

MTIA 76/66

CONFIDENTIAL

MEMORANDUM FOR CABINET, BY THE HON M.T.I.A.
ON THE SUBJECT OF THE URGENCY OF THE IMMEDIATE
IMPLEMENTATION OF STAGE II OF THE MALTA POWER/
WATER STATION PROJECT

Under the provisions of Act No XXIV of 1963, the Malta Electricity Board is bound to promote and encourage the use of energy with a view to the economic development of Malta, and, for this purpose, it is bound to purchase and construct all appropriate installations. Notwithstanding any powers conferred on the Board by these provisions, the Board is, however bound to obtain the Minister's approval to embark upon any programme for expanding its facilities and services that will involve borrowing monies upon the credit of Malta or that will require a longer period than one year to complete.

2. Ministers are aware that the first Stage of the New Power/Water Station has now been completed. Its final phase, that is, the Water Distillation Plant, is now undergoing its thirty-day reliability test. If this is satisfactory, it will then be considered to be on commercial operation.

3. It cannot be expected that, at the time when the proposal for the erection of the Station was made, namely, about 7 years ago, the Consultants and the then Water and Electricity Department could have envisaged the rapid growth in the demand for Power which has since occurred, and is at present occurring, following the drive for industrialisation and tourism. In fact, when an appraisal of the growth of load was submitted to the World Bank in July 1961, the Bank agreed that at that stage they could only finance the first stage of the whole scheme and were not prepared to go beyond the figure of 7½ million dollars. Moreover, even if funds had been available, it would not have been wise for Government to proceed with the Second Stage unless it was sure that additional revenue would cover the additional capital expenditure involved.

4. However, following a survey carried out in January, 1965, by the Malta Electricity Board with the assistance of the Consultants and World Bank Engineers, it became evident that further plant would have to be in operation by 1968 if electricity supplies were not to be placed in serious jeopardy to the detriment of Industry, Tourism and the standard of living of the people of Malta. Accordingly, a report was submitted to Government in February, 1965, urging that a decision be reached with regard to the implementation of the Second Stage of the Malta Power/Water Station with as little delay as possible. In fact, Ministers were advised that tenders should have been let by February of that year if further plant had to be in operation by 1968.

5. Present experience has shown that the expected increase in load has, in fact, exceeded the estimates made at that time, and confirms that works should have been taken in hand then for additional capacity to be available in 1967/68.

6. In a Memorandum to Cabinet dated 28th August, 1965 (copied herewith as Appendix A) the estimated cost of the Second Stage, which comprises one 25-megawatt Turbo-Alternator, one Boiler together with ancillary plant, and an additional Water Distiller, was prepared by the Consultants and submitted to Government. Since then, Government has insisted that another Distiller should be added to Stage II. This will involve the purchase and installation of an additional Boiler, and the estimated cost for the Stage II extension plant now totals £3,053,000 as explained in attached Appendix B.

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7. Appendix C shows estimated demand in relation to capacity now available. The forecast of the system loads was prepared by the Consultants in 1966. To these loads have been added the additional demands which a committee, appointed by me to study the Consultants' Report, claimed ought to be taken into account, and this has been related to the generating capacity which the Electricity Board have at their disposal. I accept the forecast, as amended by my committee. It will be seen that in 1967/68 demand could be 4.8 megawatts in excess of the firm capacity, and the position gets rapidly worse so that in 1970/71 demand will exceed the installed capacity by 22.7 megawatts. Even if the equipment for Stage II were to be ordered immediately, the additional capacity that would thus be provided would still leave the Electricity Board with its firm capacity 22.7 megawatts short of anticipated demand in 1970/71 --- 26.2 megawatts if account is taken of the 3.5 megawatts that is estimated for Phase I of the Free Port Project.

8. It should be clearly understood that the comparisons with installed capacity have only been made to illustrate the extreme gravity of the position. In order to comply with statutory regulations, it is necessary for the Electricity Board to take out of operation, for maintenance and overhaul, each major item of generating plant once every year. There are now 6 Boilers, 7 Steam Turbo-Generators, and one Gas Turbine Generator; and the programme to cover these overhauls occupies a complete year. It can, therefore, be seen that the Board is never in a position to operate the whole of its installed plant. Account must also be taken of breakdowns which are inevitable. It will thus be seen that firm capacity is the total installed capacity less machinery which is out of commission for any reason, which in practice is taken to be the largest generating unit which at present is 12.5 megawatts. In line with universal practice, therefore, expected demand is related to firm capacity, which shows the situation to be even more critical.

9. An immediate start should therefore be made on the implementation of the Second Stage of the Power/Water Station Project.

10. Funds are available from the grant monies provided in the Financial Agreement with the British Government to meet the cost of the distillers (£790,000) and the distillate pipe line (£112,000). A further sum of £2,151,000 has therefore to be found to meet the cost of the generating plant (£1,880,000) Substations (£98,000) and of the building works (£173,000).

11. Several attempts have been made to find the necessary finance from sources other than the World Bank but as far as this Ministry is aware the results were negative. The World Bank is pressing Government for the increase of the rates and from the trend of the discussions held so far it is evident that the Bank would not be prepared to finance the offshore procurement element of the project unless there is a definite commitment for an increase in the rates. The Consultants too are of the view that the Board would not be able to meet its commitments and the servicing of the loan unless the electricity rates are increased by 7½%. The Bank, moreover, would not be in a position to consider a request for finance before Malta becomes a member of the International Monetary Fund and of the World Bank itself.

12. In the absence of financial assistance from friendly nations, the remaining alternative would be the issue of a local loan to cover the full cost of the second phase of the project. In any case, a local loan will have to be floated to cover the local costs of the scheme (estimated at £763,000). It is moreover the considered view of the Ministry of Trade, Industry and Agriculture that an increase in the electricity rates should not be allowed unless this is unavoidable, for the reason that any such increase might affect the industrial development of Malta. In view of these considerations and as it is essential to proceed immediately with the second phase of the project, it is the view of the Ministry of Trade, Industry and Agriculture that the financing of the full cost of the project, exclusive of the distillation unit, be found by the floating of a local loan.

13. Hon Ministers are therefore asked to consider whether they agree that a local loan of £2,151,000 should be raised for the financing of the second phase of the Malta Power/Water station project.

31st January, 1967.

MEMO FOR MINISTERS REGARDING THE IMPLEMENTATION
OF STAGE II OF THE POWER/WATER STATION

Ministers are aware that the first Stage of the New Power/Water Station Scheme is nearing completion and it is expected that this stage including the Distillation Plant will be in operation before the beginning of the next calendar year. It could not be expected, at the time when the proposal for the erection of the Station was put up, namely about five years ago, that the Consultants and the Electricity Department could have envisaged the rapid growth for demand of power which has since occurred and is at present occurring following the drive for industrialisation and tourism. In fact, when an appraisal of the growth of load was submitted to the World Bank the latter agreed that at this stage they could only finance the first stage of the whole scheme and were not prepared to go beyond the figure of 7½ million dollars. Moreover, even if funds are available, it would not have been wise for Government to proceed with the Second Stage unless it was sure that additional derived revenue would have covered the additional capital expenditure involved. However, following a survey carried out in January of this year by the Malta Electricity Board with the assistance of the Consultants and World Bank Engineers, it resulted that further plant must be in operation by 1968 if electricity supplies are not to be placed in serious jeopardy to the detriment of Industry, Tourism and Standard of Living of the people of Malta. Accordingly, a report was submitted to Government in February of this year urging that a decision be reached with regard to the implementation of the Second Stage of the Malta Power Station with as little delay as possible. In fact, Ministers are advised that Tenders should have been let by February of the current year if further plant were to be in operation by 1968. The estimated cost of the Second Stage which comprises one 25 Megawatt Turbo-Alternator, 1 Boiler together with Ancillary Plant and including an additional Distiller would be as per attached statement prepared by the Consultants.

It is known that to obtain a second I.B.R.D. Loan it would be first necessary for Malta, now that it is independent, to become a member of the I.B.R.D. This entails a Membership Subscription on which a decision has not yet been reached. Accordingly it is most unlikely that a decision would be reached in time to permit Tenders to be let in the current year as recommended by the Malta Electricity Board. It should be brought to the notice of Ministers that the ex-Admiralty Power Station is in a very deteriorated condition and the Board has already been approached as to whether it would be ready to take over the whole of this load as much as 10 M.W. rising to 14 M.W. in 1968-69 and 19 M.W. in 1976. Such proposal should not be discarded lightly as both the Board and Government would benefit and in fact it has always been held by Government that there should be only one supply Authority on the Island and that the monopoly should be in the hands of Government. This makes it all the more necessary for a decision to be taken on the implementation of the Second Stage of the Malta Power/Water Station. As already explained a Second World Bank Loan would retard matters considerably and the alternative would therefore have to be to finance the offshore and local elements

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of the Second Stage out of the Second Five Year Plan. It should be stressed that there is no point in proceeding with development works namely construction of the Law Courts, erection of the Opera House, setting up of new Industries and Hotels unless adequate power is available to meet the growing demand.

Ministers are therefore invited to decide whether Government should approve the Board's proposal to go ahead with the Second Stage immediately and to indicate the sources of funds.

A.A. PALZON
CHAIRMAN
MALTA ELECTRICITY BOARD

28th August, 1965

L-ARKIVJI NAZZJONALI TA' MALTA

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MALTA 'B' POWER STATION
STAGE II EXTENSION PLANT
ESTIMATED COST

<u>Contract Ref.</u>	<u>Description</u>	<u>Cost - £</u>
1027FWS/81	Structural Steelwork, sheet steel cladding, glazing etc.	90,000
1027FWS/82	Civil Engineering Works comprising:- extension of Turbine Hall and annexes to line 19, cw culverts, Rock excavation, foundations, addition of 3rd floor to Departmental building, finishing, painting and dayworks.	295,000
1027PWS/83	1 - 25 M.W. Passout Turbo-Alternator and auxiliary plant	580,000
1027FWS/84	2 - 220,000 lb/hr oil-fired boilers, chimney, flue-gas ducting, HP-2P and general service pipework, pumps, tanks, pressure reducing and desuperheating equipment, control and instrumentation equipment and ancillary plant.	570,000
1027PWS/85	2 - 1 million Imperial gallons per day Flash distillers, Boiler feed make-up Evaporator, transfer pumps and ancillary equipment.	855,000
1027PWS/88	33KV., 3.3K.V. and 415 volt Switchgear and control equipment for Malta 'B' Power Station and 33 K.V. Switchgear for Mosta and Msierah Substations.	110,000
1027PWS/89	Main and auxiliary power cables, multicore control cables and station earthing.	32,000
1027PWS/90	Main power transformers and station auxiliary transformers for Malta 'B' Power Station and step-down Power Transformers for Mosta and Msierah Substations.	95,000

<u>Contract Ref.</u>	<u>Description</u>	<u>Cost - £</u>
1027PWS/91	Extensions to Station Lighting System	12,000
1027PWS/93	Distillate pipeline to Ta' Qali Reservoir	108,000
	Engineering and Site Supervisions	146,000
	Contingencies:-	
	Civil Works - 40,000	
	Mech/Elect. Works - 60,000	
	Price Escalation - 60,000	
		160,000
		<u>3,053,000</u>

If the estimated cost is apportioned among the main categories, the respective costs inclusive of engineering, site supervision and contingencies are approximately as follows:-

Stage II Extension to Power/Water Station

<u>Generating Plant</u>	1,880,000
<u>Distillers Only</u>	790,000
<u>33 K.V. Substations</u>	98,000
<u>Distillate Pipeline</u>	112,000
<u>Extensions to Departmental Building</u>	173,000
Total Estimated Cost	<u>£3,053,000</u>

APPENDIX "C"

Estimated demand in relation to capacity now available

Year	Capacity		Maximum Demand		Total	Capacity in relation to estimated Total Maximum Demand () = Shortage	
	Installed	Firm	Per Consultant's Report	Additional per M.T.I.A. Committee		Installed	Firm
1966	56	43.5	33.5	-	33.5	22.5	10.0
1967	56	43.5	37.1	2.9	40.0	16	3.5
1968	56	43.5	41.7	6.6	48.3	7.7	(4.8)
1969	56	43.5	46.9	12.2	59.1	(3.1)	(15.6)
1970	56	43.5	52.1	16.5	68.6	(12.6)	(25.1)
1971	56	43.5	58.1	20.6	78.7	(22.7)	(35.2)
Stage II	25	12.5				(2.3)	(22.7)

N.B. Free Port load of 3.5 MW is not included