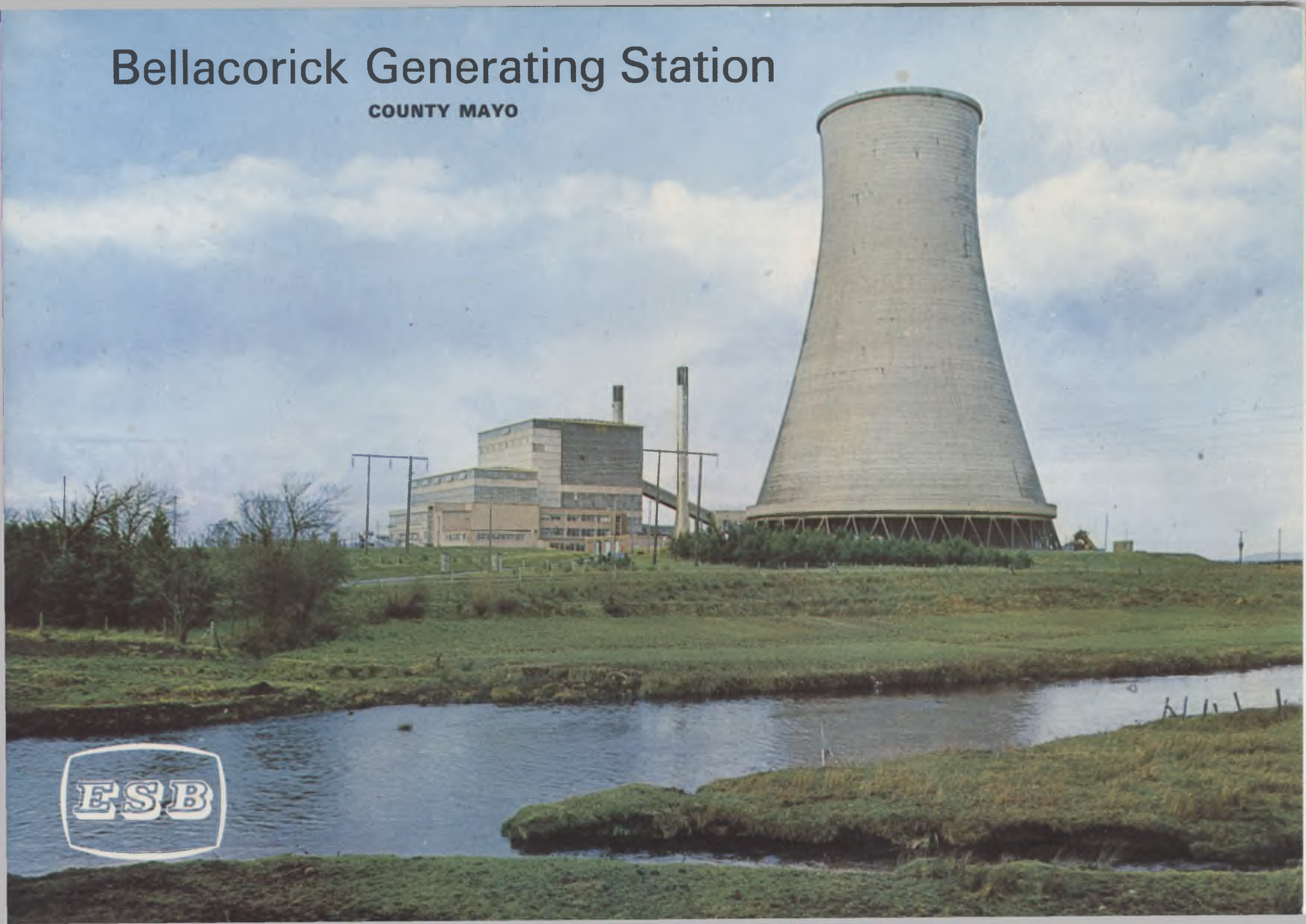


Bellacorick Generating Station

COUNTY MAYO



Bellacorick Generating Station

The Bellacorick (Co. Mayo) Generating Station burns milled peat obtained from the 7,000 acres of developed bogland in the area.

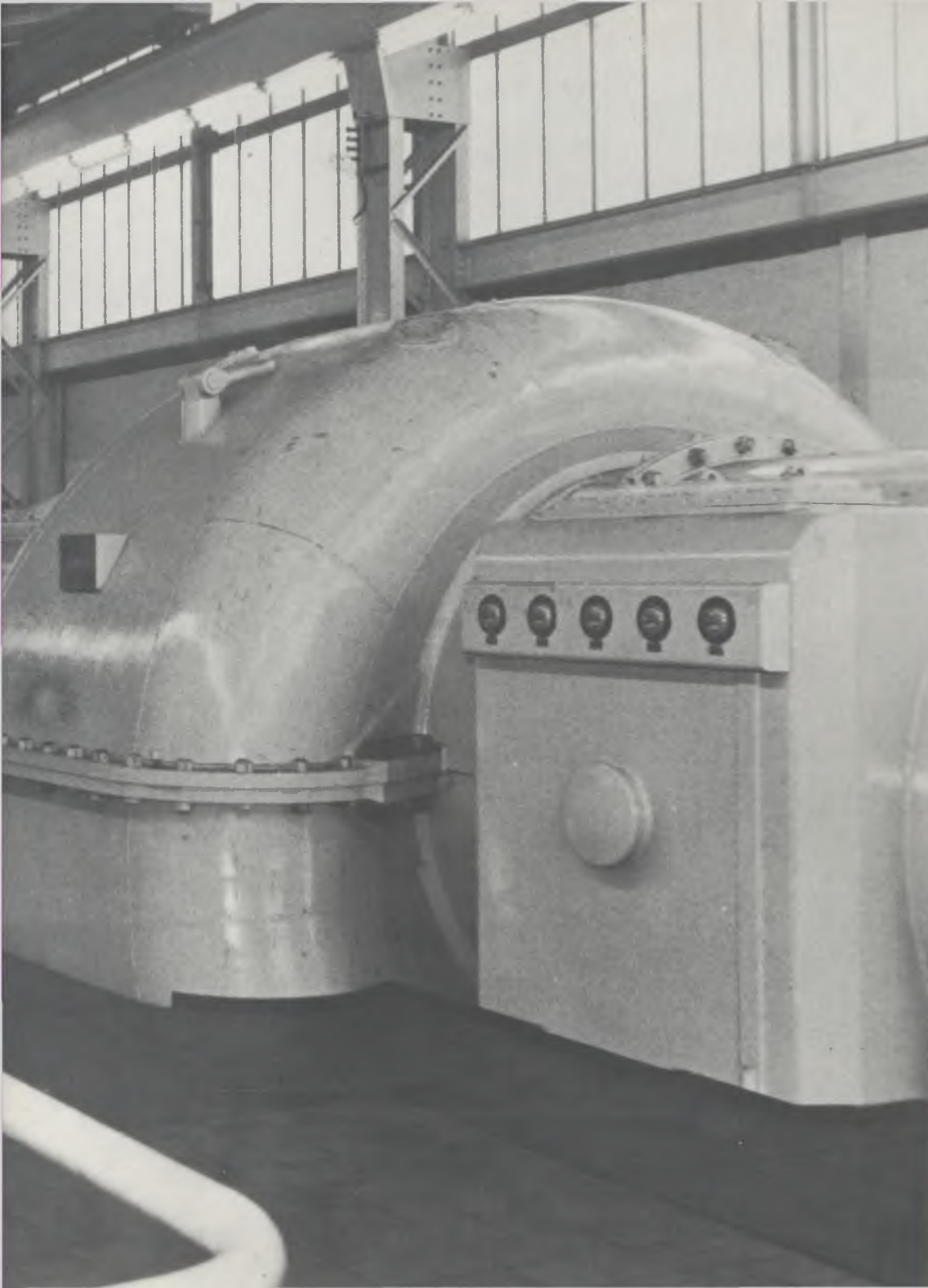
Construction work commenced in May, 1958. The first generating unit was commissioned in November, 1962, and the second unit in January, 1963.

The plant comprises two 20,000 kW turbo-alternators driven by two boilers capable of producing 210,000 pounds of steam per hour. The power is passed through transformers to the 110,000 volt transmission network. A supply is also given to the local 10,000 volt distribution network and the 38,000 volt network. The milled peat when harvested is stored on the bog. As required, it is loaded into eight-ton railway wagons of special design. The wagons are conveyed to the station by diesel locomotives where they are unloaded on to a belt conveying system which delivers the peat to the boilers. In a normal day's running, 120 wagons are transported in this way.

During an average year the station burns about 300,000 tons of peat and generates about 140 million units.

Generating Hall





TECHNICAL DATA

Fuel

Milled peat	55 per cent moisture
Size	Dust, and up to 2 in. also 'foidin' sods 2 in. x 3 in. x 7 in.
Net calorific value at 55% moisture	{ 1,889 kcal/Kg. 3,400 B.t.u./lb
Ash fusion point	1,100°C-1,150°C

Boilers

Number	2
Maker	Babcock & Wilcox
Firing	Pulverised milled peat
Economic rating	168,000 lb./hr. – 76.2 x 10 ³ tonnes/hr.
M.C.R.	210,000 lb./hr. – 95.2 x 10 ³ tonnes/hr.
Steam pressure	675 p.s.i. – 47.5 Kg./cm ²
Steam temperature	865°F – 463°C

Turbo-Alternators

Number	2
Maker	De Laval Ljungstrom
Type	Radial flow
Economic rating	18,000 kW
M.C.R.	20,000 kW
Speed	3,000 r.p.m.
Steam pressure	650 p.s.i. – 45.7 Kg./cm ²
Steam temperature	850°F – 454°C
Voltage	10,500
Power factor	0.8

Cooling Tower

Number	1
Type	R-C hyperbolic
Height	290 ft. – 88 metres
Internal diameter at base	210 ft. – 64 metres
Water quantity	2,800,000 gals./hr. – 12,740 x 10 ³ litres/hr.
Temperature range	84°F to 70°F (at 75% relative humidity) 29°C to 21°C

Transformers

T1 – 10/38/110kV, 22,000 kVA;	Maker	ACEC
T102 – 10/110kV, 22,500 kVA;	"	AEG
100 EXT1 110kV, 30-100A;	"	SSW
UT1 and UT2 10/3.3/0.38kV, 3,000 kVA;	"	Unidare
T11 10/10kV 2,000 kVA;	"	"
ST11 10/0.38kV 200 kVA	"	"

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

Electrical Control Room

