.
Five A.C.E.C. and Unidare 10/3.35kV Trafo 5 M.V.A. and 3 M.V.A.
Eight A.C.E.C. 3.3/0.38kV Trafo 0.5 M.V.A. and 0.7 M.V.A.
110kV switchgear B.B.C. rupturing capacity 2,000 M.V.A.

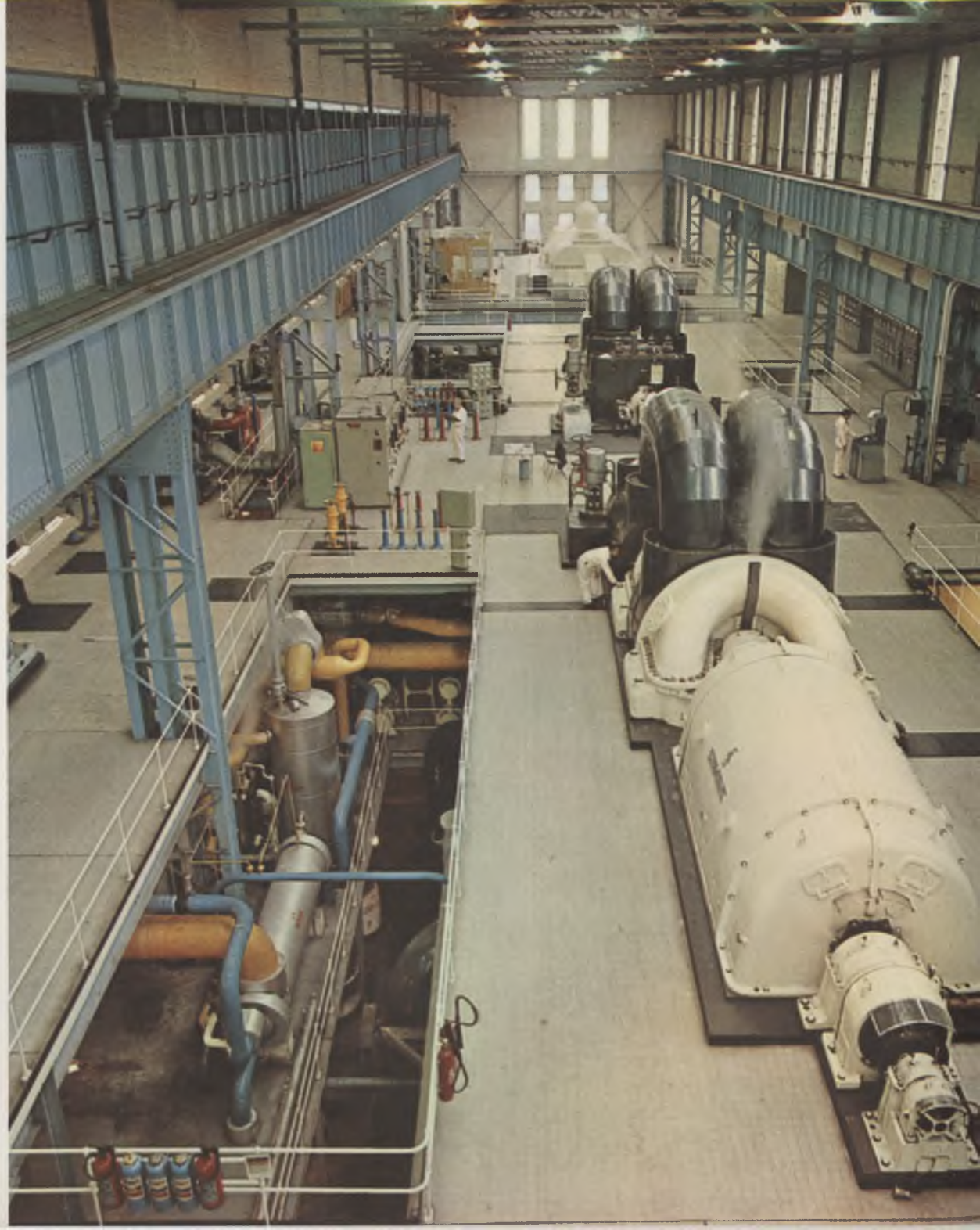


Control Panel

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	<i>Capacity Mw.</i>	STEAM STATIONS	<i>Capacity Mw.</i>
River Shannon: Ardnacrusha	85	Portarlington (Co. Laois) <i>sod peat</i>	38
River Liffey: Pollaphuca	30	Tarbert Island (Co. Kerry) <i>oil</i>	120
Golden Falls	4	Allenwood (Co. Kildare) <i>sod peat</i>	40
Leixlip	4	Ferbane (Co. Offaly) <i>milled peat</i>	90
River Erne: Cathaleen's Fall	45	Lanesborough (Co. Longford) <i>sod and milled peat</i>	60
Cliff	20	Rhode (Co. Offaly) <i>milled peat</i>	80
River Lee: Inniscarra	19	Bellacorick (Co. Mayo) <i>milled peat</i>	40
Carrigadrohid	8	Shannonbridge (Co. Offaly) <i>milled peat</i>	40
River Clady: Clady	4	Arigna (Co. Roscommon) <i>native coal</i>	15
	219	Miltown-Malbay (Co. Clare) <i>sod peat</i>	5
UNDER CONSTRUCTION		Screeb (Co. Galway) <i>sod peat</i>	5
Pumped Storage		Cahirciveen (Co. Kerry) <i>sod peat</i>	5
Turlough Hill, Co. Wicklow	292	Gweedore (Co. Donegal) <i>sod peat</i>	5
			1,459
STEAM STATIONS	<i>Capacity Mw.</i>	Total Capacity, Hydro and Steam	1,678 Mw.
Pigeon House "A" (Dublin City) <i>oil</i>	90		
North Wall (Dublin City) <i>oil</i>	48		
Ringsend (Dublin City) <i>coal/oil</i>	270		
Marina (Cork City) <i>oil</i>	120		
Pigeon House "B" <i>oil</i>	268		
Great Island (Co. Wexford) <i>oil</i>	120		



Generating Hall