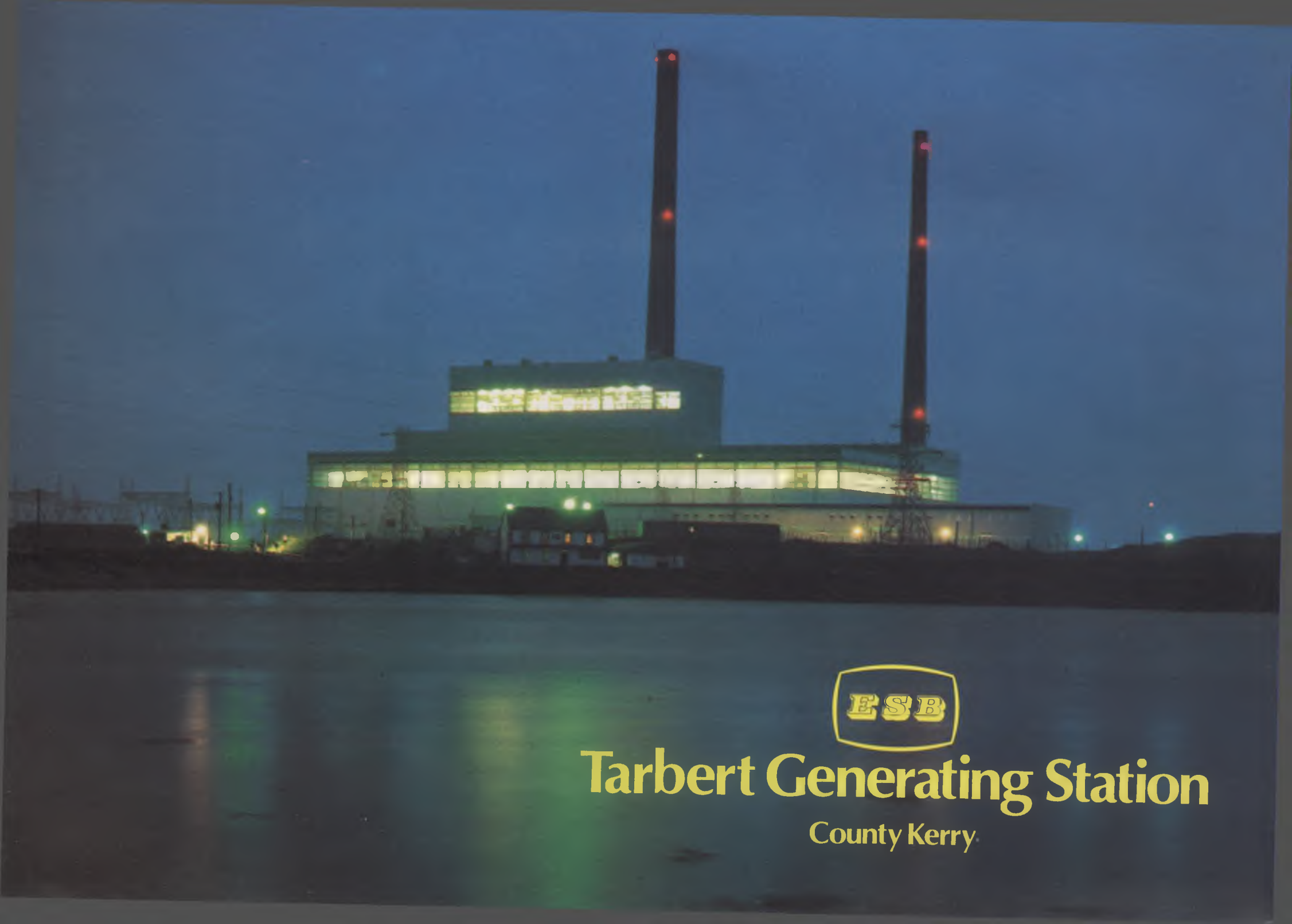

ESB

Tarbert Generating Station

County Kerry

The Station

Construction of the first phase of the Tarbert Generating Station commenced in October 1966 and the first 60MW unit went into service in September 1969. The second 60MW unit was commissioned in December 1969. The second development phase comprised two 250MW units. The first of these was commissioned in April 1976 and the second in April 1977. The station now has a total installed capacity of 620MW capable of producing 3,500 million units of electricity a year and it is the largest station on the ESB's system.

The first development was officially opened by An Taoiseach, Mr. Jack Lynch T.D., on June 19th 1970 and the official opening of the completed station was presided over by Mr. Desmond O'Malley, T.D., Minister for Industry, Commerce and Energy on October 10th 1977.

The capital investment in the total project is £55 million. During construction over 500 people were engaged at peak. The Station was designed by ESB staffs and the construction work and commissioning carried out under their supervision.

Tarbert is the first oil-fired station built by the ESB on the Shannon or its estuary. The other stations on the Shannon are: Arigna which has a capacity of 15MW and is fired on native coal; Lanesborough with a capacity of 60MW is fired on milled peat and sod peat. Shannonbridge which has a capacity of 80MW, also uses milled peat and, of course, there is Ardnacrusha, the original Shannon Scheme, which has a capacity of 85MW.

Above: The Generating Hall at Tarbert Station.

Left: High pressure steam and water piping.

Fuel Storage and Handling

The fuel used at Tarbert is a heavy residual fuel oil which is an oil refinery by-product. The oil is delivered to the station's own 300-foot jetty and pumped at a rate of 2,000 tonnes per hour into the storage tanks which have a capacity of 250,000 tonnes. This storage capacity is sufficient to maintain full station output for about 14 weeks.

The Boilers

The two M.A.N. boilers of the first development can produce 240 tonnes of steam per hour at a pressure of 81kg per cm^2 and at a temperature of 540°C. They are of a radiant furnace, two pass, natural circulation single drum design. Two M.A.N. boilers also provide steam in the second development, producing 780 tonnes per hour at a pressure of 169kg per cm^2 and at a temperature of 540°C.

Thermal Control

Starting, load control and shutdown of boiler and turbine plant can be carried out from the thermal control room, by means of the latest electronic equipment. Auxiliaries, such as fans, pumps and standby equipment are also operated from this location and full data on the minute-by-minute operations are transmitted to this location to ensure maximum efficiency and reliability.

The oil storage facility and jetty at Tarbert.

The outdoor transformer complex.

Generation

Steam is fed into two 60MW Brown-Boveri turbo-alternators and two 250MW 3-stage Alsthom turbo-alternators. The steam drives the turbines which are coupled to the generator units which produce electricity. These units are amongst the most modern and most efficient of their kind in the world.

Despatch

The station generates electricity at 10,000 volts, but this is 'stepped up' in the station's own transformers to 110,000 volts before being delivered into the national network. This is done, because it is more economical to transmit power over long distances at high, rather than low voltages.

The Control Room at Tarbert.

Aerial view of Tarbert Generating Station.

One of the many

The Tarbert Oil-Fired Generating Station is the 28th to be built by the ESB in this country. Of the total 9 are hydro, 4 operate on milled peat, 6 on sod peat, 1 on sod and milled peat, 1 on native coal, 6 on oil and 1 is a pumped storage station.

HYDRO STATIONS		Capacity MW.
River Shannon:	Ardnacrusha	85
River Liffey:	Pollaphuca	30
	Golden Falls	4
	Leixlip	4
River Erne:	Cathaleen's Fall	45
	Cliff	20
River Lee:	Inniscarra	19
	Carrigadrohid	8
River Clady:	Clady	4
		219
Turlough Hill (Pumped Storage)		292

STEAM STATIONS	Capacity MW.
North Wall (Dublin City)	
oil	48
Ringsend (Dublin City)	
coal/oil	270
Marina (Cork City)	
coal/oil	120
Great Island (Co. Wexford)	
oil	240
Portarlington (Co. Laois)	
sod peat	38
Tarbert (Co. Kerry)	
oil	620
Poolbeg (Dublin)	
oil	268
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	80
Arigna (Co. Roscommon)	
native coal	15
Miltown-Malbay (Co. Clare)	
sod peat	5
Screeb (Co. Galway)	
sod peat	5
Cahirciveen (Co. Kerry)	
sod peat	5
Gweedore (Co. Donegal)	
sod peat	5
	1861
Total Capacity, Hydro and Steam	**2540**

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