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OED SPECIAL STUDIES

85035--003

*Power - Terms of Reference, Initial Documents
Comparative Review*

Population Supplied by Utilities of Power Review



 **Archives**

 **30248178**

A1994-141 Other #: 11 205083B

Power - Terms of Reference - Initial Documents - Comparative Review - Population
Supplied by Utilities of Power Review

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SCR :	<u>Resid.</u>	<u>Total</u>	
1970:	4,371.3	5,185.9	(84.3%)
1960:	2,302	2,990*	

~~on 1 MOAR?~~

TURNAR : 1970

	<u>Resid.</u>	<u>Total</u>	
2,271.9 Light Rio :	786.150 (382.93)	(1,227.793) (451.93)	2,271.9 (4871) 4,664.1
5214.2 Light S.P.	1,566.318 (580.68)	(1,842.768) (683.11)	5,214.2 (3707) 14,064.6
1013.1 CEMIG :	337.152 (86.24)	(418.094) (106.95)	959.5 (2558) 3751.1
221.1 CPFL	444.224 (36.86)	(534.136) (44.33)	221.1 (0.0830) 2664.9
8.9 CELG	90.416 (2.36)	(68.195) (2.82)	8.3 (0.0261) 318.1
91.3 ESCELSA	66.152 (19.13)	(77.854) (22.52)	88.2 (0.2892) 305.0
432.3 CBEE	168.029 (116.31)	(186.589) (129.16)	432.3 (0.6922) 624.5

Total consumers : (1,224.51) (1,440.82) ~ 6,129 (7,211)
 served by turnar
 size of households : 1960
 1970 : 3.1586 + 1.8468 = 5.005
 sub people

Populations

Populations served

	<u>1960</u>	<u>1970</u>	<u>Min</u>		<u>Max</u>	
			<u>1960</u>	<u>1970</u>	<u>1960</u>	<u>1970</u>
DUB :	1.634	2.065	0.406	1.328	0.510	1.472
NEB :	7.00	9.265	0.809	2.214	1.065	2.944
ECG :	2.650	3.388	0.171	0.378	0.225	0.496
EELPA :	19.200	22.900	0.113	0.411	0.215	0.781
SEGRA :	4.900	7.500	3.017	6.549	3.017	6.549
FURNHS :	30.511	40.469	11.050	18.140	14.352	21.522
CFE :	34.920	50.650	9.568	26.976	10.885	32.821
Total	100.815	136.237	25.134	55.976	30.279	66.585

27.706 (27.48%)
61.281 (64.98%)

26.85 (27.45) 45%

Tolley 4021.
Farag 4703

Max Features:
Phaters.

Population served by utilities: 0.927

	1960	1970	
In 1961, 58.2% of all <u>households</u> <u>123,750</u> in Addis had electricity (Average size households: 3.5)			
<u>EELPA</u> : No. of consumers (000's)	32.4	66.6 (1965)	112.6
X Population (total, mln)		22.512 (1968)	o.w. 7.55% urban (1970)
X Total population of country	21.91 (1963)	24.14 (1970)	25.0 (1970)
<u>NEB</u> : No. of consumers (000's)	180.6		469.2
X No. of households (total, 000's) in W.M.	1,152	1,198 (1961)	1,484
X NEB-PRHE: Total no. of consumers (000's)	245.9*	5.933?	586.5* (29.8)
7.48 (1957) Population of Malaysia (total, mln)	8.37 (1961)	10.6 (1969)	10.9 (1970)
6.28 (1957) Population of West Malaysia (mln)	7.11* (1961)	8.655 (1968)	85.1% of total country (9.0 for 1969)
<u>PUB</u> : No. of consumers (000's)	98.2	133.1	267.6
X No. of households (000's)	308.2	319.9	380.0
X No. of residential consumers (000's)	76.7*	108.0*	241.4*
Population of Singapore (total, mln)	1.634	1,775	2.017 (1969)
Size of household.	5.3	5.5	5.4
<u>VRA-EGGT</u> : No. of consumers (000's)	39.0 (1959)	3.00	99.3
X Population in area served by EGG (mln)	2.650 (1960)	1.4 (1966)	1.5 (1970)
No. of residential consumers (000's)		17% total pop.	16% tot. pop.
Population (mln) total	6.73 (1960)	7.34 (1963)	8.5 (1968)
EGG: Residential consumers / total consumers in %	76.2%	76.1%	76.2%
<u>SEGBA</u> : No. of residential consumers (000's)	862	1331 (1962)	1,871
X Population in area served by (mln)	4.9 (1961)	6.63 (1962)	7.5 (1968)
Population in SEGBA's area (mln)	4.9 (1961)	6.63 (1962)	7.5 (1968)
No. of consumers of CIAE			.3 (1968)
Population Argentina	20.014 (1960)		23.364 (1970)
<u>FURNAS-BRAZIL</u> UN: in 1960: 13,475,500 households, average size 5.1, o.w. 38.7% with elec.			
Urban 1960, 7 6,550,800			4.8, 71.5%
S.C.R. population	30,511 (1960)	39,983 (1970)	41,527* (1969) or 40,941
No. of residential consumers (000's) in SCR	2,302 (1960)	4,004 (1969)	4,371 (1970)
Furnas Scales as % of SCR:	0% in 1962	2.7 (1963)	40.5
Urbanization rate %	17.5 (1960)	57.3% (1960)	65.8% (1970)

Pop. + Household size Mexico 1950 1960 1970
 Pop. + Household size Argentina Urban or GBA 1960 1962 1970
 Pop. + ~~Brazil~~ Southern Central Region 1960 1963 1970
~~VRA~~ Ghana Southern 1960 1965 1970
 Ethiopia 1960 1961 1970
 Malaysia 1950 1960 1970

CFE Smbart / Total Smbart = $\frac{1962}{48\%}$ $\frac{1970}{90\%}$ $\frac{1960}{52.2\%}$

CFE - Mexico UN: in 1960, 7,640,000 households, average size 5.5
 Population: 34.92 (1960) (3.5% p.a. 63/68) 50.65 (1970)
 In 1970: 7,828,700 households, average size 6.1

CFE Sales / Total Sales: 1960: 60.3% 1962: 55.5% 1970: 92.7%
 Consumers: Residential + Agric. + Farms
 1962: 2427.6
 1970: 2449.9
 1960: 4419.2
 1966: 5206.2
 1970: 5369.8
 1970: 1928
 1970: 1970
 4.93 Households / U.S. Africa
 No changes in time

Along lake (?) (out?) above Kumeri.

	West.	Central	Volta	Abanti	Eastern	Greater Accra	Total
VRA: 1960	0.626	0.751	0.777	1.109	1.094	0.692	6.727
Population 1970	0.768	0.892	0.947	1.477	1.263	0.249	8.545
	+	+		+	+		
	1/2			1/2			

Ethiopia: Rural: 4.65 Households
 1970: Urban: 3.65
 Urban population (except Entrea):
 Farms: 1960: 5 / 11,510
 1963: 4.9 / 13,480
 1970: 4.7 / 20,544 + Population covered.
 No of residential customers: 0.164 (1970)
 Urban population

5.69	2.44		
5.494	4.625		
4.824	7.984		
0.585	4.729		
2,204.3	9,155.2		
1969	1970		
		1970	
			384
			2
			768

Baldwin (Population) VRA Cacho (ECOA) : X 3511

directly or indirectly

(million) Population served Population served as % of total population in area

Δ 1963-70

	<u>1960</u>	<u>1963</u>	<u>1970</u>	<u>Δ 1960-70</u>	<u>1960</u>	<u>1963</u>	<u>1970</u>
<u>PUB :</u>							
0.734 (Resid. Cons) <u>Min</u>	0.406 ✓	0.594	1.328 ✓	0.922 ✓	24.9 ✓	33.8	63.5 ✓
0.740 (All Cons) <u>Max</u>	0.520 ✓	0.732	1.472 ✓	0.952	31.9 ✓	41.6	70.4 ✓

Δ 1958-70 NEB :

5.9 household size constant thru 1958-1970

	<u>1960</u>	<u>1958</u>	<u>1970</u>	<u>Δ 1960-70</u>	<u>1960</u>	<u>1958</u>	<u>1970</u>
1.535 (75% Cons) <u>Min</u>	0.809 ✓	0.689	2.214 ✓	1.405 ✓	16.2 ✓	14.6	23.9
1.849 (All Cons) <u>Max</u>	1.065 ✓	0.919	2.944 ✓	1.879 ✓	21.3 ✓	19.5	31.8

Δ 1965-70 VRA-ECG

Construct 5/ Households.

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>Δ 1960-70</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>
0.108 (Resid. Cons) <u>Min</u>	0.171 ✓	0.270	0.378 ✓	0.207 ✓	6.5 ✓	9.0	11.2
0.141 (All Cons) <u>Max</u>	0.225 ✓	0.355	0.496 ✓	0.271 ✓	8.5 ✓	11.8	14.6 ✓

Δ 1965-70 EELPA

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>Δ 1960-70</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>
0.173 (All Cons) <u>Min</u>	0.113 ✓	0.238	0.411 ✓	0.298 ✓	as % urban 8.7-16.6	16.1-30.6	22.5-42.5
0.329 (Cons x 1.89) <u>Max</u>	0.215 ✓	0.452	0.781 ✓	0.566 ✓	as % total 0.6-1.1	1.1-2.1	1.8-3.4

Δ 1962-70 SEGBA

3.5 Household size constant thru 1960-1970

	<u>1960</u>	<u>1962</u>	<u>1970</u>	<u>Δ 1960-70</u>	<u>1960</u>	<u>1962</u>	<u>1970</u>
<u>Min</u>							87.3 ✓
1.891	3.017 ✓	4.658	6.549 ✓	3.532 ✓	61.6 ✓	70.2	(6.54/7.5)
<u>Max</u>					(3.017/4.9)	(4.658/6.63)	90.3 ✓
							(1.871/1.871+0.2)

FURNAS

	<u>1960</u>	<u>1963</u>	<u>1970</u>	<u>Δ 1960-70</u>	<u>1960</u>	<u>1967</u>	<u>1970</u>
<u>Min</u>	0 ✓	ε	5.082 ✓	5.082 ✓	36.2 ✓	X	44.8 ✓
<u>Max</u>	0 ✓	ε	5.979 ✓	5.979 ✓	47.0 ✓	X	53.8 ✓

CFE

	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>Δ 1960-70</u>	<u>1950</u>	<u>1960</u>	<u>1970</u>
Population dir. or indir. served as % of total population in area: <u>Min</u>	X	5.535 ✓	28.581	23.046 ✓	X	27.4 ✓	53.3
<u>Max</u>	X	6.500 ✓	30.366	23.766 ✓	X	31.1 ✓	64.8 ✓

<u>1960-1970</u>	<u>1960</u>	<u>1970</u>	<u>Δ 1960-70</u>	<u>1960</u>	<u>1970</u>
24.8 40.8	<u>Total : Min</u>	10.051	44.543	34.492	24.9
28.9 46.9	<u>Max</u>	11.642	48.587	36.945	30.0
Non-weighted average, %	<u>Average</u>	10.846	46.565	35.719	Weighted Average, %