

MEMO BY HON. MINISTER OF AGRICULTURE, POWER AND
COMMUNICATIONS ON THE IMPLEMENTATION OF STAGES
2 & 3 OF THE NEW POWER/WATER STATION.

Hon. Ministers are aware that the Malta Electricity Board, on assuming the Administration of the Electricity concern, were faced with four problems namely the meeting of the rising demand for power during the current winter months, the taking of steps to avoid load shedding, as has already been reported to Cabinet, during the winter of next year and subsequent years until such time as the new Station is commissioned which is expected to be in operation towards the end of 1965, and the erection of the 1st Stage of the new Power/water Station, as well as of planning to meet future load growth as a result of the drive for industrialization and tourism after 1966.

The Board are hopeful that they will be in a position to meet the demand. They are also taking steps to purchase a gas turbine to be in commission in Autumn of next year for which approval from the World Bank has already been obtained by the Board. As regards the new Station good progress is being maintained.

From the report which was submitted by the Chief Electrical Engineer and which is supported by the Consultants' recommendations regarding the preview of the Power situation in 1966/67 namely subsequent to the commissioning of the new plant, it emerges that by the time the first stage of the new Power Station scheme is in operation, work should be in progress to implement Stages 2 and 3 of the whole scheme. It appears from the report that no further assistance will be forthcoming from the Naval Generating Station after 1965/66 as by that time their diesel sets will be totally obsolete. In spite of the services run-down the load on this Station continues to grow and is likely to show a marked increase when the load suppression policy banning the

use of electric power for heating purposes in Service Establishments is lifted. The Admiralty consider that their diesel generators which now provide supplementary power to the Civil Station would have approached the end of their serviceable life and maintenance costs would be prohibitive. Figure (a) shows the estimated load demands in winter 1966/67. A deficiency of firm capacity of 10 M.W. introduces the probability of load shedding if one of the 12½ M.W. sets is to be taken out of service during the winter season.

The emergency 6 M.W. gas turbine which the Board contemplate to purchase is expected to be commissioned by the winter of 1964; the deficiency of firm capacity in 1966/67 will be reduced but not eliminated. It follows, therefore, that in order to ensure that sufficient firm plant capacity is always available, action should be initiated now for the ordering of No. 3 unit namely a 25 M.W. set plus one boiler. This proposal was discussed extensively in the Malta Electricity Board at which discussion both the Chief Electrical Engineer, the ex-Chief Engineer Telephones, Mr. Attard, who is a Member of the Board and the Designate General Manager, Mr. Morison took a prominent part. It was agreed that the Board should approach Government stating the position as seen both by their technical officer and the Consultants and if Government agrees with the suggestion, the Colonial Office be approached and asked whether they were prepared to sponsor a second loan application to the World Bank possibly before Independence Day as otherwise before any further loan applications are considered, the State of Malta will have to be one of the Member Countries of the World Bank.

The estimated cost of Stage 2 of the project as given in the first application to I.B.R.D. is £1.285 millions, of which £.95 millions are attributable to the two distillers. Stage 3 which consists of a 25 M.W. set, one boiler and one distiller was estimated at £1.535 millions, of which £.5 millions is

attributable to one distiller. No doubt, Colonial Office would like to have the reports of the Chief Electrical Engineer and the Consultants' and should that be needed, the Board is prepared to submit same and to suggest that if further clarification is required, Colonial Office should approach our Consulting Engineers, Messrs. Preece, Cardew and Rider of London.

As regards the water requirements for Malta, Gozo and Comino by the year 1968/69 when the additional distillers are expected to be commissioned if action for a second loan is initiated shortly, an analysis of the overall water supply consumption over the past 23 years indicates an average increase of 7.6% and 8.0% for Malta and Gozo respectively. Projecting the water demand up to 1968/69 on the basis of the above-mentioned averages the total (Malta and Gozo) consumption works out to about 3,700 M.G.A. as against an actual overall consumption of 3,173 M.G.A. during 1962/63.

With the advent of distillation extraction from the Lower Water Table should be decreased in order to reduce unduly high salinities in some pumping stations. In three major stations the mean annual salinities during 1962/63 were 744, 652 and 712 p.p.m. (in parts chloride as chlorine per 1,000,000). It is therefore considered that the production of ground water should, at least, be decreased by some 550 M.G.A. from various pumping stations.

The additional impetus for water demand caused by the industrialisation, intensification of agriculture and tourism will, it is estimated mean about 150 M.G.A. over and above the normal increase at the end of 1968/69.

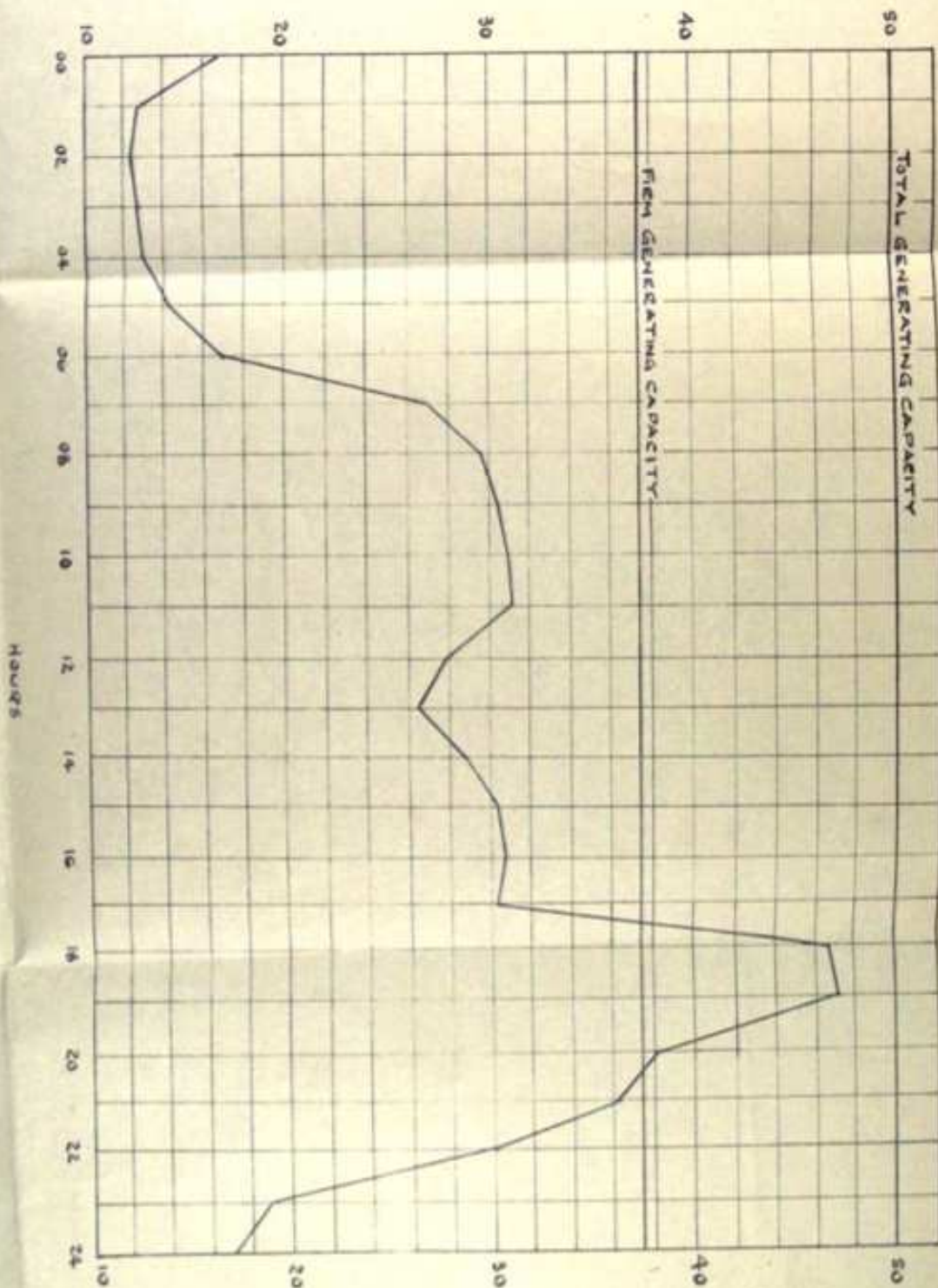
In all, therefore, the total anticipated demand by 1968/69 can be conveniently summarised thus

| | <u>End of 1968/69</u> |
|------------------------------------|------------------------------|
| | <u>Malta, Gozo & Com</u> |
| 1. Normal increase in demand | 440 M.G.A. |
| 2. Substitution of ground water | 550 M.G.A. |
| 3. Addition industrial etc. demand | 150 M.G.A. |
| | <hr/> |
| | 1,140 M.G.A. |
| | <hr/> |

The expected yield of the four distillers to be commissioned in Stages 1, 2 and 3 is 1,332 M.G.A. In other words, if all four distillers are in operation by the end of 1968/69 an arithmetical excess of yield over demand appears to the extent of 192 M.G.A. This surplus (about half the yield of one distiller) could cater for low ground water production in years of low rainfall or substitute for water extraction from the Lower Water Table to reduce salinity or increased agricultural use, etc. In any case, the small surplus would constitute a safe production reserve which is always most desirable.

11th November, 1963.

MEGAWATTS.



ESTIMATED DAILY LOAD CURVE WINTER 1966/67

MALTA ELECTRICITY BOARD

DCR. No 9/85/63

FIG 8/a

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