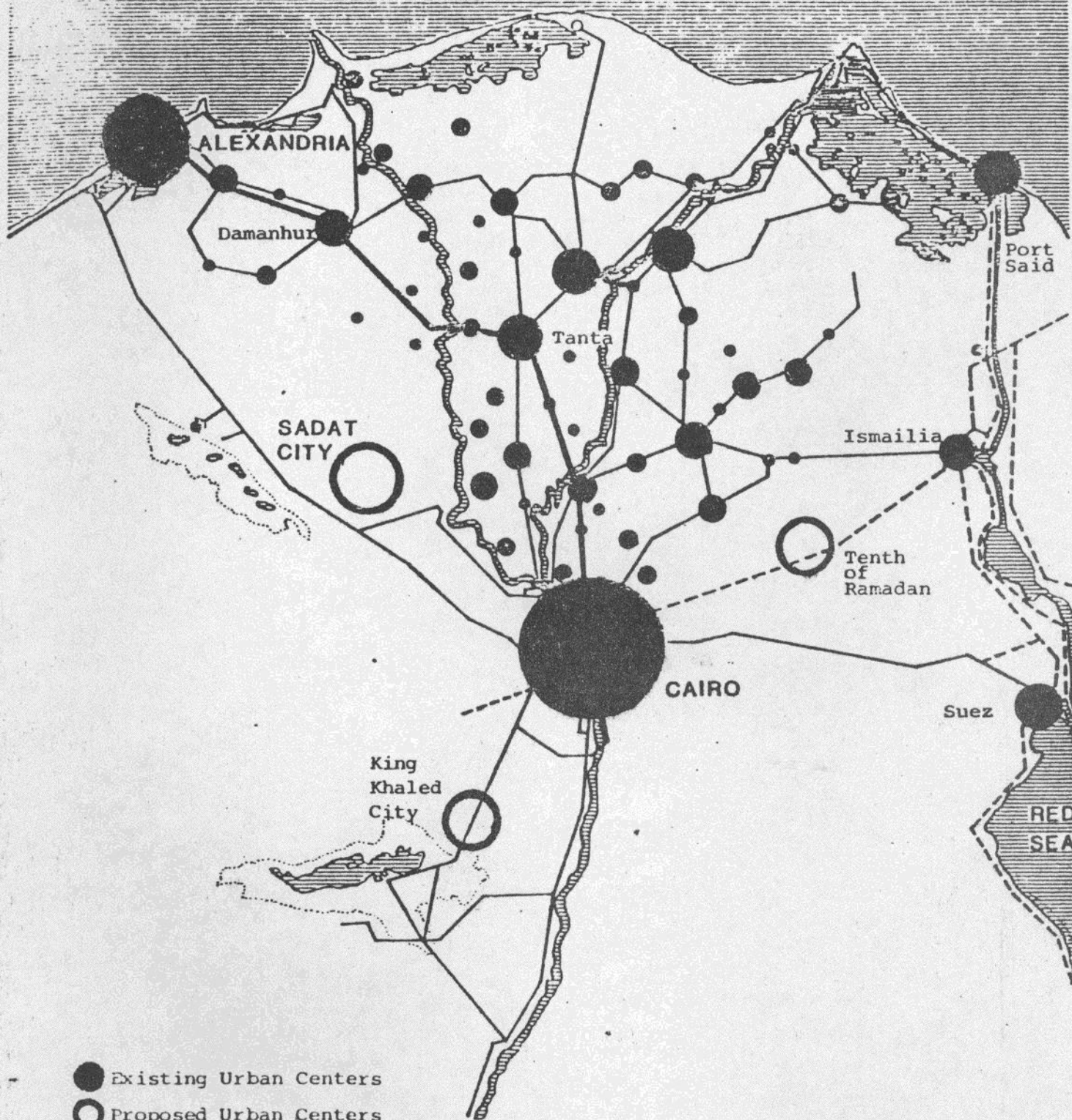


MEDITERRANEAN SEA



00B
URBAN CENTERS IN LOWER EGYPT
1976

6.2.4 Other New Cities.

A. 15th of May City.

The chosen area is a (10 kms Square) in approximately 5 km east Helwan city. The new city will consist of 30,000 residential units for the population of 150,000 inhabitants.

The load Demand by the end of year 1982 is estimated to be 40 MW.

EEA has started construction of 66/11 kv S/St (2 x 25 MVA), and will be connected to National Grid Through the existing, double circuit 66 kv from wadi-Houf/Tebbin 5.

B. Helwan New Community:

The chosen area is located opposite to 15th of May city, and it is planned for a first stage population of 36,000 (by the year 1983) with an ultimate of 100,000 (by the year 2000).

Load Demand up to the year 2000

Year	1983	1985	1990	1995	2000
Peak Load	11.25	16.50	28.50	37.50	45.00

C. 6th of October City.

The, chosen area is located at Western South Cairo/
Alex., Desert Road (km 26) and North Baharia Oasis
Road (km 32).

The city is expected to have a population of at last 350, 00
inhabitants by the year 2000, to provide at least 105, 000
jobs.

a) Load and Energy Requirements (As per Ministry of
Development and New Communities.

Year	1985	1990	1995	2000
Population	24, 000	126, 000	215, 000	350, 000
Economically Active Population	13, 000	35, 000	60, 000	105, 000
Peak Demand (MW)	15	35	70	100
Electric Energy Consumption of Industries (GWh/year)	17	45	95	165
Total Electric energy Consumption(Gwh/year)	52	145	310	620

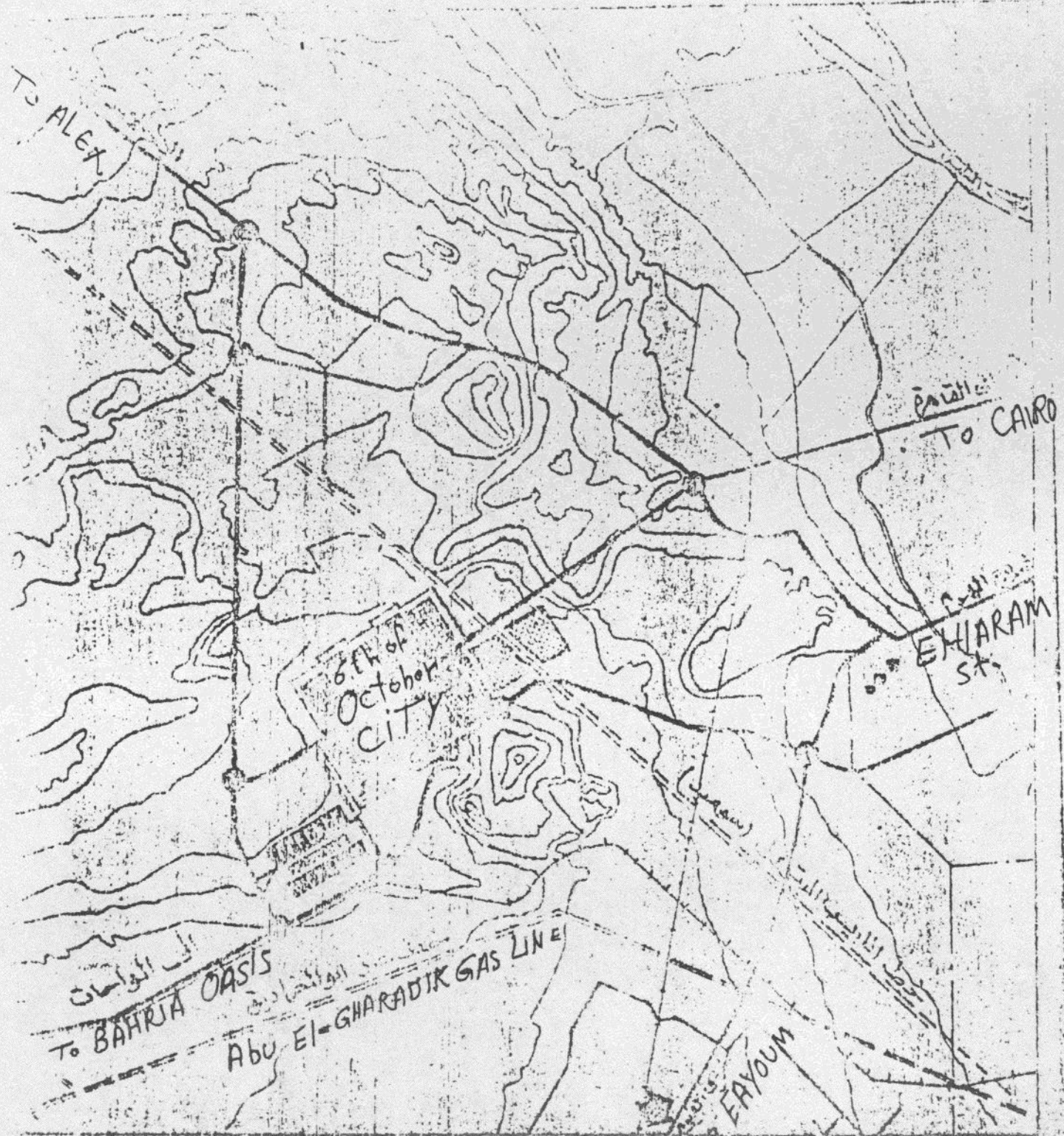
b) Population & Load Requirements (As per Consulting
Eng. EL SAID ALLAM 1979.

Year	1985	1990	1995	2000
Population	70, 000	130, 000	220, 000	350, 000
Industrial Demand MW	6	12	18	24
Residential, services and others (MW)	7	26.5	41	60
Total (MW)	23	28.5	59	84

From above, we see that discrepancy is excluding the early stage of housing plan (till 1985), is of the order of 15%.

Source of Supply

To supply the required load, it is necessary to construct a high tension network (one transformer S/S 220/20 kv. of adequate capacity) and it will be connected to the National Grid from ELHARAM S/S 220/66 kv. Further investigation for power supply of city is still needed as the picture becomes more clear.



موقع مدينة ٦ أكتوبر
6th of October
CITY
LOCATION

El-Amal City (*)

Location : East Maady City (Katamia Zone)

El - Obour City (*)

Location : Eastern North Great Cairo (El Khanka Zone)

El-Amria City

S/S 66/11 kv, 2 x 25 MVA, it will be connected a Ground Cable 66 kv. to the existing, El Amria S/S 220/66/11 kv.

6.2.5 The Coastal Zone of the Western Desert

This zone extends from Alexandria Westwards along the Northern coast till the West border of Egypt at the town of Salum.

* Further investigation is needed as the picture becomes more clear.

A. The population of the N.W. Coast will develop as follows.

Planning Section	1975	1980	1985	2000	2000 ^(a)
- Salum	8000	8000	9,000	10,000	10,000
- Sidi Barrani	14,000	15,500	18,500	21,500	68,000
- Marsa Matruh	44,000	56,500	95,000	252,000	260,000
- El Dab'a	15,500	18,500	54,500	92,500	98,000
- El Hammam	30,000	51,500	75,000	190,000	190,000
- Neguila	9,000	10,000	12,000	141,500	35,000
- Bagush	10,000	13,500	28,000	95,000	120,000
Total....	130,000	173,500	292,000	675,000	781,000

(a) The population plus tourists in the summer season.

B. Since the coastal zone includes a large number of small towns and therefore have small power supply diesel units of different capacities as follows :

	<u>Capacity</u>	<u>Peak Loads</u>
- Burg El Arab	630 KW	200 KW
- El Hammam	630 KW	200 KW
- El Dab'a	420 KW	150 KW
- Marsa Matruh	3,090 KW	2,500 KW
- Sidi Barrani	280 KW	140 KW
- Salum	490 KW	200 KW
Total	5,540 KW	

- C. The plans for extending the National Grid to this coastal area on different stages. The first stage from (1977-1981) and the second stage from (1982 - 1986).

Projects Plan (1977-1981):

- Total Power Capacity will be 34,800 kw
(Mostly of Gas Turbines & Diesel Units)
- The length of M. V. 11 kv lines are about 190 km
- The length of L. V. distribution lines are about 100 km

Plan of new projects (1982-1986)

- Total Power Capacity will be 56,200 kw
(Mostly of Gas turbines & Diesel units).....
- The lengths of the 220 kv lines are about ... 120, km
- The lengths of the 66 kv lines are about 80 km
- The lengths of the M. V. 11 kv lines are about 100 km
- The lengths of L. V distribution lines about.. 200 km

It is planned that during the (1985-2000) period, a main trunk transmission line at 220 kv will be extended westwards, the power plant of Marsa Matruh will be further extended by 3 x 10 MW additional units, the 66 kv distribution system will reach around El-Dab'a will be installed (100 km) and a great lengths of M. V. lines

(200 km) 11 kv, L.V. distribution network will be added to serve the Region, the total lengths are around (100 km).

These projections are tentative and subject to the implementation of the development plans in other economic related sectors.

D. Demand forecast for regions in the Western Desert.

As indicated in table (1) the demand is expected to increase from 3.5 MW (year 1975) to about 50 MW year 1985 and to 160 MW by the year 2000 (Sidi-Kreir petrochemical industry is not included).

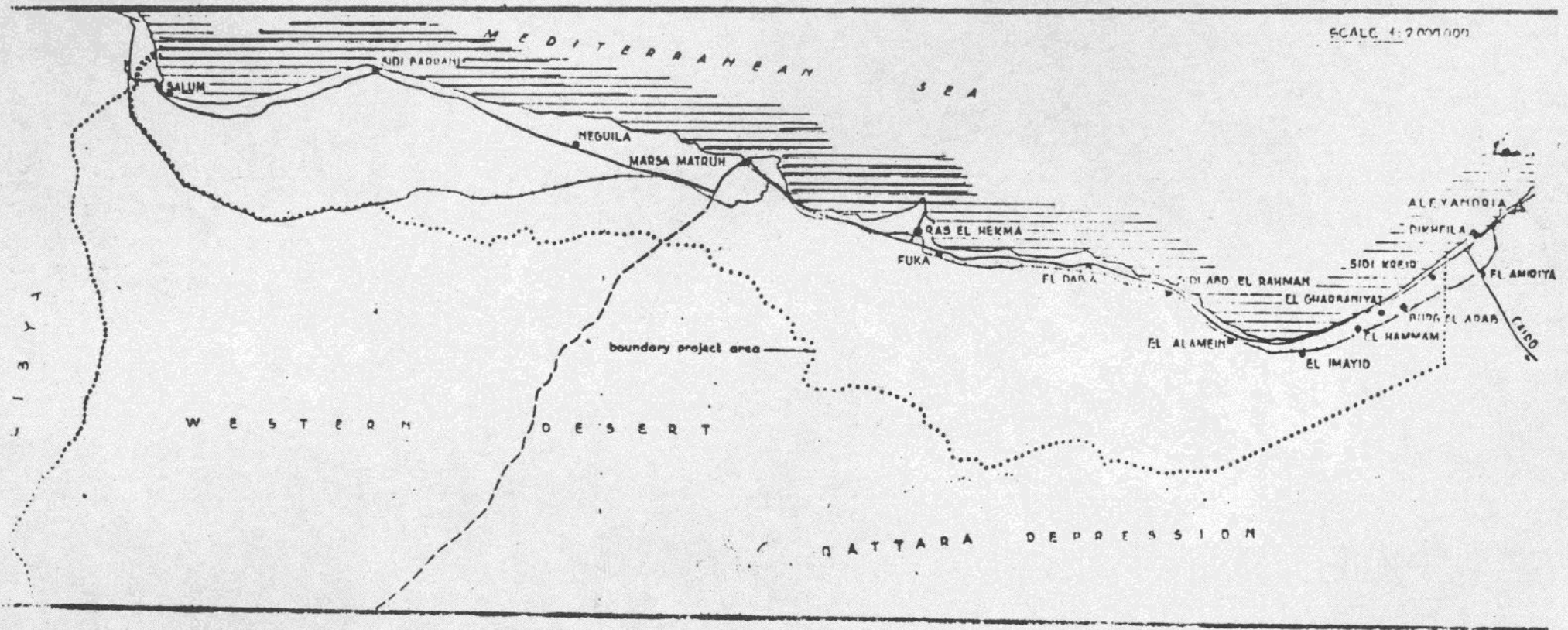
Estimated Electric Energy consumption of industries
(in GWH).

Year	Marsa Matruh area	El Dab'a and Bagoush area	Sidi Kreir and El-Hamman area	Total
1980	16.3	4.9	84	105.2
1985	27.0	9.0	673	709
1990	44.8	12.7	1,275	1332.5
1995	77.4	20.3	1,892	1989.7
2000	130.0	32.1	1,984	2146.1

Table (1) Demand forecast for regions in the Western Desert

Sector	Main town	Estimated potential demand in MW							
		1975		1980		1985		2000	
		evening	day	evening	day	evening	day	evening	day
Canal up to Sidi Barrani									
I	Sidi Kreir	-	-	9	9	75	75	235	235
II	El Hammam	1.4	0.5	8.2	9	13	17	47	60
III	El Dab'a	0.8	0.4	3.3	4.6	8	30	20	72
IV	Bagush	0.15	0.1	1.5	1.3	8	8	42	43
V	Marsa Matruh	3	1.5	7.5	10	14	18	52	68
VI	Negula	0.1	0.05	0.3	0.1	1	0.5	4	2
VII	Sidi Barrani	0.25	0.12	0.65	0.3	1.3	0.6	8	4
VIII	Salum	0.2	0.1	0.2	0.1	0.3	0.15	0.5	0.25
		6	3	31	34	121	149	409	484
Canal up to El Dab'a only									
I	Sidi Kreir	-	-	9	9	75	75	235	235
II	El Hammam	1.4	0.5	8.2	9	13	15	47	45
III	El Dab'a	0.8	0.4	3.3	4.6	8	8	19	17
IV	Bagush	0.15	0.1	1.5	1.3	8	6	39	28
V	Marsa Matruh	3	1.5	7.5	10	14	18	51	67
VI	Negula	0.1	0.05	0.3	0.1	1	0.5	2	1
VII	Sidi Barrani	0.25	0.12	0.65	0.3	1.3	0.6	2.3	1.1
VIII	Salum	0.2	0.1	0.2	0.1	0.3	0.15	0.5	0.25
		6	3	31	34	121	123	396	394

LOCATION MAP



6.2.6 Red Sea Governorate

Location : With its 850 Kilometers coast, it has the largest maritime window. It is bordered to the north by the suez and Cairo governorates and to the west by those of Benisuef, Minya, Asyut, Sohag, Qena and Aswan. It stretches South as far as the Sudanese border.

Purpose : The three general goals of the scope of services are :-

- Rapid economic development.
- Absorption of substantial additional population.
- Improvement of the economic and social circumstances of the existing population and future migration.

Population :

Year	1976	2000
Population	26 , 000	110 , 000

Elec. Energy :* At 1975

Town	Capacity (MW)	Source
Hurghada	4, 5	Fueloil
Safage	0, 6	"
Ras Charib	, 6	Gas
Quseir	0, 6	Fueloil
	0, 6	"
	5	"
	12	"

* Up to 1980

Town	Capacity (MW)	Energy
Hurghada	2 x 10	Gas turbine
Safaga		(1980)
Ras Gharib	10	Gas turbine
Total	30	

* Preliminary simulation of the power need (2000)

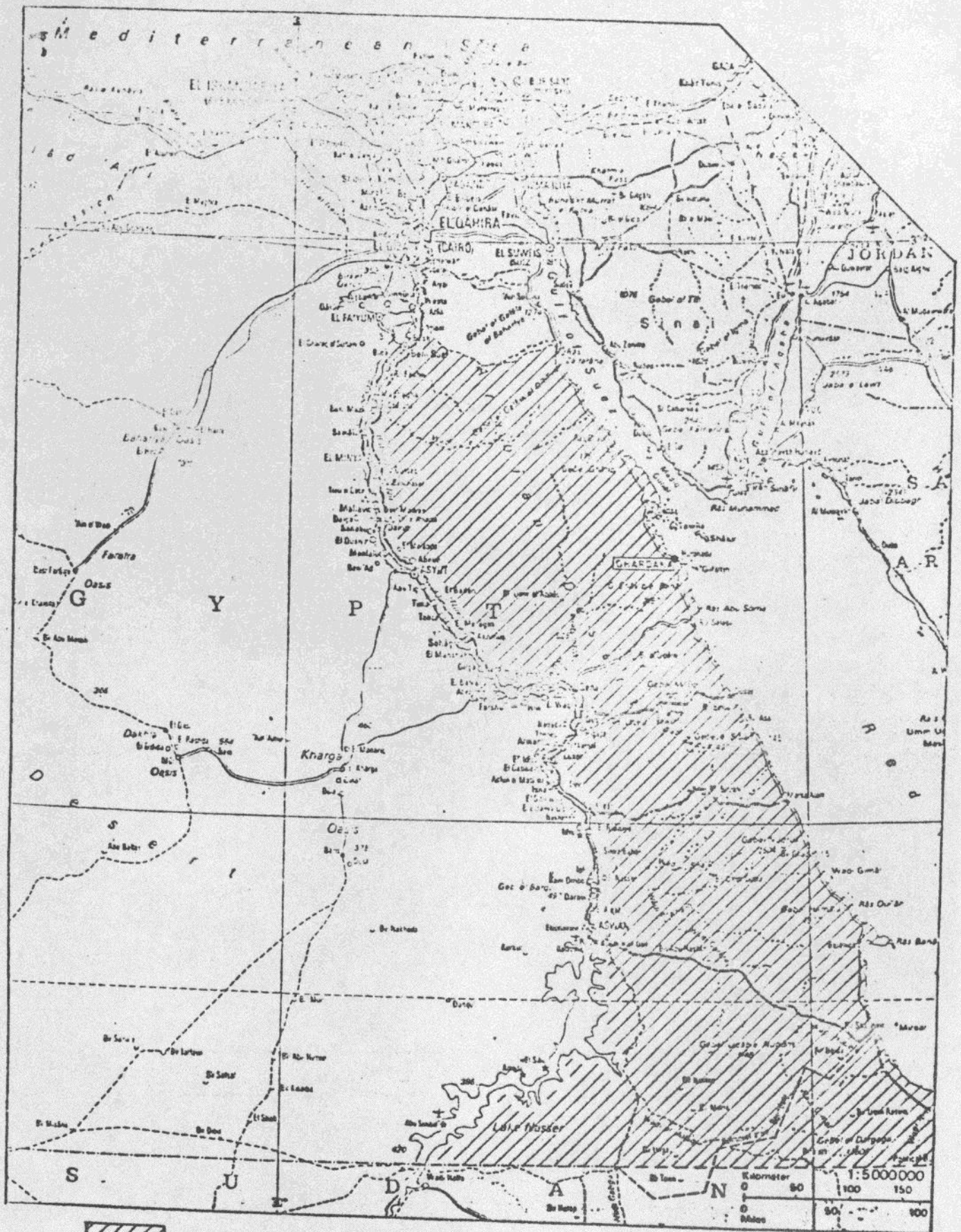
Types of Hypothesis	1 st Hyp.	2 nd Hyp.	3 rd Hyp.
Population	200 000	1000 000	3500 000
Assumed Consumption percapita/yr	350 kwh	350 kw	350 kwh
Corresponding need Gwh Year	70	350	1225
Estimated peak Load (MW)	23	120	400

Proposals for regional developments :-

New Projects To Be Considered

- Development of mechanical construction for production platforms and facilities. Maintenance of old facilities.
- Direct use of gas in the Ras Gharib and Ras Shukeir areas for -
 - . Cement factories or mud products factories which could export to eastern countries.
 - . Electricul power generation.
 - . Distribution of gas to the south of the Governorate with possible underground storage for strategic conservation.

- Study of refinery and petrochemical units for export and for the Upper Egypt market in order to increase links between Upper Egypt and the Red Sea coast.
- Depollution service company.



RED SEA GOVERNORATE