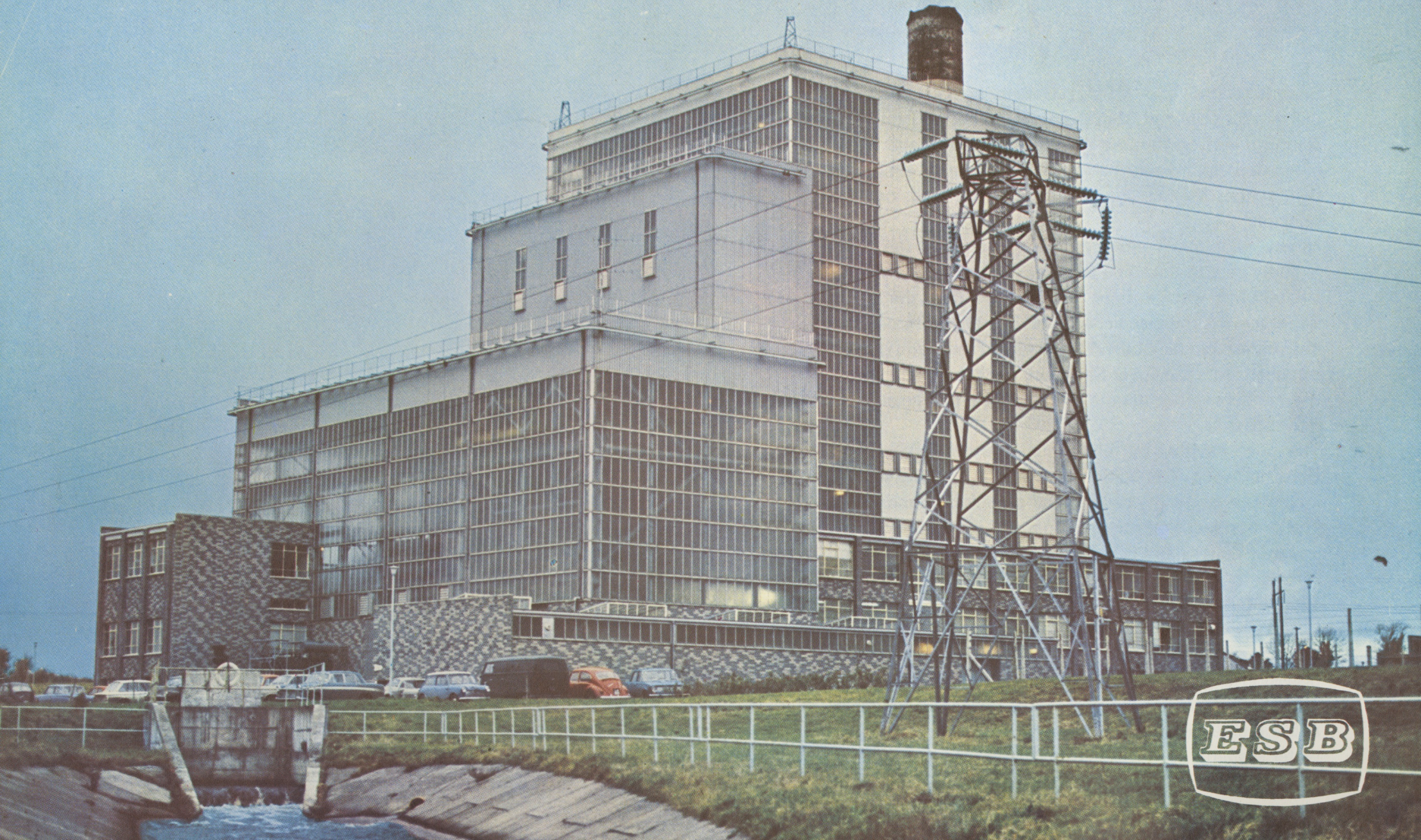


Shannonbridge Generating Station

COUNTY OFFALY



ESB

Shannonbridge Generating Station

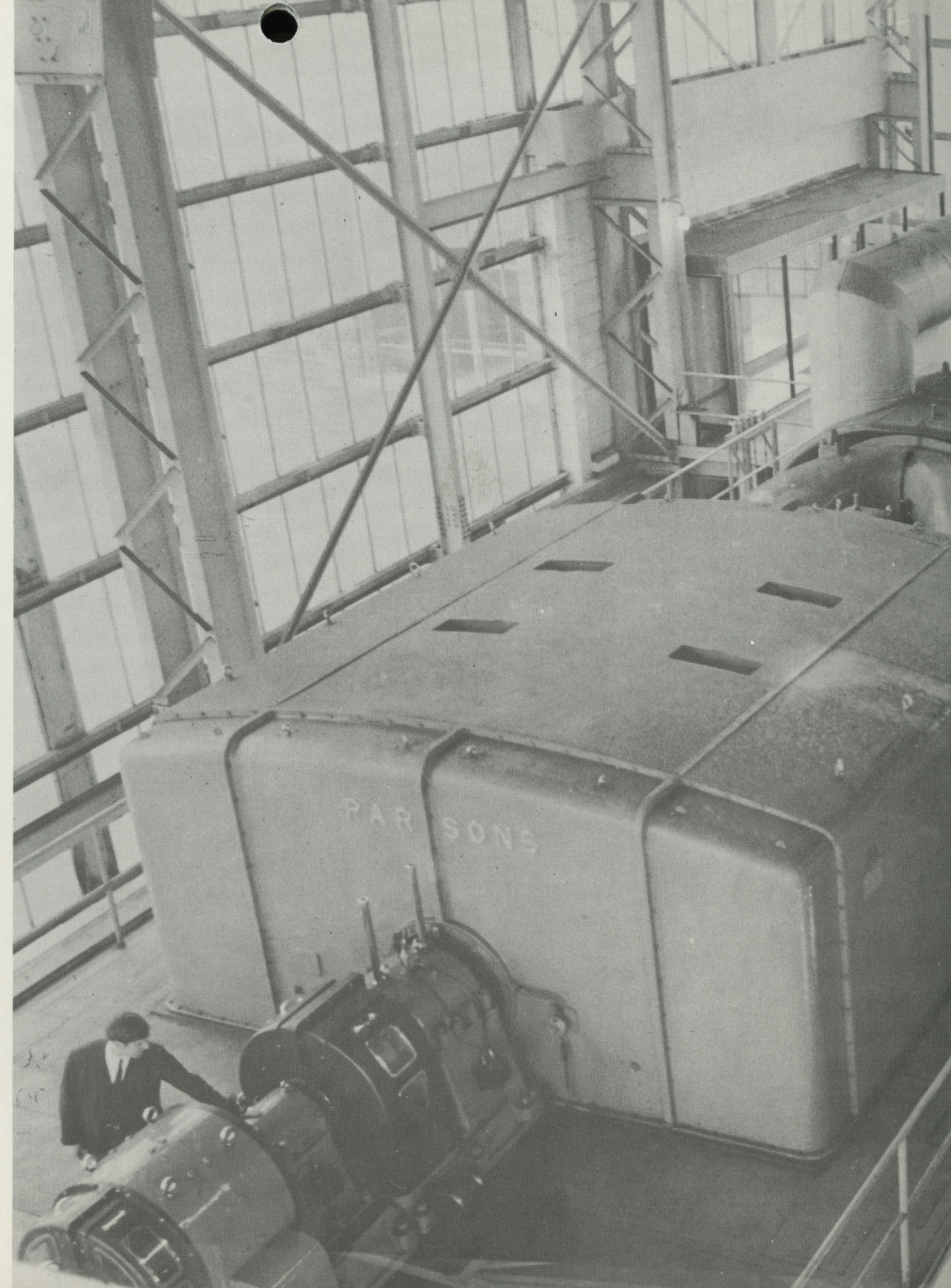
Shannonbridge (Co. Offaly) Generating Station burns milled peat obtained from the surrounding bogland. The station is run on the unit system, the turbine and boiler being operated by one man from the unit panel. It was the first station in this country to be operated on this principle.

Ninety people are employed in the station, the great majority being locals. The power is generated by a 40 mW (40,000 kilowatts) turbine, using steam from the boiler. The steam is condensed at a rate of 24,000 gallons per hour and returned to the boiler. Twenty-eight thousand gallons of water, from the River Shannon, are circulated through the condenser, per minute to condense the steam from the turbine.

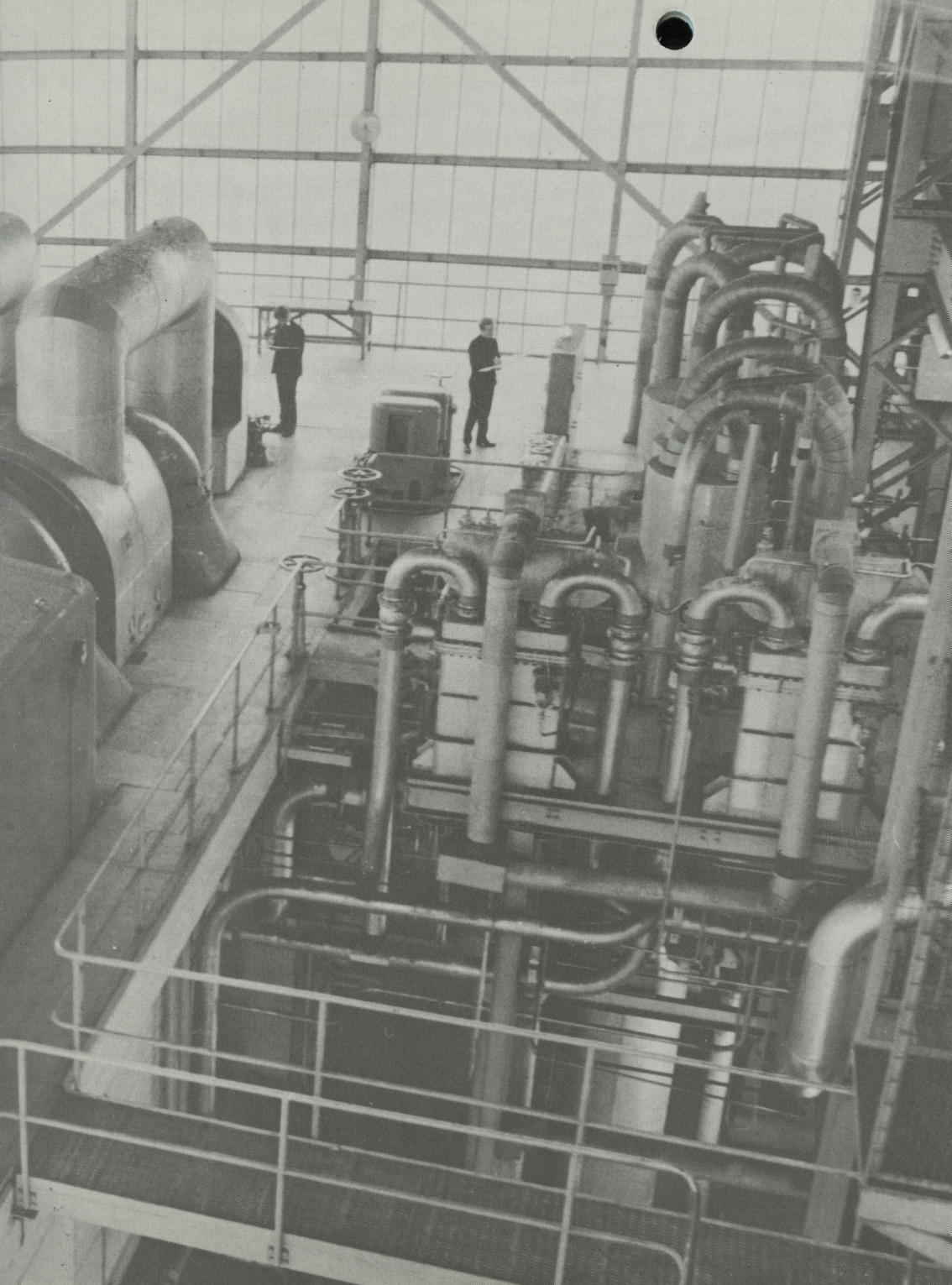
The boiler is fired by milled peat, harvested locally by Bord na Mona. The station uses about 280,000 tons of milled peat annually, costing half a million pounds.

The station feeds into the national grid servicing Athlone, Tynagh, Galway and Ferbane at 110 kV, and Killonan and Maynooth at 220 kV. The annual output of the station is approximately 200 million units.

It is planned to double the capacity of the Shannonbridge Generating Station by 1974. This will involve the provision of a further boiler/turbo-alternator unit of 40 megawatt capacity, together with auxiliary equipment, and the extension of the fuel handling plant and cooling water system.



Generating Hall



PRINCIPAL TECHNICAL PARTICULARS

Fuel

Milled peat	55 per cent moisture
Consumption	300,000 tons per annum
Bunker capacity	1500 m ³

Boiler

Maker	Walther & Cie
Normal rating	140,000 Kg./Hr.
M.C.R.	173,000 Kg./Hr.
Steam pressure	72 Kg./Cm ²
Steam temperature	512°C

Turbo-Alternator

Maker	C. A. Parsons
Type	Axial flow – Impulse Reaction
Steam pressure	63 Kg./Cm ²
Steam temperature	510°C
Capacity	40,000 kW
Speed	3,000 r.p.m.
Voltage	10,500

Transformer

47 MVA 10kV/220kV

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	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
Pigeon House "A" (Dublin City)		90	Screeb (Co. Galway)	<i>sod peat</i>	5
<i>oil</i>					
North Wall (Dublin City)		48	Cahirciveen (Co. Kerry)	<i>sod peat</i>	5
<i>oil</i>					
Ringsend (Dublin City)		270	Gweedore (Co. Donegal)	<i>sod peat</i>	5
<i>coal/oil</i>					
Marina (Cork City)		120			
<i>oil</i>					
Pigeon House "B"		268			
<i>oil</i>					
Great Island (Co. Wexford)		120			
<i>oil</i>					
			Total Capacity,		
			Hydro and Steam	1,678 Mw.	

Section of Generating Hall

