Administration

Electricity Council

J.B. Maree
(Chairman)
P.J. Botes
T.R. Castle
Dr. J.W.L. de Villiers
A.B. Dickman
Dr. R.A.P. Fockema
B.J. Groenewald
J.F.W. Haak
Prof. D. Konar
Prof. I.J. Lambrechts
F.J. Malan
I.C. McRae
Dr. D.C. Neethling
G.Y. Nisbet
R.B. Savage
Dr. C.L. Stals
Prof. H.C. Viljoen
R.C. Webb
Prof. J.L. Weyers

Management Board

I.C. McRae
Chief Executive
Chairman of the Management Board

J.L. Rothman
Senior General Manager

H. Edeling
General Manager, Commercial and Estates

J.S. Els
General Manager, Strategic Planning

R.A. Forbes
General Manager,
Distribution and Marketing

A.J. Ham
General Manager, Engineering

L.C. Harper
General Manager, Finance
and Data Processing

Dr. G.F. Lindeque
General Manager, Human Resources

P.J.T. Oosthuizen
General Manager, Services

E.H. Ralph
General Manager, Strategic Technology

P. Semark
General Manager, Generation

Head Office
Megawatt Park, Maxwell Drive,
Sunninghill Park, Sandton

Postal address
P.O. Box 1091,
2000 Johannesburg
Republic of South Africa

The information relevant to Eskom in this Yearbook may be reproduced subject to acknowledgement of source.

Additional copies of this Statistical Yearbook may be obtained from the Communication Manager at the above address.
Hierdie publikasie is ook in Afrikaans verkrygbaar.

Contents

1 **Foreward**
2 **Contents**
3 **Eskom Statistics – 1987**
4 Highlights of the year
5 Table 1: Financial statistics
6 Table 2: Cash flow statement
7 Table 3: Growth in key statistics
8&9 Table 4: Eskom operating statistics
10&11 Table 5: Summary of operations over 38 years
12&13 Table 6: Power station operating statistics
14 Table 7: Power stations on order
15 Table 8: Coal-fired power stations: 12 with highest thermal efficiency 1987
16 Table 9: Power stations in service at 31 December 1987
17 Table 10: Maximum one-hour demand, MW
18 Table 11: Transmission and distribution equipment in service
19 Table 12: Transmission and distribution equipment: by Region
20&21 Table 13: Electricity sent out and sold
22&23 Table 14: Customer categories by distribution region
24&25 Table 15: Eskom total GW.h sold
26&27 Table 16: Revenue per kW.h by category of customer
28&29 Table 17: Sales to mining sector
30 Table 18(a)&(b): Sales to industry
31 Table 19: Total number of farm supplies
32 Table 20: Number of customers by category
33 **Escom Maps**
34 Map 1: Eskom's interconnected generation system
35 Map 2: Eskom's distribution regions in the RSA
36 Map 3: Eastern Natal Distribution Region
37 Map 4: Southern Cape Distribution Region
38 Map 5: Eastern Cape Distribution Region
39 Map 6: Western Cape Distribution Region
40 Map 7: Northern Cape Distribution Region
41 Map 8: Orange Free State Distribution Region
42 Map 9: Western Natal Distribution Region
43 Map 10: Eastern Transvaal Distribution Region
44 Map 11: Central and Southern Transvaal Distribution Region
45 Map 12: North-eastern Transvaal Distribution Region
46 Map 13: Western Transvaal Distribution Region
47 **South African statistics**
48 Table 21: Production and consumption of electricity in the Republic of South Africa
49 Table 22: Gross production of electricity by type of ownership
50 – 63 Table 23: South African municipal statistics
64 Table 24: Installed generating capacity in Southern Africa 1985
65 Table 25: Net consumption of electricity in Southern Africa 1980 to 1985
66 Table 26: Production of electricity in Southern Africa
67 Table 27: African net installed generating capacity – 1985
68 Table 28: African production of electricity – 1985
69 Table 29: African production trade & consumption of electricity – 1985
70 Table 30: World electricity production – total net production

Eskom's Statistical Yearbook

Eskom's statistical yearbook has become a valuable addition to the library of information on South Africa's economic performance.

The electricity industry in any country provides an important barometer of economic growth and development.

The statistics contained in this book bear heartening testimony to the evolving potential, strength and resilience of South Africa.

I.C. McRAE
Chief Executive
Chairman of Eskom Management Board
June 1988

Eskom Statistics – 1987

Highlights of the year

	1987	1986*	1985	1984	1983	1982	Change 1986-87 %	Average yearly increase 1983-87 %
Financial								
Revenue (R million)	**7 046**	5 845	4 625	3 832	3 302	2 695	20,5	21,2
Charges against revenue (R million)	**6 344**	5 064	4 585	3 995	3 405	2 753	25,3	18,2
Net expenditure on fixed assets (R million)	**3 750**	3 770	4 757	3 719	2 757	2 741	0,5	6,5
Fixed assets at cost (R million)	**31 603**	28 140	23 969	19 261	15 591	12 858	12,3	19,7
Average price per kW.h sold (cents)	**5,75**	4,98	4,12	3,58	3,36	2,80	15,5	15,5
Average cost per kW.h sold (cents)	**5,18**	4,32	4,08	3,74	3,47	2,86	19,9	12,6
Average coal cost per ton (rand)	**17,11**	14,87	13,25	12,55	12,44	11,75	15,1	7,8
Electricity sold by Eskom (mill. kW.h)	**122 524**	117 353	112 306	106 904	98 251	96 136	4,4	5,0
Operating statistics								
Total electricity sent out by Eskom (mill. kW.h)	**132 774**	126 766	122 494	117 086	108 321	104 920	4,7	4,8
Electricity available for distribution (mill. kW.h)	**129 545**	123 748	119 229	113 898	105 404	102 516	4,7	4,8
Coal burnt in Eskom power stations (Mt)	**65,8**	58,9	59,5	58,7	55,0	55,2	11,7	3,6
Water consumed in Eskom power stations (Mℓ)	**274 804**	262 372	275 716	269 868	255 654	265 933	4,7	0,7
Peak demand on integrated Eskom system (MW)	**20 001 (26/6/87)**	18 278 (20/6/86)	17 852 (12/7/85)	17 296 (15/6/84)	15 639 (10/8/83)	15 532 (2/7/82)	9,4	5,2
Eskom plant in service at 31 December								
Installed capacity (MW)	**31 261**	28 086	25 716	24 514	22 949	21 749	11,3	7,5
Assigned sent-out rating (MW)	**29 618**	26 682	24 359	23 168	21 673	20 523	11,0	7,6
Transmission lines:								
765 kV (km)	**871**	434	—	—	—	—	100,6	0
533 kV (DC)(km)	**1 030**	1 030	1 030	1 030	1 030	1 030	0	0
400-220 kV (km)	**18 533**	17 981	17 488	16 842	16 017	15 251	5,3	4,4
165 kV and below (km)	**166 883**	151 056	142 528	130 425	121 343	111 535	10,5	8,4
Staff employed at 31 December	**56 830**	60 800	66 000	64 560	62 420	58 850	-6,5	-0,7

**The 1986 figures have been restated as prescribed by the Eskom Act of 1987. Figures prior to 1986 have not been restated and the effect on the average yearly increase (1983 – 1987) would be minimal.*

Financial statistics

	1987	1986	1985	1984	1983
Electricity sold					
Electricity thousand GW.h sold	**122**	117	112	107	98
Annual increase – thousand GW.h	**5**	5	5	9	2
Annual increase – %	**4,41**	4,49	5,05	8,81	2,20
Electricity revenue (R'million)	**7 046**	5 845	4 625	3 832	3 302
Annual increase – %	**20,55**	26,39	20,69	16,05	22,50
Cents per kW.h	**5,75**	4,98	4,12	3,58	3,36
Annual increase – %	**15,46**	20,95	14,89	6,65	19,86
Charges against revenue (R'million)					
OPERATING EXPENDITURE	**3 244**	2 634	2 152	1 989	1 701
Annual increase – %	**23,16**	22,40	8,20	16,93	22,91
Depreciation	**963**	811	524	393	336
Annual increase – %	**18,74**	54,77	33,33	16,96	13,08
INTEREST AND FINANCE CHARGES	**2 137**	1 619	1 211	718	521
Annual increase – %	**32,00**	33,69	68,67	37,81	86,69
Net income	**702**	781	738	732	744
Total assets (R'million)					
FIXED ASSETS **	**26 970**	24 363	21 483	17 213	13 871
Assets in commission	**20 649**	16 398	12 737	9 767	7 275
Works under construction	**6 075**	7 753	8 552	7 271	6 434
Equipment and vehicles **	**246**	212	194	175	162
NON -CURRENT ASSETS	**2 068**	1 780	1 805	1 375	793
STORES MATERIALS AND FUEL	**705**	730	593	470	448
DEBTORS	**729**	620	487	398	360
CASH	**171**	114	72	170	(34)
Financing (R'million)					
CURRENT LIABILITIES	**1 857**	1 536	1 441	1 113	832
LOANS AND OTHER DEBT.	**21 475**	19 462	17 621	13 861	10 686
RESERVES	**7 311**	6 609	5 378	4 652	3 920
Debt/Equity Ratio	**2,9**	2,9	3,3	3,0	2,7

*Due to the change in the basis of accounting as prescribed by the Eskom Act of 1987, prior year's figures have been restated.
**At Book value

Cash flow statement for the year ended 31 December 1987

(Figures in R million)	**1987**	1986
Cash generated from operations		
Net operating income	**2 839**	2 400
Non-cash items	**1 000**	1 016
	3 839	3 416
Cash released from working capital	**251**	(88)
	4 090	3 328
Net financing costs	**(2 379)**	(2 125)
Net cash flow from operations	**1 711**	1 203
Cash effect of investment activities	**(3 301)**	(3 095)
Financing requirements	**(1 590)**	(1 892)
Increase in cash	**(57)**	(42)
	(1 647)	(1 934)
Cash effect of financing activities		
Loans and facilities raised		
Local	**1 761**	1 282
Foreign	**1 391**	375
Foreign currency swaps	**366**	768
	3 518	2 425
Loans and facilities repaid		
Local	**(1 276)**	(117)
Foreign	**(595)**	(374)
	(1 871)	(491)
Finance raised	**1 647**	1 934

Table 3

Growth in key statstics (1983 = 100)

	1983	1984	1985	1986	**1987**
Electricity thousand Gw.h sold	100	109	114	119	**125**
Revenue	100	116	140	177	**213**
Operating expenditure	100	117	127	155	**191**
Cost of fuel	100	117	123	145	**191**
Depreciation	100	117	156	241	**287**
Interest and finance charges	100	138	232	311	**410**
Operating surplus	100	98	99	105	**94**
Fixed assets at book value	100	134	175	225	**284**
Assets in Commission	100	131	168	216	**271**
Works under construction	100	113	133	121	**94**
Equipment, vehicles, etc at book value	100	108	120	131	**152**
Stores, material and fuel	100	105	132	163	**157**
Non-current assets	100	173	228	224	**261**
Current liabilities	100	134	173	185	**223**
Loans and other debt	100	130	165	182	**201**
Reserves	100	119	137	169	**187**

Eskom operating statistics

	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Plant performance															
Total power station capacity, installed rating, MW	**31 261**	28 086	25 716	24 514	22 949	21 749	20 049	18 349	15 974	14 434	13 556	12 444	11 242	10 692	10 142
Total power station capacity, assigned sent-out rating, MW	**29 618**	26 682	24 359	23 168	21 673	20 523	18 989	17 339	15 056	13 595	12 756	11 688	10 522	10 002	9 482
Peak demand on integrated Eskom system, MW	**20 001**	18 278	17 852	17 296	15 639	15 532	14 674	13 668	12 855	11 490	10 735	10 085	9 185	8 552	7 350
Average station availability[1]	**79,2**	78,5	77,5	74,9	71,9	74,3	74,2	74,7	78,8	77,4	78,5	82,3	85,0	83,7	82,5
Station load factor, per cent[2]	**54,3**	55,5	58,0	58,1	55,6	59,3	62,2	57,8	60,9	60,7	61,9	66,8	68,6	66,3	62,6
Integrated Eskom system load factor, per cent	**73,9**	77,3	76,2	75,0	76,9	75,3	77,6	77,5	76,4	77,3	75,8	76,1	76,5	75,1	77,3
Coal burnt, thousands of tons	**65 787,0**	58 915,9	59 488,6	58 703,6	55 010,2	55 198,4	53 903,7	46 755,0	43 264,9	39 589,5	37 505,6	37 257,4	34 231,7	30 891,4	27 907,9
Coal burnt, kg/kW.h sent out	**0,535**	0,515	0,522	0,533	0,546	0,551	0,563	0,568	0,580	0,574	0,576	0,579	0,567	0,560	0,563
Average heat rate of coal-fired station, MJ/kW.h sent out	**11,00**	10,95	11,26	11,45	11,57	11,82	12,01	12,16	12,33	12,44	12,55	12,66	12,59	12,56	12,65
Average heat content of coal (as received), MJ/kg	**20,48**	21,19	21,52	21,38	21,11	21,39	21,25	21,34	21,22	21,61	21,78	21,87	22,21	22,42	22,47
Overall thermal efficiency, sent-out basis	**32,7**	32,9	32,0	31,4	31,1	30,5	30,0	29,6	29,2	28,9	28,7	28,4	28,6	28,7	28,5
Average coal cost, R/ton	**17,11**	14,87	13,25	12,55	12,44	11,75	9,71	8,12	6,96	6,67	6,22	5,39	4,05	2,92	2,39
Average coal cost, c/kW.h sent out	**0,9155**	0,7665	0,691 6	0,669 2	0,679 3	0,647 1	0,547 3	0,461 4	0,404 5	0,382 4	0,358 2	0,312 2	0,229 5	0,163 7	0,134 8
Electricity output															
Total electricity sent out in South Africa, million kW.h[3]	**134 751**	130 083	125 962	120 835	112 366	109 536	106 135	99 905	92 615	84 812	79 352	75 381	70 111	66 412	60 700
Eskom electricity available for distribution as a percentage of South African total	**96,2**	95,1	94,7	94,3	93,8	93,6	93,9	93,0	92,8	91,7	89,8	89,4	87,8	84,7	82,0
Total electricity sent out on Eskom system (Eskom stations and purchased), million kW.h[4]	**132 774**	126 766	122 494	117 086	108 321	104 920	100 425	93 021	86 037	77 826	71 291	67 414	61 533	56 259	49 770
Total sent out from Eskom stations, million kW.h	**132 507**	126 511	121 987	116 581	103 295	102 769	97 824	83 362	75 643	70 902	67 050	66 188	61 498	56 251	49 759
Sub-total, from coal-fired stations, million kW.h	**122 947**	114 298	113 941	110 094	100 738	100 217	95 675	82 342	74 485	69 004	65 114	64 309	60 400	55 141	49 570
Sub-total, from hydro-electric stations, million kW.h	**1 617**	1 623	624	560	595	1 016	1 653	992	1 144	1 887	1 924	1 853	1 098	1 110	189
Sub-total, from pumped-storage station, million kW.h	**1 774**	1 785	2 107	1 994	1 957	1 519	415	—	—	—	—	—	—	—	—
Sub-total, from diesel and gas-turbine stations, million kW.h	**2**	2	0	8	5	17	81	28	14	11	12	26	—	—	—
Sub-total, nuclear power station, million kW.h	**6 167**	8 803	5 315	3 925	—	—	—	—	—	—	—	—	—	—	
Total purchased by Eskom and sent out on Eskom system, million kW.h	**267**	255	507	505	5 026	2 151	2 601	9 659	10 394	6 924	4 241	1 226	35	8	11
Total consumed by Eskom, million kW.h[5]	**3 229**	3 018	3 265	3 188	2 917	2 404	712	71	58	52	27	—	—	—	—
Total available for distribution, million kW.h	**129 545**	123 748	119 229	113 898	105 404	102 516	99 713	92 950	85 979	77 774	71 264	67 414	61 533	56 259	49 770
Total sold, million kW.h[6]	**122 524**	117 353,0	112 305,9	106 904,1	98 251,1	96 135,9	93 844,0	87 539,3	80 582,8	72 780,4	67 125,4	63 355,7	57 869,2	52 585,1	46 578,4
Growth in kW.h sales, per cent	**4,4**	4,5	5,1	8,8	2,2	2,4	7,2	8,6	10,7	8,4	5,9	9,5	10,0	12,9	11,8
Employees															
Total number at 31 December	**56 830**	60 800	66 000	64 560	62 420	58 850	52 080	47 490	43 690	41 040	39 112	36 915	33 999	29 891	28 559
Ratio number/million kW.h sold	**0,464**	0,518	0,588	0,604	0,635	0,612	0,555	0,542	0,542	0,564	0,583	0,583	0,588	0,568	0,613
Fixed Assets															
In commission at 31 December, Rand '000	**24 986**	19 907	15 497	12 058	9 219	7 689	6 323	5 604	4 256	3 565	2 851	2 312	2 009	1 847	1 699
Ratio Rand '000/million kW.h sold	**203,93**	169,64	137,99	112,79	93,83	79,98	67,38	64,02	52,81	48,98	42,47	36,49	34,71	35,13	36,48

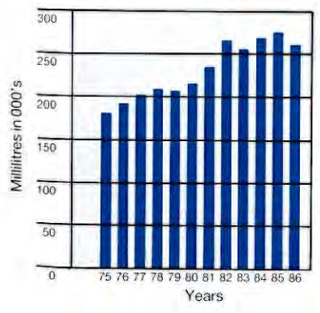
[1] Capacity hours available x 100/total capacity hours in year
[2] kW.h sent out x 100/(assigned sent-out rating x hours in year)
[3] Electricity sent out by Eskom and municipalities which generate all or part of their electricity requirements
[4] Includes Eskom electricity sent out to neighbouring countries
[5] In respect of pumped-storage facilities and synchronous condensor mode of operation.
[6] Difference between electricity available for distribution and electricity sold is due to transmission losses.

Summary of operations over 38 years

	Coal-fired power stations						
	Coal used					Coal cost	
Year	Thousands of tons	Average heat content (as received) MJ/kg	Consumption sent-out basis kg/kW.h	Average heat rate sent-out basis MJ/kW.h	Overall thermal efficiency sent-out basis %	Average R/ton	c/kW.h sent out
1950	6 323,4	22,72	0,869	19,74	18,2	0,84	0,072 9
1951	6 662,9	22,72	0,855	19,43	18,5	0,98	0,084 0
1952	7 113,4	22,75	0,865	19,68	18,3	1,20	0,103 7
1953	7 393,9	23,08	0,837	19,32	18,6	1,33	0,111 6
1954	8 024,9	23,06	0,805	18,56	19,4	1.41	0,113 6
1955	8 999,7	22,89	0,788	18,04	20,0	1,52	0,120 1
1956	9 688,5	22,96	0,765	17,56	20,5	1,62	0,123 6
1957	10 220,6	22,79	0,750	17,09	21,1	1,69	0,126 6
1958	10 784,1	22,73	0,743	16,89	21,3	1,77	0,131 2
1959	11 548,7	22,44	0,732	16,43	21,9	1,82	0,132 9
1960	12 512,6	22,52	0,723	16,28	22,1	2,03	0,146 6
1961	13 194,9	22,39	0,722	16,17	22,3	2,10	0,151 6
1962	13 955,5	22,22	0,719	15,98	22,5	2,09	0,150 7
1963	14 721,1	22,15	0,708	15,68	23,0	2,11	0,149 2
1964	15 654,7	22,15	0,692	15,33	23,5	2,07	0,143 0
1965	16 726,7	22,39	0,680	15,23	23,6	2,09	0,142 3
1966	16 982,3	22,20	0,666	14,79	24,4	2,23	0,148 6
1967	18 307,7	22,44	0,645	14,47	24,9	2,30	0,148 2
1968	19 133,9	22,63	0,620	14,03	25,6	2,33	0,144 6
1969	19 982,9	22,73	0,595	13,52	26,6	2,37	0,141 2
1970	21 630,6	22,97	0,580	13,32	27,0	2,26	0,130 8
1971	23 416,2	23,30	0,576	13,42	26,8	2,25	0,129 7
1972	24 952,8	22,89	0,571	13,07	27,5	2,25	0,128 5
1973	27 907,9	22,47	0,563	12,65	28,5	2,39	0,134 8
1974	30 891,4	22,42	0,560	12,56	28,7	2,92	0,163 7
1975	34 231,7	22,21	0,567	12,59	28,6	4,05	0,229 5
1976	37 257,4	21,87	0,579	12,66	28,4	5,39	0,312 2
1977	37 505,6	21,78	0,576	12,55	28,7	6,22	0,358 2
1978	39 589,5	21,61	0,574	12,44	28,9	6,67	0,382 4
1979	43 264,9	21,22	0,580	12,33	29,2	6,96	0,404 5
1980	46 755,0	21,34	0,568	12,16	29,6	8,12	0,461 4
1981	53 903,7	21,25	0,563	12,01	30,0	9,71	0,547 3
1982	55 198,4	21,39	0,551	11,82	30,5	11,75	0,647 1
1983	55 010,2	21,11	0,546	11,57	31,1	12,44	0,679 3
1984	58 703,6	21,38	0,533	11,45	31,4	12,55	0,669 2
1985	59 488,6	21,52	0,522	11,26	32,0	13,25	0,691 6
1986	58 915,9	21,19	0,515	10,95	32,9	14,87	0,766 5
1987	65 787,0	20,48	0,535	11,00	32,7	17,11	0,915 5

	Power station output (sent-out basis)							
Coal-fired stations GW.h	Hydro-electric stations GW.h	Pumped-storage station GW.h	Diesel and gas-turbine stations GW.h	Nuclear station GW.h	Total power station output GW.h	Total power station capacity assigned sent-out rating at 31 December MW	Average power station plant load factor sent-out basis %
7 276	7	—	4	—	7 287	1 290	64,7
7 797	6	—	3	—	7 806	1 361	66,1
8 220	6	—	1	—	8 227	1 454	66,9
8 838	7	—	—	—	8 845	1 635	65,5
9 971	6	—	—	—	9 977	1 846	66,4
11 419	6	—	—	—	11 425	2 145	65,9
12 663	7	—	—	—	12 670	2 498	61,2
13 634	6	—	—	—	13 640	2 555	61,1
14 511	5	—	—	—	14 516	2 748	62,0
15 774	3	—	—	—	15 777	2 983	62,6
17 306	2	—	—	—	17 308	3 091	65,2
18 282	2	—	—	—	18 284	3 226	66,2
19 401	3	—	—	—	19 404	3 406	65,8
20 789	4	—	—	—	20 793	3 788	65,7
22 634	5	—	—	—	22 639	4 077	65,2
24 583	—	—	—	—	24 583	4 181	67,4
25 504	—	—	—	—	25 504	4 377	67,1
28 371	—	—	—	—	28 371	5 328	66,8
30 843	—	—	—	—	30 843	5 800	62,9
33 598	—	—	—	—	33 598	6 441	62,1
37 321	—	—	—	—	37 321	7 060	62,9
40 645	94	—	—	—	40 739	8 373	61,3
43 662	813	—	—	—	44 475	8 849	59,6
49 570	189	—	—	—	49 759	9 482	62,5
55 141	1 110	—	—	—	56 251	10 002	66,3
60 400	1 098	—	—	—	61 498	10 522	68,6
64 309	1 853	—	26	—	66 188	11 688	66,8
65 114	1 924	—	12	—	67 050	12 756	61,9
69 004	1 887	—	11	—	70 902	13 595	60,7
74 485	1 144	—	14	—	75 643	15 056	60,9
82 342	992	—	28	—	83 362	17 339	57,8
95 675	1 653	415	81	—	97 824	18 989	62,2
100 217	1 016	1 519	17	—	102 769	20 523	59,3
100 738	595	1 957	5	—	103 295	21 673	55,6
110 094	560	1 994	8	3 925	116 581	23 168	58,1
113 941	624	2 107	0	5 315	121 987	24 359	58,0
114 298	1 623	1 785	2	8 803	126 511	26 682	55,5
122 947	1 617	1 774	2	6 167	132 507	29 618	54,3

Water consumption



Power station operating statistics for the year ended 31 December 1987

Power station	Sent-out rating on 31 December 1987 MW	Energy sent out million kW.h	Maximum demands 1 hour sent out MW	Station load factor[1] %	Specific water consumption ℓ/kW.h sent out	Availability[3] %	Overall thermal efficiency % sent out	Fuel burnt tons	kg of coal/kW.h sent out	Heat content of coal (as received) MJ/kg	Station heat rate MJ/kW.h sent out
Coal-fired stations											
Arnot	1 955	11 699	2 106	68,3	2,43	85,0	33,8	5 796 949	0,496	21,43	10,66
Camden	1 520	6 489	1 337	48,7	2,26	58,8	28,2	3 651 380	0,563	22,66	12,75
Duvha	3 450	23 336	3 461	77,2	1,91	84,3	34,9	10 975 913	0,470	21,90	10,32
Grootvlei	1 130	5 096	1 052	51,5	1,74	63,6	29,3	2 988 630	0,586	20,81	12,27
Hendrina	1 900	11 939	1 849	71,7	2,45	77,5	31,7	6 036 644	0,506	22,45	11,36
Hex River	103	13	63	1,5	3,67	96,3	20,2	17 075	1,295	28,23	17,82
Highveld	412	435	237	12,1	4,38	79,1	24,8	316 371	0,727	19,72	14,52
Ingagane	465	1 690	387	41,5	3,96	91,7	27,7	975 910	0,577	22,39	13,00
Komati	891	4 703	886	59,3	3,05	72,3	26,5	3 020 733	0,642	21,12	13,60
Kriel	2 850	16 014	2 877	64,1	2,02	80,5	34,6	8 214 082	0,513	20,26	10,40
Lethabo	2 372[2]	10 475	2 389	71,3	1,72	76,5	34,9	7 121 341	0,680	15,09	10,31
Matimba	1 230[2]	1 678	1 217	46,4	0,79	81,1	32,7	925 719	0,552	18,66	11,00
Matla	3 450	18 816	3 545	62,3	2,13	87,5	35,2	9 610 309	0,511	20,02	10,24
Salt River	228	20	113	1,0	3,34	90,4	15,5	19 241	0,962	24,03	23,17
Taaibos	440	507	239	13,2	5,45	89,1	23,3	388 642	0,767	20,07	15,48
Tutuka	2 340[2]	7 690	2 140	41,5	1,80	77,8	35,8	3 684 790	0,479	20,84	10,05
Umgeni	216	17	116	0.9	8,58	98,4	15,8	15 706	0,924	24,90	22,81
Vaal	270	426	125	18,0	4,92	82,8	15,8	531 233	1,247	18,28	22,81
Vierfontein	336	396	180	13,4	4,43	81,6	17,4	395 086	0,998	20,78	20,73
West Bank	74	9	50	1,3	3,02	99,5	13,7	9 005	1,001	26,23	26,32
Wilge	216	1 499	230	78,1	3,73	88,6	23,4	1 092 645	0,729	21,02	15,35
Sub-total for coal-fired stations	**25 848**	**122 947**		**58,2**	**2,23**	**80,0**	**32,7**	**65 787 404**	**0,535**	**20,48**	**11,00**
Gas-turbine stations											
Acacia	171	—[6]	72	—		81,5		267			
Port Rex	171	—[6]	55	—		93,9		482			
Paratus	48	2	—	0,4		—		470			
Sub-total for gas turbine stations	**390**	**2**		**0,5**		**87,7**		**1 219**			
Hydro-electric stations											
Hendrik Verwoerd	320	735	378	26,2		92,6					
Vanderkloof	220	882	249	46,2		97,8					
Sub-total for hydro stations	**540**	**1 617**		**34,2**		**94,2**					
Pumped-storage station											
Drakensberg	1 000	1 774	1 148	20,3		92,2					
Sub-total for pumped-storage station	**1 000**	**1 774**		**20,3**		**92,2**					
Nuclear station											
Koeberg	1 840	6 167	1 337	38,3	0,19	55,1		9 638[4]	11 4[5]		
Sub-total for nuclear station	**1 840**	**6 167**		**38,3**	**0,19**	**55,1**					
Total/weighted average all Escom	**29 618**	**132 507**		**54,3**		**79,2**					
Other power sources											
Cahora Bassa	1 355	—									
Swawek		168									
Tescor		26									
Other		73									
Sub-total for other power sources	**1 355**	**267**									
Total/weighted average	**30 973**	**132 774**		**51,8**		**75,5**					

[1] *Station load factor* $= \frac{kW.h\ sent\ out \times 100}{(assigned\ sent\text{-}out\ rating) \times hours\ in\ year}$

[2] *Operating statistics are based on average capacity during the year*

[3] *Availability* $= \frac{capacity\ hours\ available \times 100}{total\ capacity\ hours\ in\ year}$

[4] *Burn-up of nuclear fuel MW.d/t*

[5] *Burn-up as a percentage of target burn-up for cycle*

[6] *Auxiliary consumption exceeded energy generated*

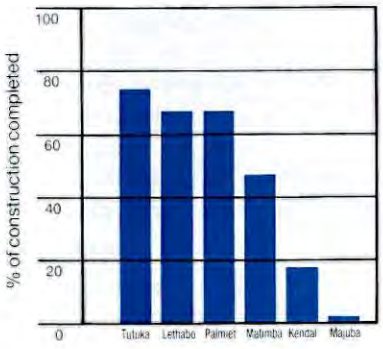
Power stations on order as at 31 December 1987

Name of station	Type	Location	No. and rating of generator sets MW	Total installed rating MW	Total sent-out rating MW	Year of completion first set	Year of completion last set
Kendal	Coal-fired	Kendal	6 x 686	4 116	3 780	1988	1993
Lethabo	Coal-fired	Vereeniging	2 x 618	1 236	1 186	1985	1990
Majuba	Coal-fired	Volksrust	3 x 657; 3 x 707	4 092	3 840	1991	1999
Matimba	Coal-fired	Ellisras	4 x 665	2 660	2 460	1987	1991
Palmiet	Pumped-storage	Grabouw	2 x 200	400	400	1988	1988
Tutuka	Coal-fired	Standerton	2 x 609	1 218	1 170	1985	1990
Power stations under construction[1]				**13 722**	**12 836**		
Plant on order at 31 December 1986				16 897	15 837		
Less plant taken into commercial service during 1987[3]				3 175	3 001		
Plus plant placed on order in 1987				—	—		
Total, plant on order at 31 December 1987				**13 722**	**12 836**		

[1]Dates on which sets on order will be taken into commercial service may change, depending on growth in electricity demand.
During 1987 the following plant was taken into commercial service:

	Installed rating	*Sent-out rating*
Letabo, Set 3:	*618 MW*	*593 MW*
Lethabo, Set 4:	*618 MW*	*593 MW*
Tutuka, Set 4:	*609 MW*	*585 MW*
Matimba, Set 1:	*665 MW*	*615 MW*
Matimba, Set 2:	*665 MW*	*615 MW*
Total for 1987	***3 175 MW***	***3 001 MW***

Power stations under construction



Coal-fired power stations: 12 with highest thermal efficiency 1987

Station	Steam conditions at turbine inlet Pressure MPa (abs)	Steam conditions at turbine inlet Temperature °C	Assigned sent-out rating MW	Energy sent out GW.h	Station load factor %	Average heat content of all fuel burnt MJ/kg	Overall thermal efficiency sent-out basis %	Date of commercial operation	Type of steam supply
Tutuka	16,1	535	2 340	7 690	41,5	20,84	35,8	1985	Reheat
Matla	16,1	535	3 450	18 816	62,3	20,02	35,2	1979-83	Reheat
Duvha	16,1	535	3 450	23 336	77,2	21,90	34,9	1980-84	Reheat
Lethabo	16,1	535	2 372	10 475	71,3	15,09	34,9	1986	Reheat
Kriel	16,0	510	2 850	16 014	64,1	20,26	34,6	1976-79	Reheat
Arnot	15,9	510	1 955	11 699	68,3	21,43	33,8	1971-75	Reheat
Matimba	16,1	535	1 230	1 678	46,4	18,66	32,7	1987	Reheat
Hendrina	10,3	538	1 900	11 939	71,7	22,45	31,7	1970-77	Non-reheat
Grootvlei	10,3	538	1 130	5 096	51,5	20,81	29,3	1969-77	Non-reheat
Camden	10,3	538	1 520	6 489	48,7	22,66	28,2	1967-69	Non-reheat
Ingagane	8,4	510	465	1 690	41,5	22,39	27,7	1963-69	Non-reheat
Komati	8,4	510	891	4 703	59,3	21,12	26,5	1962-66	Non-reheat

Eskom trends in plant availability and forced outage rate

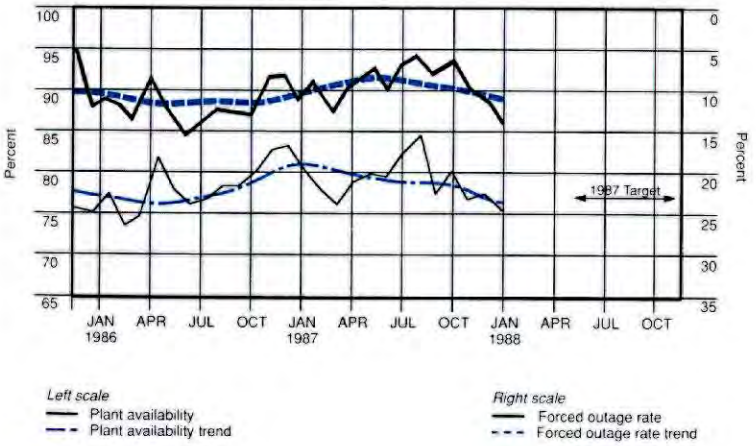


TABLE 9 ESKOM

Power stations in service as at 31 December 1987

Name of Station	Type	Location	No. and rating of generator sets MW	Total installed rating MW	Total sent-out rating MW
Acacia	Gas-Turbine	Cape town	3 x 57	171	171
Arnot	Coal-fired	Middelburg, Tvl	6 x 350	2 100	1 955
Camden	Coal-fired	Ermelo	8 x 200	1 600	1 520
Drakensburg	Pumped Storage	Bergville	4 x 250	1 000	1 000
Duvha	Coal-fired	Witbank	6 x 600	3 600	3 450
Grootvlei	Coal-fired	Balfour	6 x 200	1 200	1 130
Hendrik Verwoerd	Hydro-Electric	Norvalspont	4 x 80	320	320
Hendrina	Coal-fired	Hendrina	10 x 200	2 000	1 900
Hex River	Coal-fired	Worcester	3 x 20; 2 x 30	120	103
Highveld	Coal-fired	Sasolburg	8 x 60	480	412
Ingagane	Coal-fired	Newcastle	5 x 100	500	465
Koeberg	Nuclear	Cape Town	2 x 965	1 930	1 840
Komati	Coal-fired	Middelburg, Tvl	5 x 100; 4 x 125	1 000	891
Kriel	Coal-fired	Bethal	6 x 500	3 000	2 850
Lethabo	Coal-fired	Sasolburg	4 x 618	2 472	2 372
Matimba	Coal-fired	Ellisras	2 x 665	1 330[8]	1230
Matla	Coal-fired	Bethal	6 x 600	3 600	3 450
Paratus	Gas-Trubine/diesel	Walvis Bay	1 x 22,4; 4 x 6,4	48	48
Port Rex	Gas-Trubine	East London	3 x 57	171	171
Salt River	Coal-fired	Cape Town	4 x 30; 2 x 60	240	228
Taaibos	Coal-fired	Sasolburg	8 x 60	480	440
Tutuka	Coal-fired	Standerton	4 x 609	2 436	2 340
Umgeni	Coal-fired	Pinetown	4 x 30; 2 x 60	240	216
Vaal	Coal-fired	Viljoensdrif	9 x 33	318[2]	270
Vanderkloof	Hydro-Electric	Petrusville	2 x 110	220	220
Vierfontein	Coal-fired	Viljoenskroon	12 x 30	360	336
West Bank	Coal-fired	East London	3 x 15; 2 x 20	85	74
Wilge	Coal-fired	Witbank	2 x 30; 3 x 60	240	216
Total in service, 28 Eskom stations[3]				**31 261**	**29 618**
Subtotal, coal-fired (21 stations)[4]				27 401	25 848
Subtotal, gas-turbine (3 stations)[5]				390	390
Subtotal, hydro-electric (2 stations)[6]				540	540
Subtotal, pumped-storage (1 station)[7]				1 000	1 000
Subtotal, nuclear (1 station)				1 930	1 840
Total in service, 28 Eskom stations				**31 261**	**29 618**

1. Differences between generator rating and toal station rating, and installed and sent-out rating reflect auxilliary power consumption and reduced capacity caused by age of the plant and/or low coal quality.
2. Includes three 7MW house sets.
3. In addition to its own installed capacity, Eskom also has a firm contractual capacity of 1 355 MW from Cahora Bassa, which was not available during 1987. It also has agreements to purchase electricity from Swawek, Trescor and some municipalities.
4. Base-load stations, except in the case of older, uneconomical plant, which are used only for peak demands or in emergencies.
5. Used only for peaking or in emergencies.
6. Use restricted tp peaking and emergencies and availability of water in Hendrik Verwoerd and P.K. le Roux dams.
7. Pumped-storage facilities are net users of electricity and are used for peaking. Water is pumped during off-peak periods to generate electricity during peak periods.
8. Dry cooled units specifications are based on design backpressure and ambient air temperature.

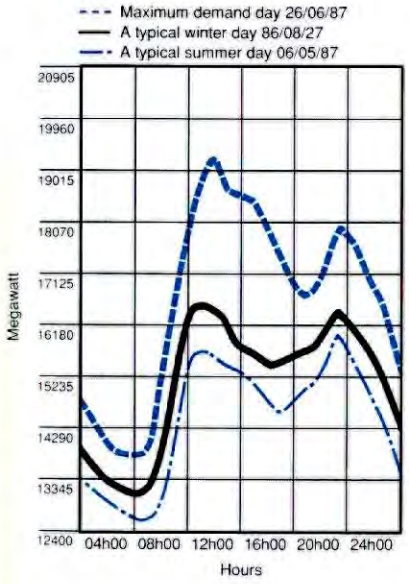
Table 10

ESKOM

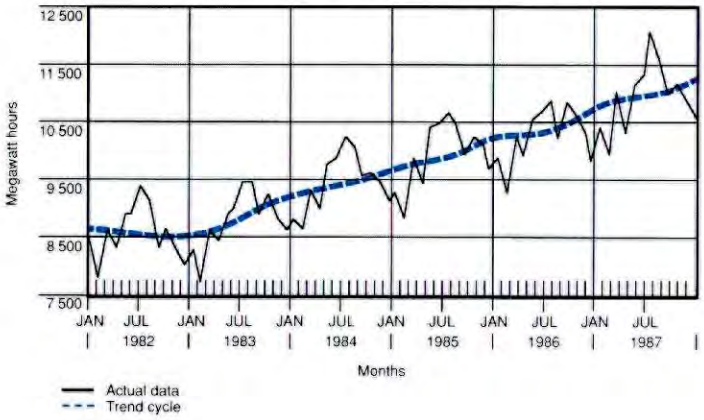
Maximum one-hour demand, MW

	1987	1986	1985	1984	1983	1982	Increase 1986 – 1987 %	Average yearly increase 1983 – 1987 %
Maximum simultaneous one-hour demand on total Eskom system	**20 001**	18 278	17 852	17 296	15 639	15 532	9,4	5,2
Date	**26/6/87**	20/6/86	12/7/85	15/6/84	10/8/83	2/7/82		
Time	**09h00**	09h00	11h00	09h00	09h00	09h00		

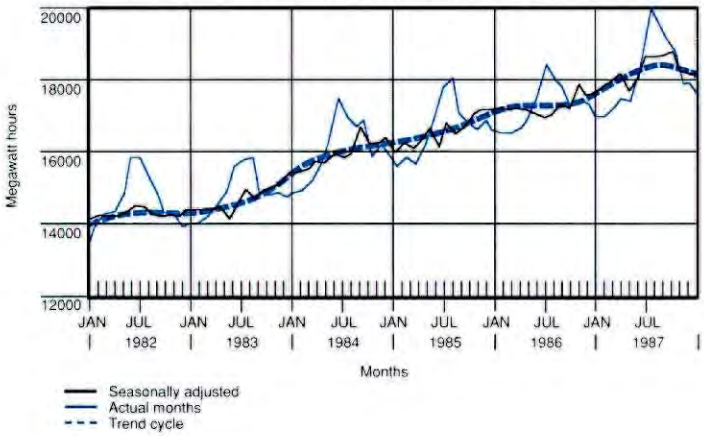
Electricity demand – 1987



Eskom total GW.h available for distribution



Maximum demand on Eskom Total integrated system



Transmission and distribution equipment in service as at 31 December 1987

	Total 1986	Change 1987	Total 1987
Overhead lines, in circuit km			
765 kV	434*	437	871
533 kV DC (monopolar)	1 030	—	1 030
400 kV	10 315**	381	10 696
275 kV	6 487	111	6 598
220 kV	1 239	—	1 239
165 kV to 132 kV	15 028*	522	15 550
88 kV to 33 kV	20 493	43	20 536
22 kV and below	115 535	15 262	130 797
Total	**170 561****	**16 756**	**187 317**
Underground cables, in circuit km			
165 kV to 132 kV	67**	—	67
88 kV to 33 kV	378*	12	390
22 kV and below	3 885	9	3 894
Total	**4 330****	**21**	**4 351**
Transformers			
Capacity MVA	109 395	27 278	136 673
Number in service	98 133	10 037	108 170

Although two lines are constructed at 765 kV, one runs at this voltage at present and the other at 400 kV.
***Figure has been adjusted. Following the reorganisation of Eskom into 12 regions, statistics are recorded from zero base. Some incorrect counting, however, occurred before the regional boundaries were finalised and the necessary adjustments have now been made.*

Table 12

ESKOM

Transmission and distribution equipment: by Region as at 31 December 1987

Circuit kilometres (excluding service connections on reticulation systems) of lines and cables and capacity of transformers in service

	Transmission lines									Transformers		
Region	765 kV	533 kV DC (monopolar)	400 kV	275 kV	220 kV	165 kV to 132 kV	88 kV to 33 kV	22 kV and below	**Total**	Capacity MVA	Number in service	MVA/No
Eastern Natal			254	484		820	1 211	6 516	**9 285**	6 194	8 284	0.75
Western Natal			1 420	968		340	2 242	13 387	**18 357**	7 672	10 488	0.73
Eastern Cape			2 020		822	1 519	1 200	11 745	**17 306**	6 002	7 181	0.84
Northern Cape			934	779	417	2 423	1 239	8 448	**14 240**	4 987	6 407	0.78
Southern Cape			846			1 455	1 260	9 575	**13 136**	3 348	8 900	0.38
Western Cape			705			660	1 298	6 025	**8 688**	10 989	9 515	1.15
Western Transvaal		52	554	749		1 928	2 920	23 715	**29 918**	19 029	15 591	1.22
Central Transvaal		119	331	622		223	1 376	4 900	**7 571**	14 705	8 987	1.64
Southern Transvaal			584	962		922	3 605	5 540	**11 613**	28 030	6 367	4.40
Orange Free State	795		1 087	567		1 787	2 425	20 493	**27 154**	11 576	11 776	0.98
North-eastern Transvaal		632	276	731		1 771	384	8 017	**11 811**	6 802	6 863	0.99
Eastern Transvaal	76	227	1 685	736		1 702	1 376	12 436	**18 238**	17 339	7 811	2.22
Total	**871**	**1 030**	**10 696**	**6 598**	**1 239**	**15 550**	**20 536**	**130 797**	**187 317**	**136 673**	**108 170**	**1.26**

	Underground cables			
Eastern Natal			438	**438**
Western Natal			183	**183**
Eastern Cape			55	**55**
Northern Cape		1	3	**4**
Southern Cape		4	46	**50**
Western Cape	24	128	1 936	**2 088**
Western Transvaal			25	**25**
Central Transvaal	13	170	841	**1 024**
Southern Transvaal	30	85	265	**380**
Orange Free State		2	24	**26**
North-eastern Transvaal			35	**35**
Eastern Transvaal			43	**43**
Total	67	390	3 894	**4 351**

	Total lines and cables								
1987	871*	1 030	10 696	6 598	1 239	15 617	20 926	134 691	**191 668**
1986	434	1 030	10 315**	6 487	1 239	15 095**	20 871**	119 420	**174 891****
Change	437	0	381	111	0	522	55	15 271	**16 777**

Although two lines are constructed at 765 kV, one runs at this voltage at present and the other at 400 kV.

***Figure has been adjusted. Following the reorganisation of Eskom into 12 regions, statistics are recorded from zero base. Some incorrect counting, however, occurred before the regional boundaries were finalised and the necessary adjustments have now been made.*

Electricity sent out and sold

	Electricity sent out								Electricity sales				Employees	
Year	South Africa total sent out GW.h	Eskom electricity available for distribution as % of South African total[1]	Electricity sent out from Eskom power stations GW.h	Electricity purchased from other sources GW.h	Own consumption GW.h	Available for distribution GW.h	Peak demand on integrated Eskom system MW	Integrated Eskom system load factor %	Ratio GW.h sold/ GW.h sent out	Electricity sold GW.h	Growth for the year %	Average selling price c/kW.h	Total number at 31 December	Ratio number/ GW.h sold
1950	10 437[2]	71,1	7 287	131	—	7 418	1 182[2]	71,6	0,932	6 910,6	11,1	0,274 1	9 352	1,353
1951	11 098[2]	72,1	7 806	195	—	8 001	1 212[2]	75,4	0,932	7 456,5	7,9	0,292 2	10 336	1,386
1952	11 678[2]	74,1	8 227	424	—	8 651	1 265[2]	77,9	0,934	8 080,6	8,4	0,311 5	10 889	1,348
1953	12 823[2]	73,3	8 845	550	—	9 395	1 394[2]	76,9	0,929	8 732,2	8,1	0,354 2	11 518	1,319
1954	14 167[2]	73,5	9 977	437	—	10 414	1 570[2]	75,7	0,929	9 676,6	10,8	0,380 8	12 317	1,273
1955	16 021[2]	73,4	11 425	339	—	11 764	1 806[2]	74,4	0,932	10 964,0	13,3	0,413 9	12 490	1,139
1956	17 293[2]	74,8	12 670	257	—	12 927	2 001[2]	73,5	0,930	12 019,5	9,6	0,428 5	12 977	1,080
1957	18 720	73,7	13 640	163	—	13 803	2 151[2]	73,3	0,925	12 763,1	6,2	0,447 8	13 421	1,052
1958	19 765	74,3	14 516	164	—	14 680	2 249[2]	74,5	0,927	13 602,1	6,6	0,473,3	14 312	1,052
1959	21 051	75,4	15 777	94	—	15 871	2 429[2]	74,6	0,928	14 724,5	8,3	0,495 1	13 947	0,947
1960	22 717	76,3	17 308	15	—	17 323	2 605[2]	75,7	0,929	16 094,1	9,3	0,507 9	14 654	0,911
1961	23 760	77,0	18 284	8	—	18 292	2 733[2]	76,4	0,930	17 013,2	5,7	0,515 5	15 441	0,908
1962	25 599	75,8	19 404	13	—	19 417	2 925[2]	75,3	0,933	18 121,0	6,5	0,516 4	16 467	0,909
1963	27 335	76,1	20 793	19	—	20 812	3 183[2]	74,6	0,937	19 500,0	7,6	0,517 7	16 804	0,862
1964	29 547[2]	76,8	22 639	41	—	22 680	3 460[2]	74,6	0,937	21 247,5	9,0	0,510 1	17 172	0,808
1965	31 939	77,4	24 583	126	—	24 709	3 669	76,9	0,937	23 143,3	8,9	0,507 6	17 851	0,771
1966	33 929[2]	77,0	25 504	630[3]	—	26 134	3 906	76,4	0,940	24 554,3	6,1	0,525 4	18 579	0,757
1967	36 897	77,1	28 371	70	—	28 441	4 227	76,8	0,937	26 657,1	8,6	0,546 7	19 817	0,743
1968	39 761	77,6	30 843	8	—	30 851	4 658	75,4	0,936	28 885,0	8,4	0,555 0	20 893	0,723
1969	42 847	78,4	33 598	8	—	33 606	5 055	75,9	0,937	31 505,6	9,1	0,556 5	21 644	0,687
1970	47 456	77,7	37 321	7	—	37 328	5 622	75,8	0,935	34 890,6	10,7	0,554 5	22 700	0,651
1971	51 081	79,8	40 739	8	—	40 747	6 115	76,1	0,934	38 040,0	9,0	0,577 2	25 050	0,659
1972	55 332	80,4	44 475	10	—	44 485	6 630	76,4	0,936	41 648,9	9,5	0,610 8	26 937	0,647
1973	60 700	82,0	49 759	11	—	49 770	7 350	77,3	0,936	46 578,4	11,8	0,648 4	28 559	0,613
1974	66 412[2]	84,7	56 251	8	—	56 259	8 552	75,1	0,935	52 585,1	12,9	0,682 2	29 891	0,568
1975	70 111	87,8	61 498	35	—	61 533	9 185	76,5	0,940	57 869,2	10,0	0,795 0	33 999	0,588
1976	75 381	89,4	66 188	1 226	—	67 414	10 085	76,1	0,940	63 355,7	9,5	1,036 0	36 915	0,583
1977	79 352	89,8	67 050	4 241	27	71 264	10 735	75,8	0,942	67 125,4	5,9	1,535 3	39 112	0,583
1978	84 812	91,7	70 902	6 924	52	77 774	11 490	77,3	0,936	72 780,4	8,4	1,788 7	41 040	0,564
1979	92 615	92,8	75 643	10 394	58	85 979	12 855	76,4	0,937	80 582,8	10,7	1,898 0	43 690	0,542
1980	99 905	93,0	83 362	9 659	71	92 950	13 668	77,5	0,942	87 539,3	8,6	2,024 2	47 490	0,542
1981	106 135	93,9	97 824	2 601	712	99 713	14 674	77,6	0,941	93 844,0	7,2	2,281 1	52 080	0,555
1982	109 536	93,6	102 769	2 151	2 404	102 516	15 532	75,3	0,938	96 135,9	2,4	2,803 8	58 850	0,612
1983	112 366	93,8	103 295	5 026	2 917	105 404	15 639	76,9	0,932	98 251,1	2,2	3,360 6	62 420	0,635
1984	120 835	94,3	116 581	505	3 188	113 898	17 296	75,0	0,939	106 904,1	8,8	3,584 2	64 560	0,604
1985	126 606	94,2	121 987	507	3 265	119 229	17 852	76,2	0,942	112 305,9	5,1	4,117 9	66 000	0,588
1986	130 056	95,1	126 511	255	3 018	123 748	18 278	77,3	0,948	117 353,0	4,5	4,980 3	60 800	0,518
1987	134 751	96,1	132 507	267	3 229	129 545	20 001	73,9	0,946	112 523,6	4,4	5,751 2	56 830	0,464

[1]Includes Eskom electricity sent out to neighbouring territories.
[2]Estimates based on limited information.
[3]Includes purchases from City of Johannesburg during serious drought.

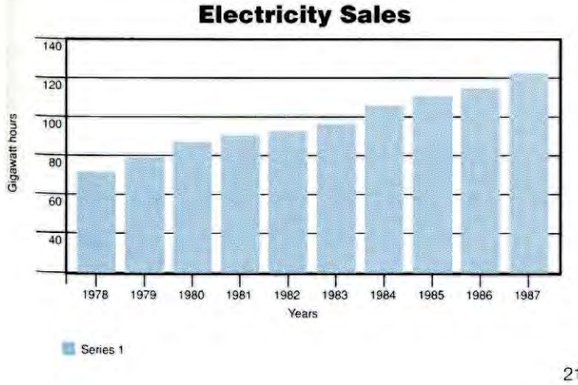


Table 14

ESKOM

Customer categories by distribution region

Distribution region and category	Number of customers	GW.h sold 1987	% of total GW.h	Revenue R000 1987	% of total Revenue	Average price cents per kW.h 1987	Average price cents per kW.h 1986
Eastern Natal							
Bulk sales	32	7 837	55,9	435 136	55,5	5,553	4,722
Domestic and street lighting	17 480	148	1,1	16 088	2,1	10,835	9,119
Industrial	9426	5 743	41,0	308 983	39,4	5,380	4,572
Mining	1	14	0,1	1 162	0,1	8,081	7,365
Traction	3	274	2,0	22 223	2,8	8,112	6,807
Own usage	0	0	0,0	0	0,0	—	—
Total	**26942**	**14 017**	**100,0**	**783 592**	**100,0**	**5,590**	**4,750**
Western Natal							
Bulk sales	15	2 102	40,2	120 433	36,6	5,730	4,900
Domestic and street lighting	4880	49	0,9	5 047	1,5	10,374	8,744
Industrial	11248	1 892	36,2	119 046	36,2	6,293	5,438
Mining	49	330	6,3	22 925	7,0	6,939	5,871
Traction	5	852	16,3	61 544	18,7	7,221	5,902
Own usage		1	0,0	0	0,0	—	—
Total	**16197**	**5 225**	**100,0**	**328 995**	**100,0**	**6,296**	**5,377**
Eastern Cape							
Bulk sales	78	3 502	88,2	180 110	78,0	5,143	4,570
Domestic and street lighting	3125	24	0,6	3 021	1,3	12,615	11,538
Industrial	6895	271	6,8	28 800	12,5	10,644	8,633
Mining	0	0	0,0	0	0,0	—	—
Traction	3	170	4,3	18 860	8,2	11,101	8,769
Own usage	46	4	0,1	0	0,0	—	—
Total	**10147**	**3 971**	**100,0**	**230 791**	**100,0**	**5,812**	**5,170**
Northern Cape							
Bulk sales	51	1 152	34,3	66 609	30,2	5,781	5,434
Domestic and street lighting	992	8	0,2	984	0,4	11,833	10,010
Industrial	6954	419	12,5	35 859	16,2	8,563	7,585
Mining	82	1 496	44,5	95 859	43,4	6,407	5,506
Traction	3	285	8,5	21 435	9,7	7,511	6,517
Own usage	1	1	0,0	0	0,0	—	—
Total	**8083**	**3 362**	**100,0**	**220 745**	**100,0**	**6,566**	**5,866**
Southern Cape							
Bulk sales	57	831	55,1	52 206	47,1	6,281	5,438
Domestic and street lighting	3676	21	1,4	2 651	2,4	12,375	10,474
Industrial	9711	466	30,9	43 763	39,5	9,394	7,932
Mining	2	2	0,1	181	0,2	11,521	13,757
Traction	1	183	12,1	12 130	10,9	6,639	5,552
Own usage	0	7	0,4	0	0,0	—	—
Total	**13447**	**1 509**	**100,0**	**110 931**	**100,0**	**7,349**	**6,288**
Western Cape							
Bulk sales	43	4 835	61,5	226 008	46,9	4,674	4,076
Domestic and street lighting	94 171	678	8,6	78 924	16,4	11,637	9,824
Industrial	12800	2 007	25,5	147 714	30,7	7,359	6,399
Mining	28	19	0,2	2 619	0,5	13,625	12,499
Traction	2	305	3,9	26 494	5,5	8,697	7,464
Own usage	0	13	0,2	0	0,0	—	—
Total	**107044**	**7 858**	**100,0**	**481 760**	**100,0**	**6,131**	**5,373**

Distribution region and category	Number of customers	GW.h sold 1987	% of total GW.h	Revenue R000 1987	% of total Revenue	Average price cents per kW.h 1987	Average price cents per kW.h 1986
Western Transvaal							
Bulk sales	56	2 101	12,6	130 448	13,8	6,210	5,305
Domestic and street lighting	350	3	0,0	369	0,0	12,182	10,458
Industrial	13268	1 043	6,2	82 359	8,7	7,900	6,536
Mining	70	13 306	79,5	709 342	75,0	5,331	4,540
Traction	5	260	1,6	23 383	2,5	8,991	7,093
Own usage		16	0,1	0	0,0	—	—
Total	**13749**	**16 728**	**100,0**	**945 901**	**100,0**	**5,655**	**4,807**
Central Transvaal							
Bulk sales	31	6 156	67,1	343 916	62,4	5,587	4,913
Domestic and street lighting	13424	300	3,3	28 089	5,1	9,347	7,602
Industrial	11398	2 049	22,3	137 801	25,0	6,726	5,486
Mining	23	282	3,1	17 417	3,2	6,178	5,692
Traction	5	320	3,5	23 888	4,3	7,464	5,734
Own usage		61	0,7	0	0,0	—	—
Total	**24881**	**9 168**	**100,0**	**551 111**	**100,0**	**6,011**	**5,235**
South Transvaal							
Bulk sales	55	11 750	40,7	674 380	41,8	5,740	5,087
Domestic and street lighting	1481	18	0,1	1 768	0,1	9,827	8,287
Industrial	9468	10 246	35,5	559 109	34,7	5,457	4,722
Mining	83	6 117	21,2	335 010	20,8	5,477	4,649
Traction	5	645	2,2	41 683	2,6	6,459	5,431
Own usage		96	0,3	0	0,0	—	—
Total	**11092**	**28 872**	**100,0**	**1 611 950**	**100,0**	**5,583**	**4,862**
Orange Free State							
Bulk sales	67	2 183	21,8	121 703	21,5	5,576	4,928
Domestic and street lighting	967	8	0,1	1 045	0,2	12,644	9,641
Industrial	10318	369	3,7	37 121	6,6	10,061	8,087
Mining	25	7 219	72,2	391 238	69,3	5,420	4,603
Traction	4	216	2,2	13,648	2,4	6,320	5,441
Own usage		3	0,0	0	0,0	—	—
Total	**11381**	**9 998**	**100,0**	**564 755**	**100,0**	**5,649**	**4,826**
North-eastern Transvaal							
Bulk sales	33	1 487	24,7	93 358	25,6	6,278	5,338
Domestic and street lighting	709	9	0,2	944	0,3	10,362	8,910
Industrial	6784	2 812	46,7	170 307	46,7	6,056	5,075
Mining	55	1 612	26,8	90 829	24,9	5,636	4,782
Traction	4	102	1,7	8 855	2,4	8,662	6,427
Own usage	1	0	0,0	0	0,0	—	—
Total	**7586**	**6 022**	**100,0**	**364 294**	**100,0**	**6,049**	**5,123**
Eastern Transvaal							
Bulk sales	44	1 483	9,4	89 802	10,5	6,055	5,177
Domestic and street lighting	795	11	0,1	1 201	0,1	10,564	9,035
Industrial	7797	10 968	69,4	573 336	67,3	5,228	4,591
Mining	126	2 451	15,5	153 364	18,0	6,257	5,358
Traction	10	436	2,8	34 051	4,0	7,804	6,471
Own usage	42	444	2,8	0	0,0	—	—
Total	**8814**	**15 794**	**100,0**	**851 754**	**100,0**	**5,393**	**4,813**
Eskom total							
Bulk sales	562	45 418	37,1	2 534 109	36,0	5,580	4,871
Domestic and street lighting	142 050	1 279	1,0	140 131	2,0	10,954	9,195
Industrial	116067	38 284	31,2	2 244 199	31,8	5,862	5,025
Mining	544	32 849	26,8	1 819 946	25,8	5,540	4,722
Traction	50	4 049	3,3	308 194	4,4	7,612	6,237
Own usage	90	645	0,5	0	0,0	—	—
Total	**259363**	**122 524**	**100,0**	**7 046 580**	**100,0**	**5,751**	**4,980**

Eskom total GW.h sold

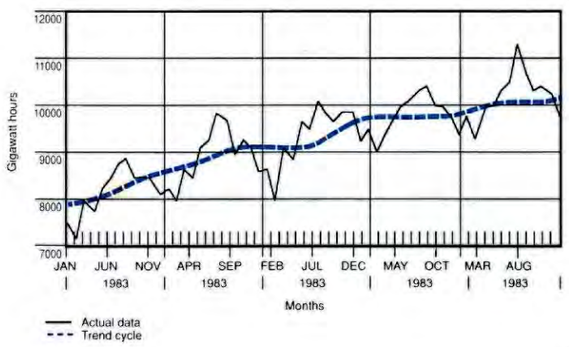
Year	Traction	Bulk supply	Mining	Air and steam	Industrial and commercial	Domestic and street lighting	Own usage*
1950	524	1 106	3 899	277	991	114	
1951	539	1 261	4 105	268	1 150	134	
1952	555	1 459	4 333	265	1 338	131	
1953	584	1 640	4 736	234	1 402	135	
1954	619	1 839	5 317	220	1 540	142	
1955	690	2 048	5 977	212	1 881	157	
1956	740	2 282	6 445	191	2 187	174	
1957	753	2 540	6 790	160	2 331	190	
1958	789	2 838	7 136	154	2 480	206	
1959	887	3 058	7 676	138	2 737	228	
1960	1 045	3 243	8 259	126	3 169	253	
1961	1 178	3 368	8 626	124	3 437	279	
1962	1 296	3 570	9 143	116	3 692	303	
1963	1 389	3 998	9 416	115	4 253	329	
1964	1 559	4 494	9 847	94	4 873	381	
1965	1 763	4 921	10 271	87	5 663	439	
1966	1 836	5 344	10 775	40	6 069	492	
1967	1 958	5 996	11 441	Terminated	6 729	563	
1968	2 181	6 628	11 995		7 439	642	
1969	2 307	7 264	12 642		8 574	719	
1970	2 410	8 108	13 948		9 608	817	
1971	2 616	9 265	14 227		11 014	918	
1972	2 782	10 716	14 509		12 642	1 000	
1973	2 896	12 752	15 800		14 026	1 105	
1974	3 108	15 522	16 941		16 106	909	
1975	3 307	18 055	17 444		18 050	1 013	
1976	3 475	20 096	18 746		19 907	1 131	
1977	3 508	20 862	20 139		21 586	1 030	
1978	3 586	21 834	22 219		24 181	960	
1979	4 035	24 133	24 000		27 475	940	
1980	4 455	26 923	25 882		29 373	906	
1981	4 660	29 961	27 131		31 091	1 002	
1982	4 436	32 349	27 372		30 959	1 020	
1983	4 137	32 729	28 021		32 286	1 078	
1984	4 595	35 541	29 506		36 119	1 144	
1985	4 587	37 451	30 849		38 215	1 204	
1986	4 501	40 570	31 860		39 170	1 252	
1987	4 049	45 418	32 849		38 284	1 279	645

*Usage on Eskom distribution premises, previously included under industrial and commercial sales, are now also listed separately as "own usage".

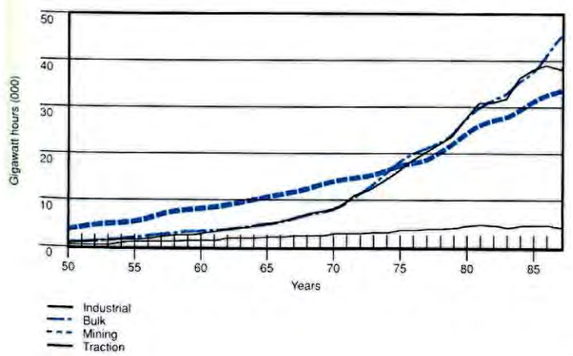
Sales as a percentage of the total GW.h sold

Total sold	Traction	Bulk supply	Mining	Air and steam	Industrial and commercial	Domestic and street lighting	Own usage *
6 911	7,6	16,0	56,4	4,0	14,3	1,6	
7 456	7,2	16,9	55,0	3,6	15,4	1,8	
8 080	6,9	18,1	53,6	3,3	16,6	1,6	
8 732	6,7	18,8	54,2	2,7	16,1	1,5	
9 677	6,4	19,0	54,9	2,3	15,9	1,5	
10 964	6,3	18,7	54,5	1,9	17,2	1,4	
12 020	6,2	19,0	53,6	1,6	18,2	1,4	
12 763	5,9	19,9	53,2	1,3	18,3	1,5	
13 602	5,8	20,9	52,5	1,1	18,2	1,5	
14 725	6,0	20,8	52,1	0,9	18,6	1,6	
16 094	6,5	20,1	51,3	0,8	19,7	1,6	
17 013	6,9	19,8	50,7	0,7	20,2	1,6	
18 121	7,2	19,7	50,5	0,6	20,4	1,7	
19 500	7,1	20,5	48,3	0,6	21,8	1,7	
21 248	7,3	21,2	46,3	0,4	22,9	1,8	
23 143	7,6	21,3	44,4	0,4	24,5	1,9	
24 554	7,5	21,8	43,9	0,2	24,7	2,0	
26 657	7,3	22,4	42,9	—	25,2	2,1	
28 885	7,5	22,9	41,5	—	25,8	2,2	
31 506	7,3	23,1	40,1	—	27,2	2,3	
34 891	6,9	23,2	40,0	—	27,5	2,3	
38 040	6,9	24,4	37,4	—	29,0	2,4	
41 649	6,7	25,7	34,8	—	30,4	2,4	
46 578	6,2	27,4	33,9	—	30,1	2,4	
52 585	5,9	29,5	32,2	—	30,6	1,7	
57 869	5,7	31,2	30,1	—	31,2	1,8	
63 356	5,5	31,7	29,6	—	31,4	1,8	
67 125	5,2	31,1	30,0	—	32,2	1,5	
72 780	4,9	30,0	30,5	—	33,2	1,3	
80 583	5,0	29,9	29,8	—	34,1	1,2	
87 539	5,1	30,8	29,6	—	33,6	1,0	
93 844	5,0	31,9	28,9	—	33,1	1,1	
96 136	4,6	33,6	28,5	—	32,2	1,1	
98 251	4,2	33,3	28,5	—	32,9	1,1	
106 904	4,3	33,2	27,6	—	33,8	1,1	
112 306	4,1	33,3	27,5	—	34,0	1,1	
117 353	3,8	34,6	27,1	—	33,4	1,1	
122 524	3,3	37,1	26,8	—	31,3	1,0	0,5

Eskom Total Sales



Sales growth by category from 1950



Bulk Sales

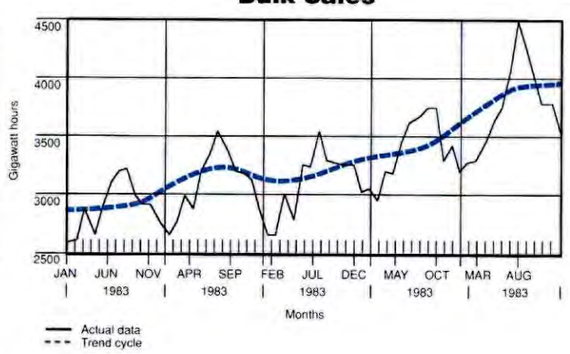


Table 16

Revenue per kW.h by category of customer (excluding air and steam)

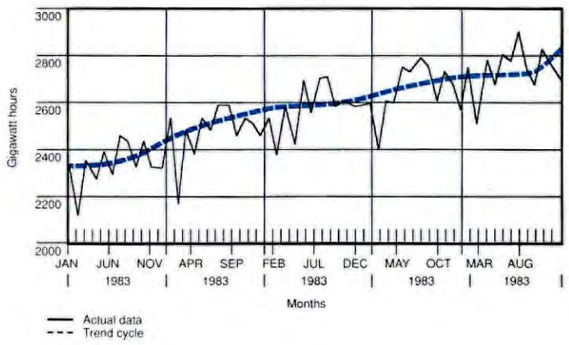
	Actual price (in c/kW.h)							Real price (in c/kW.h)						
Year	Traction	Bulk supplies	Mining	Industrial and commercial	Domestic and street lighting	Average for all categories	% Change	Consumer Price Index 1980 = 100	Traction	Bulk supplies	Mining	Industrial and commercial	Domestic & street lighting	Average for all categories	% Change
1950	0,355 7	0,353 5	0,206 9	0,286 0	1,087 0	0,270 1		19,5	1,824 1	1,812 8	1,061 2	1,466 9	5,574 3	1,385 0	
1951	0,357 4	0,360 6	0,227 4	0,303 0	1,032 1	0,287 7	6,5	20,9	1,710 2	1,725 3	1,088 0	1,449 9	4,938 3	1,376 3	–0,6
1952	0,381 1	0,380 7	0,245 4	0,312 8	1,063 0	0,305 5	6,2	22,7	1,678 9	1,677 2	1,081 0	1,378 0	4,683 0	1,346 0	–2,2
1953	0,461 8	0,419 9	0,282 9	0,360 4	1,208 3	0,349 2	14,3	23,5	1,965 1	1,787 0	1,204 0	1,533 5	5,141 6	1,485 8	10,4
1954	0,531 8	0,463 8	0,299 2	0,388 1	1,324 7	0,376 3	7,8	23,9	2,225 2	1,940 6	1,251 9	1,623 7	5,542 6	1,574 6	6,0
1955	0,617 7	0,522 5	0,326 2	0,399 1	1,348 5	0,409 9	8,9	24,7	2,500 7	2,115 5	1,320 7	1,616 0	5,459 4	1,659 7	5,4
1956	0,634 9	0,544 8	0,334 4	0,399 2	1,362 5	0,420 9	2,7	25,2	2,519 3	2,161 7	1,326 8	1,584 1	5,406 8	1,670 1	0,6
1957	0,644 8	0,569 4	0,352 7	0,415 0	1,384 7	0,440 9	4,8	25,9	2,489 4	2,198 6	1,361 8	1,602 4	5,346 3	1,702 3	1,9
1958	0,655 7	0,586 1	0,379 0	0,440 7	1,429 4	0,466 4	5,8	26,8	2,446 6	2,186 9	1,414 3	1,644 4	5,333 6	1,740 3	2,2
1959	0,667 1	0,604 9	0,396 3	0,468 2	1,441 1	0,486 3	4,3	27,2	2,452 6	2,223 7	1,457 0	1,721 2	5,298 2	1,788 0	2,7
1960	0,664 4	0,600 9	0,414 4	0,483 3	1,449 2	0,498 7	2,5	27,5	2,416 0	2,185 2	1,506 9	1,757 5	5,270 0	1,813 5	1,4
1961	0,672 7	0,612 7	0,421 6	0,494 3	1,484 3	0,509 6	2,2	28,1	2,394 0	2,180 3	1,500 3	1,759 2	5,282 1	1,813 5	0
1962	0,739 8	0,609 4	0,417 4	0,487 4	1,478 4	0,510 9	0,3	28,5	2,595 7	2,138 1	1,464 7	1,710 1	5,187 3	1,792 7	–1,1
1963	0,728 3	0,604 4	0,419 2	0,487 8	1,476 1	0,512 5	0,3	28,8	2,528 8	2,098 6	1,455 6	1,693 6	5,125 3	1,779 6	–0,7
1964	0,691 0	0,591 2	0,412 1	0,490 2	1,442 9	0,507 3	–1,0	29,5	2,342 4	2,004 0	1,397 1	1,661 8	4,891 2	1,719 5	–3,4
1965	0,696 3	0,591 2	0,405 7	0,481 9	1,398 3	0,505 1	–0,4	30,6	2,275 5	1,932 0	1,325 7	1,574 7	4,569 6	1,650 7	–4,0
1966	0,717 2	0,596 9	0,418 2	0,510 8	1,385 1	0,521 8	3,3	31,7	2,262 6	1,882 9	1,319 2	1,611 3	4,369 3	1,646 2	–0,3
1967	0,752 4	0,606 3	0,444 4	0,536 8	1,393 1	0,546 6	4,8	32,8	2,294 0	1,848 6	1,355 0	1,636 7	4,247 3	1,666 6	1,2
1968	0,755 3	0,603 7	0,449 3	0,551 3	1,391 1	0,555 0	1,5	33,3	2,268 2	1,813 0	1,349 2	1,655 5	4,177 5	1,666 7	0
1969	0,755 0	0,598 8	0,454 5	0,549 6	1,369 5	0,556 5	0,3	34,3	2,201 0	1,745 8	1,325 1	1,602 2	3,992 6	1,622 5	–2,7
1970	0,756 2	0,600 1	0,450 1	0,549 8	1,345 3	0,554 5	–0,4	36,1	2,094 8	1,662 4	1,246 7	1,523 1	3,726 5	1,536 1	–5,3
1971	0,763 0	0,613 9	0,471 6	0,573 4	1,360 8	0,577 2	4,1	38,3	1,992 1	1,603 0	1,231 4	1,497 0	3,553 1	1,507 2	–1,9
1972	0,791 3	0,636 6	0,510 4	0,600 8	1,415 6	0,610 8	5,8	40,8	1,939 4	1,560 3	1,250 9	1,472 5	3,469 7	1,497 1	–0,7
1973	0,842 4	0,674 1	0,541 8	0,637 7	1,504 9	0,648 4	6,2	44,7	1,884 5	1,508 1	1,212 1	1,426 7	3,366 7	1,450 7	–3,1
1974	0,882 8	0,703 6	0,557 2	0,705 7	1,548 0	0,682 3	5,2	49,9	1,769 1	1,410 1	1,116 6	1,414 1	3,102 2	1,367 3	–5,7
1975	1,016 2	0,807 9	0,659 0	0,821 9	1,707 9	0,795 0	16,5	56,6	1,795 4	1,427 4	1,164 2	1,452 1	3,017 4	1,404 6	2,7
1976	1,326 4	1,052 9	0,872 6	1,064 1	2,091 5	1,036 0	30,3	62,9	2,108 8	1,674 0	1,387 3	1,691 8	3,325 1	1,647 1	17,3
1977	2,004 0	1,577 9	1,294 6	1,564 1	3,177 8	1,535 3	48,2	70,0	2,862 8	2,254 1	1,849 4	2,234 4	4,539 7	2,193 2	33,2
1978	2,386 8	1,778 9	1,604 4	1,798 9	3,787 5	1,788 7	16,5	77,6	3,075 7	2,292 4	2,067 5	2,318 1	4,880 8	2,305 0	5,1
1979	2,601 8	1,871 5	1,731 1	1,892 4	3,982 6	1,898 0	6,1	87,9	2,960 0	2,129 1	1,969 4	2,152 9	4,530 8	2,159 3	–6,3
1980	2,676 2	2,002 7	1,854 0	2,025 6	4,275 4	2,024 2	6,7	100,0	2,676 2	2,002 7	1,854 0	2,025 6	4,275 4	2,024 2	–6,3
1981	2,988 8	2,269 7	2,078 7	2,283 7	4,731 4	2,281 1	12,7	115,2	2,594 4	1,970 2	1,804 4	1,982 4	4,107 1	1,980 1	–2,2
1982	3,649 5	2,807 8	2,540 5	2,825 0	5,418 2	2,803 8	22,9	132,1	2,762 7	2,125 5	1,923 2	2,138 5	4,101 6	2,122 5	7,2
1983	4,550 6	3,367 1	3,048 3	3,376 9	6,232 3	3,360 7	19,9	148,4	3,066 4	2,268 9	2,054 1	2,275 6	4,199 7	2,264 6	6,7
1984	4,695 5	3,593 4	3,268 1	3,594 7	6,661 4	3,584 2	6,7	165,7	2,833 8	2,168 6	1,972 3	2,169 4	4,020 2	2,163 1	–4,5
1985	5,373 4	4,124 3	3,788 9	4,119 8	7,507 4	4,117 9	14,9	192,6	2,789 9	2,141 4	1,967 3	2,139 0	3,897 9	2,138 1	–1,2
1986	6,236 7	4,870 6	4,721 8	5,025 0	9,195 1	4,980 3	20,9	228,5	2,729 4	2,131 6	2,066 5	2,199 1	4,024 1	2,179 6	1,9
1987	7,611 8	5,579 5	5,540 5	5,862 0	10,954 5	5,751 2	16,1	265,3	2,869 1	2,103 1	2 088 4	2 209 6	4,129 1	2,167 8	–0,5

Table 17

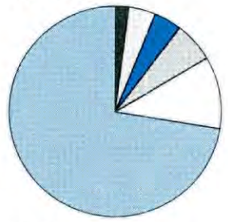
Sales to mining sector, million kW.h

Year	Gold and uranium	Diamond	Coal mines	Platinum	Copper	Chrome	Asbestos	Iron ore and manganese	Iron	Manganese	Other	Total	% Growth
1967	9 946	264	453	308	235	11	91	74			59	11 441	5,8
1968	10 339	281	480	378	256	14	107	81			59	11 995	4,8
1969	10 647	282	495	653	282	17	118	80			68	12 642	5,4
1970	11 504	288	535	941	343	20	137	88			92	13 948	10,3
1971	11 662	297	563	962	374	25	152	92			100	14 227	2,0
1972	11773	325	589	990	422	31	161	101			117	14 509	2,0
1973	12 263	334	620	1 581	565	33	168		86	27	123	15 800	8,9
1974	12 803	338	648	1 978	653	52	193		104	30	142	16 941	7,2
1975	13 108	346	705	2 001	679	42	238		121	37	167	17 444	3,0
1976	13 918	343	812	2 184	728	61	266		180	49	205	18 746	7,5
1977	14 708	342	941	2 287	874	84	275		271	62	295	20 139	7,4
1978	16 241	497	1 078	2 388	1 023	106	223		272	72	319	22 219	10,3
1979	17 201	596	1 248	2 772	1 042	126	233		334	83	365	24 000	8,0
1980	18 477	678	1 426	2 973	1 117	127	242		361	94	387	25 882	7,8
1981	19 406	714	1 522	3 014	1 131	117	240		335	104	548	27 131	4,8
1982	20 069	656	1 691	2 466	1 178	105	235		305	113	554	27 372	0,9
1983	20 724	649	1 686	2 552	1 178	99	225		215	77	616	28 021	2,4
1984	21 427	634	1 873	3 023	1 160	106	186		286	73	738	29 506	5,3
1985	22 088	652	2 142	3 402	1 304	175	184		306	84	512	30 849	4,5
1986	22 756	700	2 052	3 438	1 385	189	162		294	88	796	31 860	3,3
1987	23 421	745	2 064	3 746	1 439	189	130		264	89	762	32 849	3,1

Mining Sales

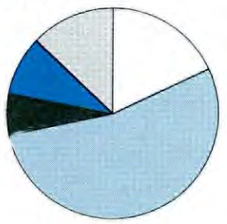


Major mining sectors



Diamonds **2%**
Minor Mining **4%**
Copper **4%**
Coal **6%**
Platinum **11%**
Gold & Uranium **71%**

Minor mining sectors



Iron **18%**
Other **53%**
Manganese **6%**
Asbestos **9%**
Chrome **13%**

Table 18 (a) ESKOM

Sales to industry, million kW.h

Year	Building, cement and quarrying	Chemical	Engineering, iron, steel and base metals	Foodstuffs, cons. goods, commercial and other	Paper and paper products	Other	Total	% growth
1966	530	1 098	2 850	935	416	240	6 069	
1967	562	1 214	3 224	1 022	469	238	6 729	10,9
1968	646	1 241	3 529	1 111	493	419	7 439	10,6
1969	716	1 272	4 207	1 088	542	749	8 574	15,3
1970	782	1 376	4 683	1 407	485	875	9 608	12,1
1971	824	1 444	5 652	1 673	494	927	11 014	14,6
1972	878	1 639	6 864	1 852	520	889	12 642	14,8
1973	1 096	1 921	7 687	2 747	575		14 026	10,9
1974	1 148	2 160	8 835	3 359	604		16 106	14,8
1975	1 115	2 382	10 180	3 790	583		18 050	12,1
1976	1 068	2 655	11 173	4 350	661		19 907	10,3
1977	1 087	3 103	11 927	4 819	650		21 586	8,2
1978	1 198	4 117	13 338	4 916	612		24 181	12,1
1979	1 121	4 657	15 600	5 378	719		27 475	13,6
1980	1 194	5 751	15 900	5 688	840		29 373	6,9
1981	1 353	7 215	15 316	6 341	866		31 091	5,8
1982	1 413	7 258	14 754	6 688	846		30 959	–0,4

Note: Figures not available for years prior to 1966

Table 18(b) ESKOM

Sales to industry, million kW.h

By Standard Industrial Classification of selected economic activities (SIC)

Year	Division 11	31	32	33	34	35	36	371	372	38	Other	Total	% Growth
1983	2 051	397	380	175	1 056	7 046	1 231	7 754	6 935	440	4 822	32 286	4,3
1984	2 295	407	400	181	1 288	7 389	1 342	8 793	8 654	441	4 929	36 119	11,9
1985	2 665	422	410	186	1 550	7 511	1 232	9 939	8 779	434	5 088	38 215	5,8
1986	2 863	382	430	189	1 500	7 758	1 206	10 302	9 030	484	5 026	39 170	2,5
1987	2 833	355	412	186	1 239	7 283	1 224	10 522	9 078	340	4 812	38 284	–2,3

Standard Industrial Classification Divisions

Division

11 Agriculture, hunting, forestry and logging
31 Manufacture of food, beverages, and tobacco
32 Manufacture of textiles, wearing apparel and leather goods
33 Manufacture of wood and wood products, including furniture
34 Manufacture of paper and paper products, including printing and publishing
35 Manufacture of chemicals and of chemical petroleum, coal, rubber and plastic products
36 Manufacture of non-metallic mineral products
371 Iron and steel basic industries
372 Non-ferrous metal basic industries
38 Manufacture of fabricated metal products, machinery and equipment
OtherThis includes other manufacturing and commercial enterprises

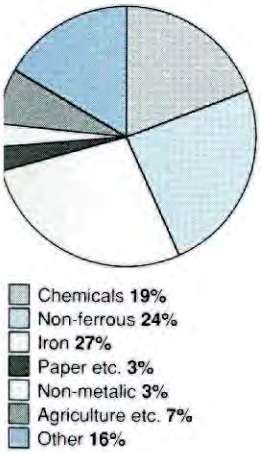
Total number of farm supplies

Farm supplies include supplies which are furnished to agriculture and smallholdings and which are primarily used for farming purposes.

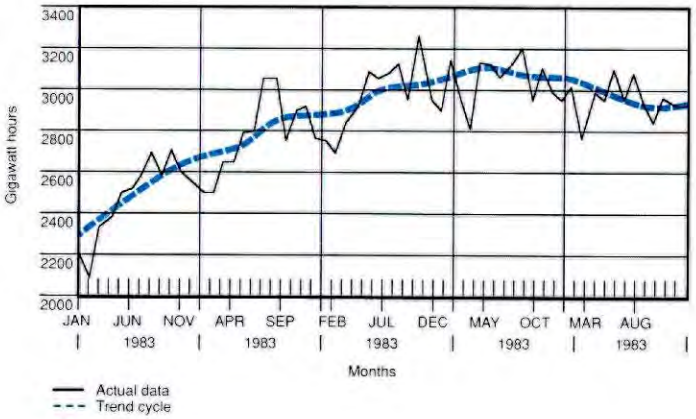
Year	**1987**	1986*	1985	1984	1983	1982	1981	1980	1979	1978
Number	**82 244**	73 302	70 364	65 018	59 098	53 467	49 238	45 156	41 605	39 787
% growth	**12,2**	4,2	8,2	10,0	10,5	8,6	9,0	8,5	4,6	4,7
Annual average growth 1977 – 1987	**8,0%**									

*The 1986 figures have been adjusted due to reclassification of categories within the rural tariff, disconnections and network sales.

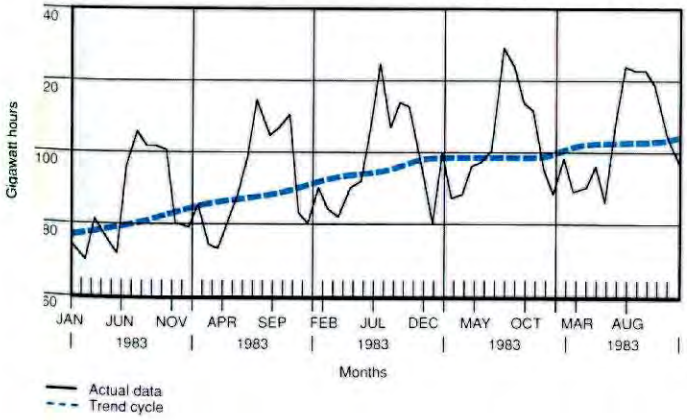
Sectors of industry



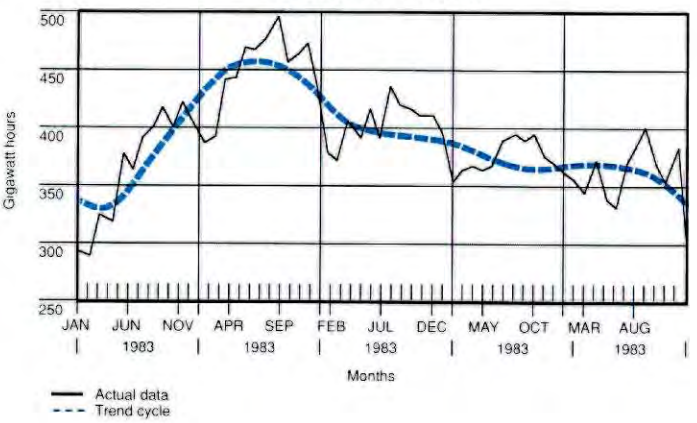
Industrial Sales



Domestic & Street Lighting Sales



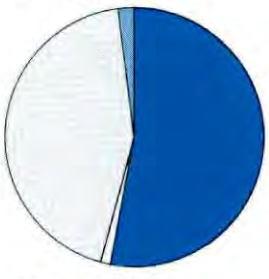
Traction Sales



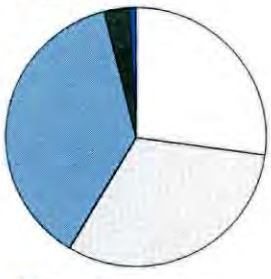
Number of customers by category (excluding traction, air and steam)

Year	Bulk supply	Mining	Industrial and commercial	Domestic and street lighting	Total for all categories	% Change
1950	70	133	2 759	35 090	38 052	
1951	79	138	3 023	37 937	41 177	8,2
1952	96	141	2 839	30 691	33 767	–18,0
1953	100	144	3 015	33 063	36 322	7,6
1954	108	145	3 089	33 877	37 219	2,5
1955	115	151	3 274	36 452	39 992	7,5
1956	125	166	3 490	38 944	42 725	6,8
1957	134	170	3 551	41 113	44 968	5,2
1958	137	174	4 216	43 665	48 192	7,2
1959	146	177	4 593	46 437	51 353	6,6
1960	155	183	5 039	49 968	55 345	7,8
1961	168	192	5 453	53 908	59 721	7,9
1962	179	209	6 410	56 456	63 254	5,9
1963	186	230	7 128	61 093	68 637	8,5
1964	187	240	7 782	66 397	74 606	8,7
1965	203	251	9 051	71 517	81 022	8,6
1966	208	259	10 278	77 121	87 866	8,4
1967	220	267	11 435	83 189	95 111	8,2
1968	233	276	13 540	85 227	99 276	4,4
1969	249	289	14 978	91 999	107 515	8,3
1970	265	294	16 336	98 155	115 050	7,0
1971	289	297	16 927	106 684	124 197	8,0
1972	310	299	18 500	108 517	127 626	2,8
1973	326	302	20 049	117 034	137 711	7,9
1974	332	314	41 647	106 857	149 150	8,3
1975	353	325	43 598	109 029	153 305	2,8
1976	365	333	61 142	105 482	167 322	9,1
1977	368	340	62 507	106 743	169 958	1,6
1978	386	354	65 797	109 317	175 854	3,5
1979	404	357	65 656	101 792	168 209	–4,3
1980	419	386	69 479	109 558	179 842	6,9
1981	434	403	77 722	113 552	192 111	6,8
1982	453	418	82 801	119 889	203 561	6,0
1983	468	421	89 439	124 433	214 761	5,5
1984	487	410	94 863	130 471	226 231	5,3
1985	528	524	101 246	135 770	238 068	5,2
1986	571	546	108 386	137 820	247 323	3,9
1987	562	544	116 067	142 050	259 223	4,8

Customers per category

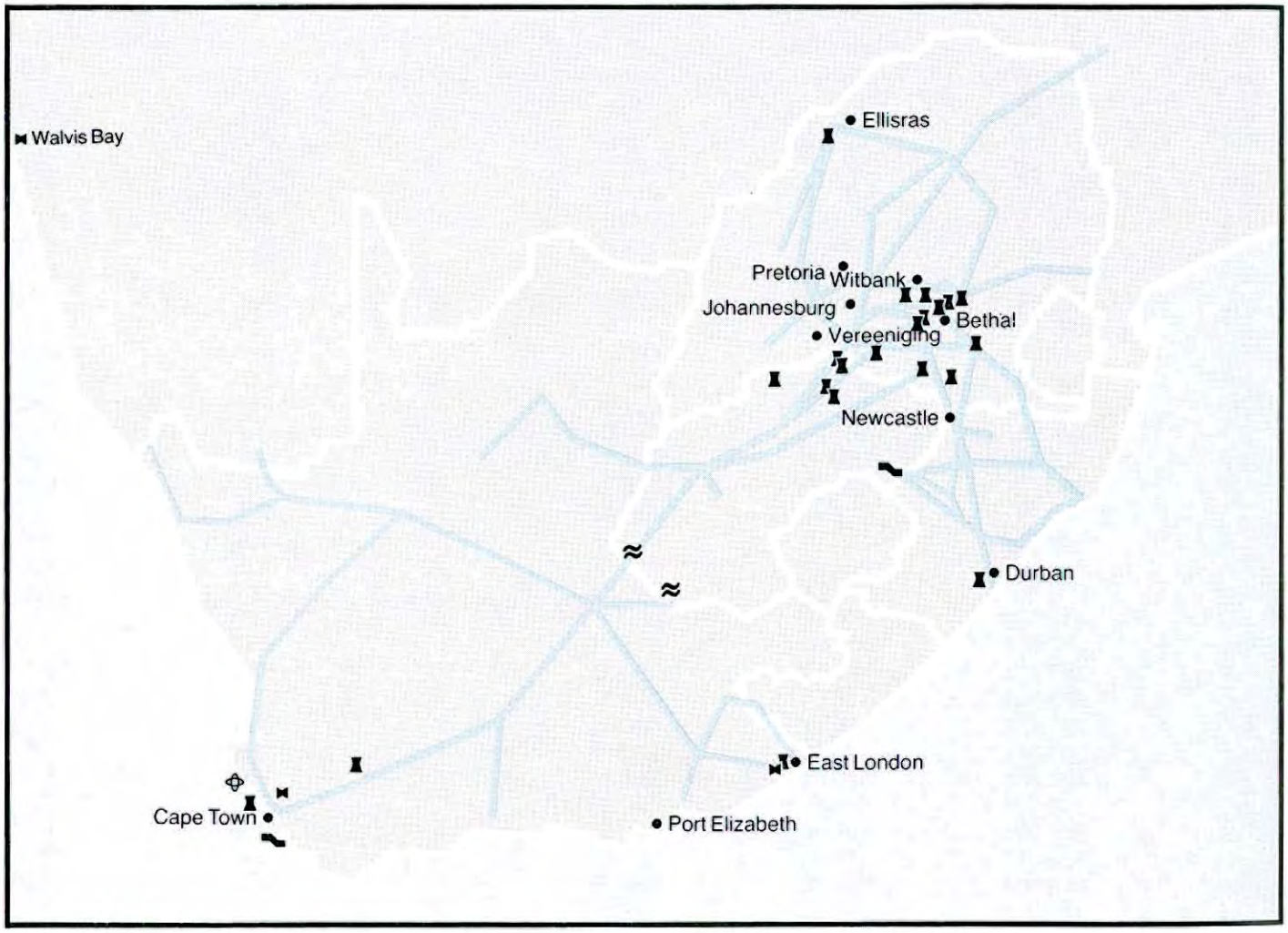


Sales per category



Eskom maps

Eskom's interconnected generation system



Reference

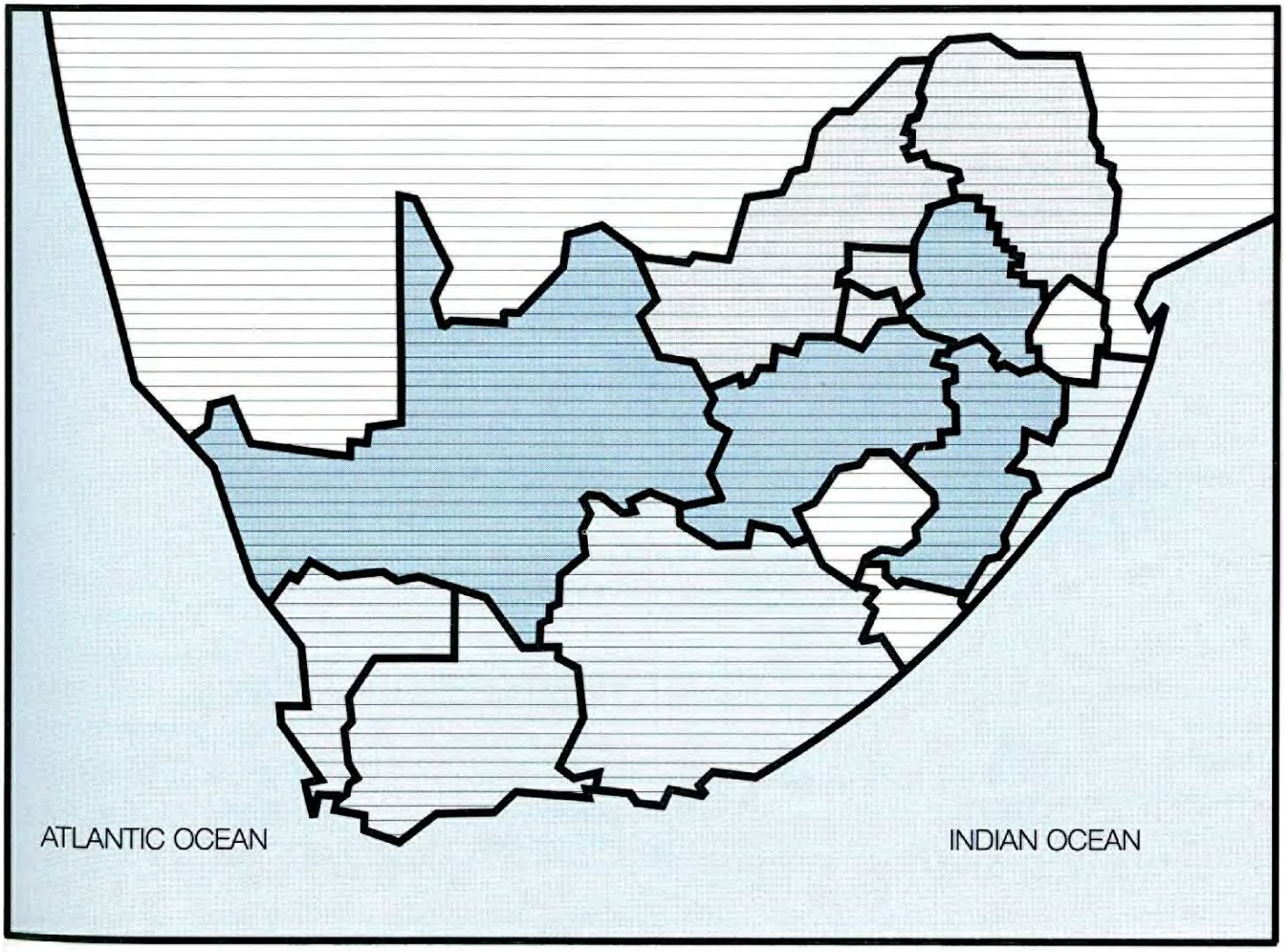
- Coal
- Nuclear
- Hydro
- Pumped storage
- Gas-turbine

Eskom's distribution regions in the RSA

Division 1
Eastern Natal – Durban
Southern Cape – George
Eastern Cape – East London
Western Cape – Bellville

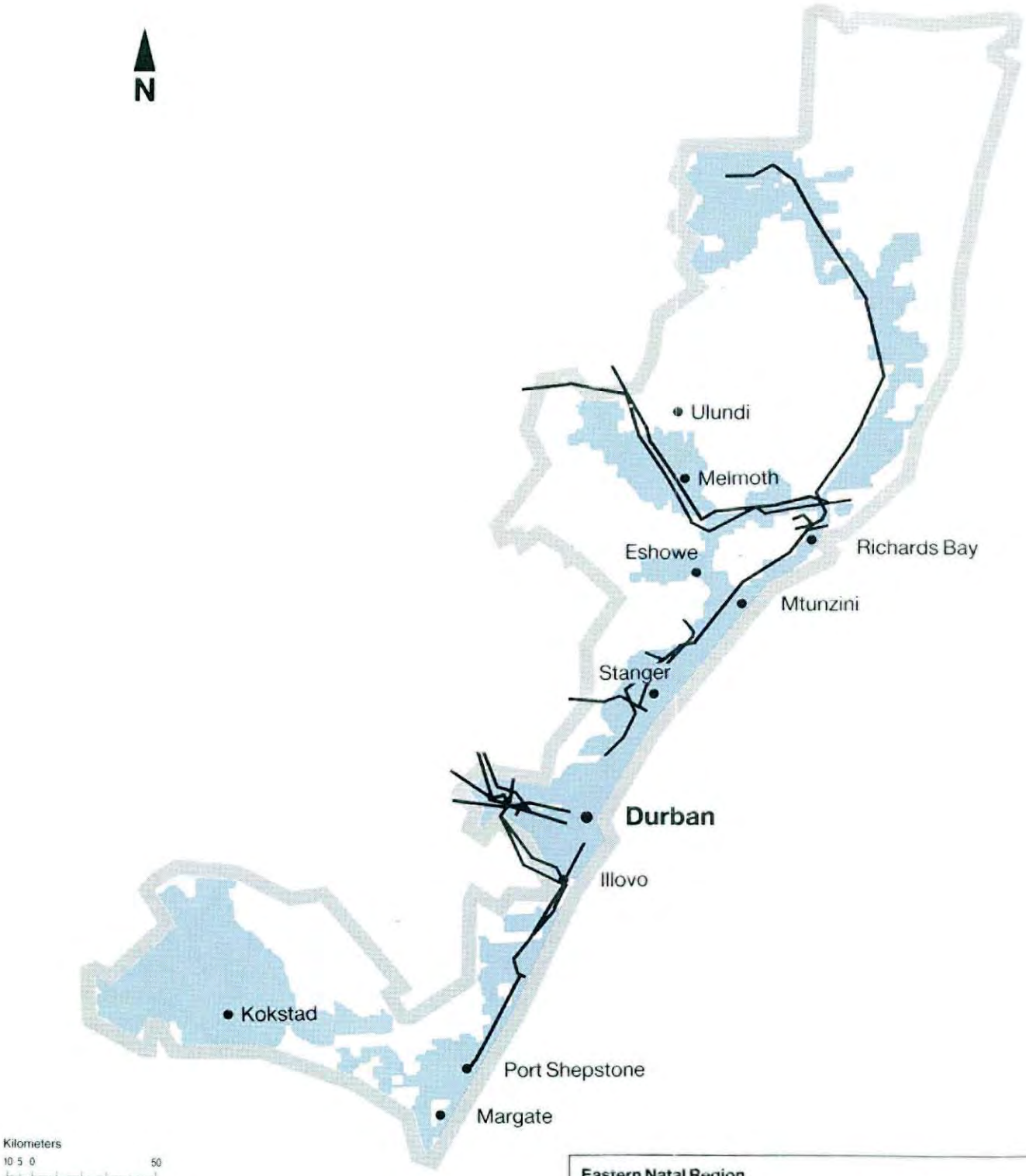
Division 2
Northern Cape – Kimberley
Orange Free State – Bloemfontein
Western Natal – Pietermaritzburg
Eastern Transvaal – Witbank

Division 3
Central Transvaal – Johannesburg
Southern Transvaal – Johannesburg
North-Eastern Transvaal – Nelspruit
Western Transvaal – Johannesburg



Map 3

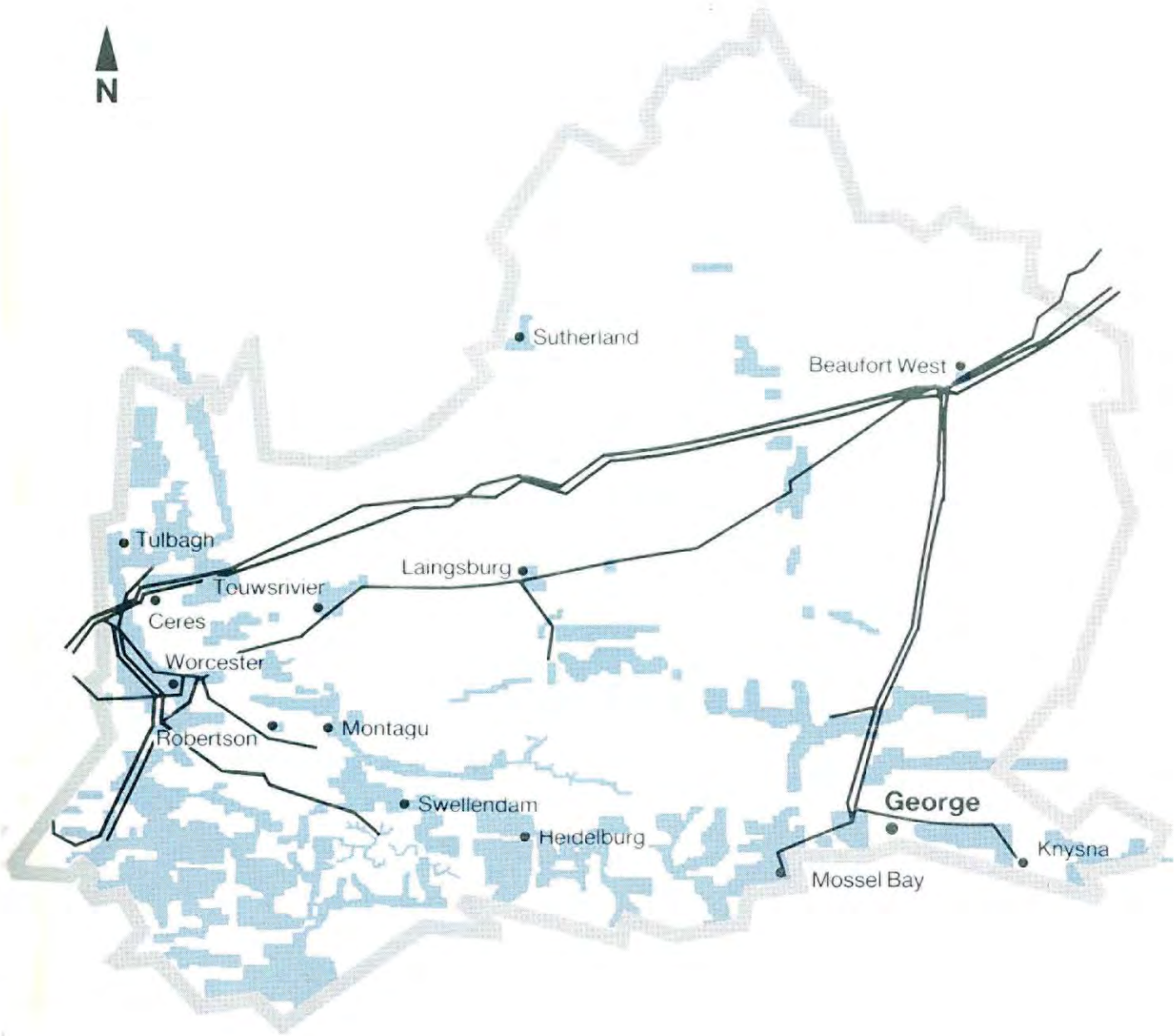
Eastern Natal Distribution Region



Eastern Natal Region Regional Office: Durban	(031) 32-0271
Empangeni District	(0351) 2-6931/2/3
Pinetown District	(031) 701-7691/701-7601
Eshowe District	(0354) 4-1348
Margate District	(03931) 2-0282

Map 4

Southern Cape Distribution Region



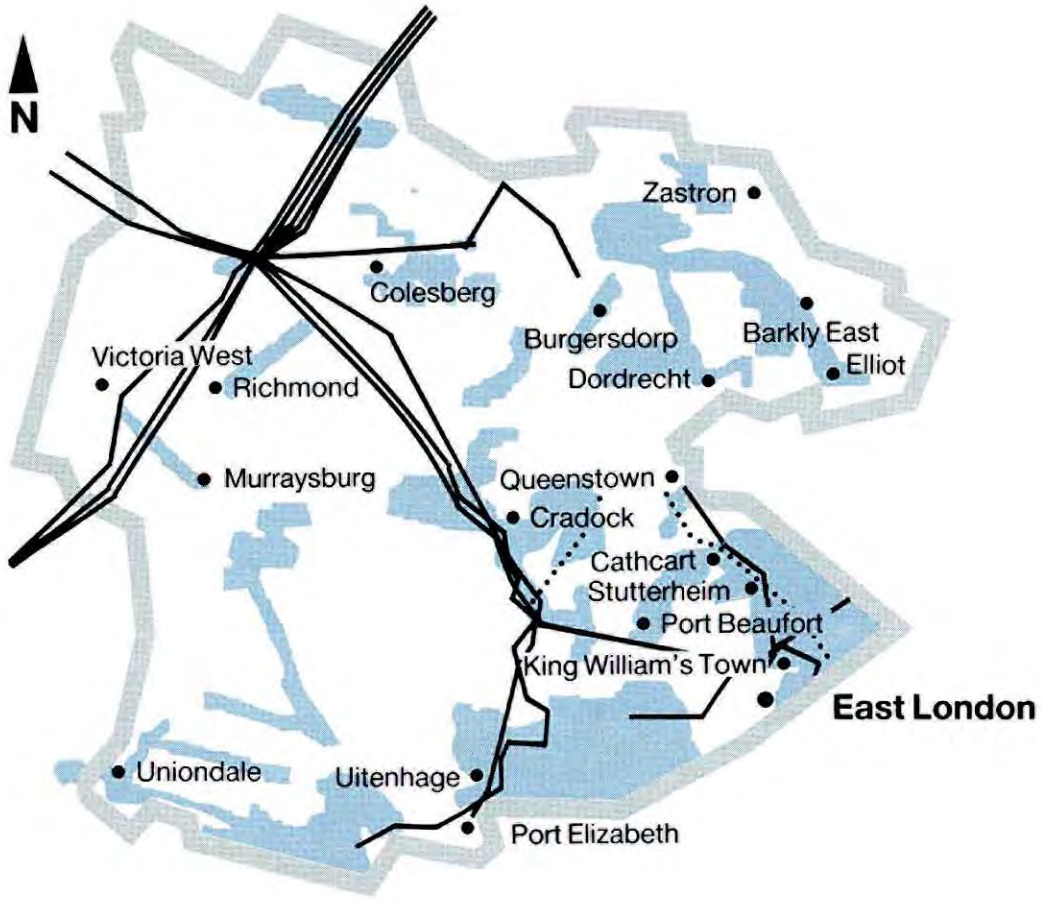
Kilometers
10 5 0 50

- Area of supply
- Transmission lines
- Transmission lines under construction
- Reticulated areas

Southern Cape Region Regional Office: George	(0441) 74-2650
Worcester District	(0231) 2-2394
Grabouw District	(024) 53-1140
George District	(0441) 74-4123
Swellendam District	(0291) 4-1051

Map 5

Eastern Cape Distribution Region



Kilometers

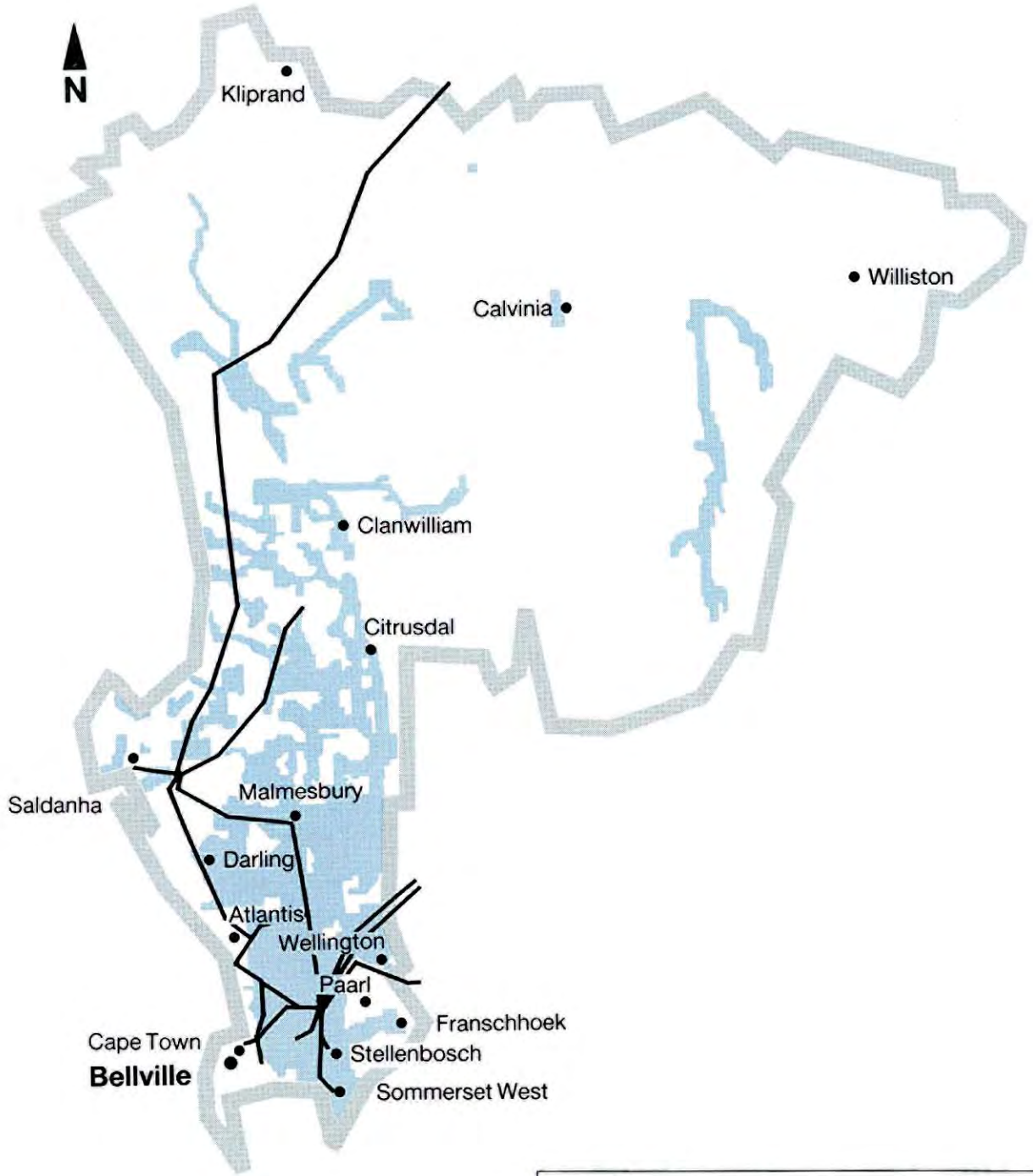
10 0 50 100

Area of supply
Transmission lines
Transmission lines under construction
Reticulated areas

Eastern Cape Region Regional Office: East London	(0431) 3-9911
Uitenhage District	(0422) 2-5833
Colesberg District	(05852) 363
East London District	(0431) 47-2493
Grahamstown District	(0461) 2-7031

Map 6

Western Cape Distribution Region



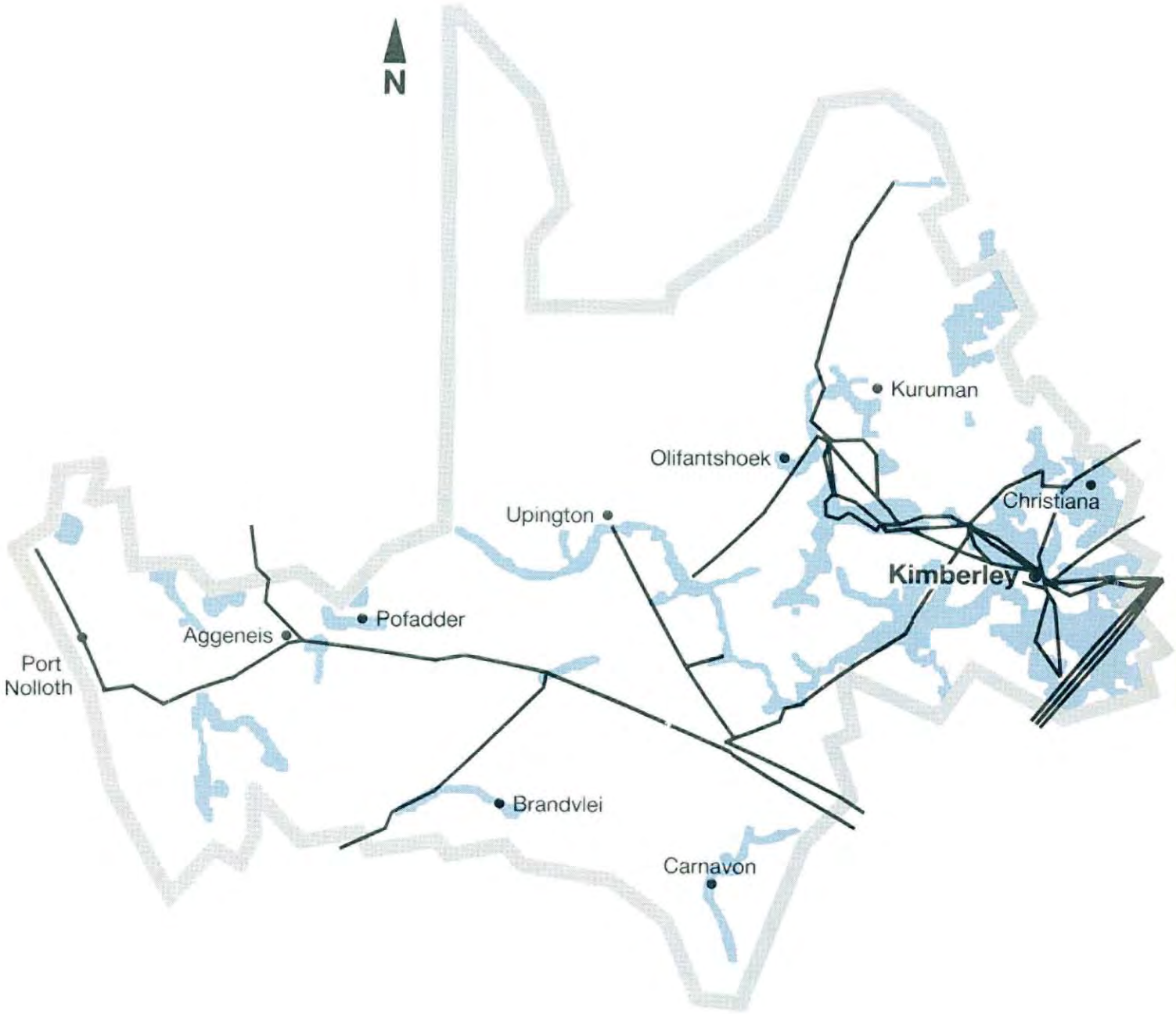
Kilometers
10 5 0 50

Area of supply
Transmission lines
Reticulated areas

Western Cape Region Regional Office: Bellville	(021) 915-9111
Bellville District	(021) 99-1160
Goodwood District	(021) 99-1160
Kraaifontein District	(021) 902-7457
Somerset West District	(024) 2-7117
Malmesbury District	(0224) 2-1369
Vredenburg District	(02281) 3-1155
Vredendal District	(0271) 3-1020

Map 7

Northern Cape Distribution Region



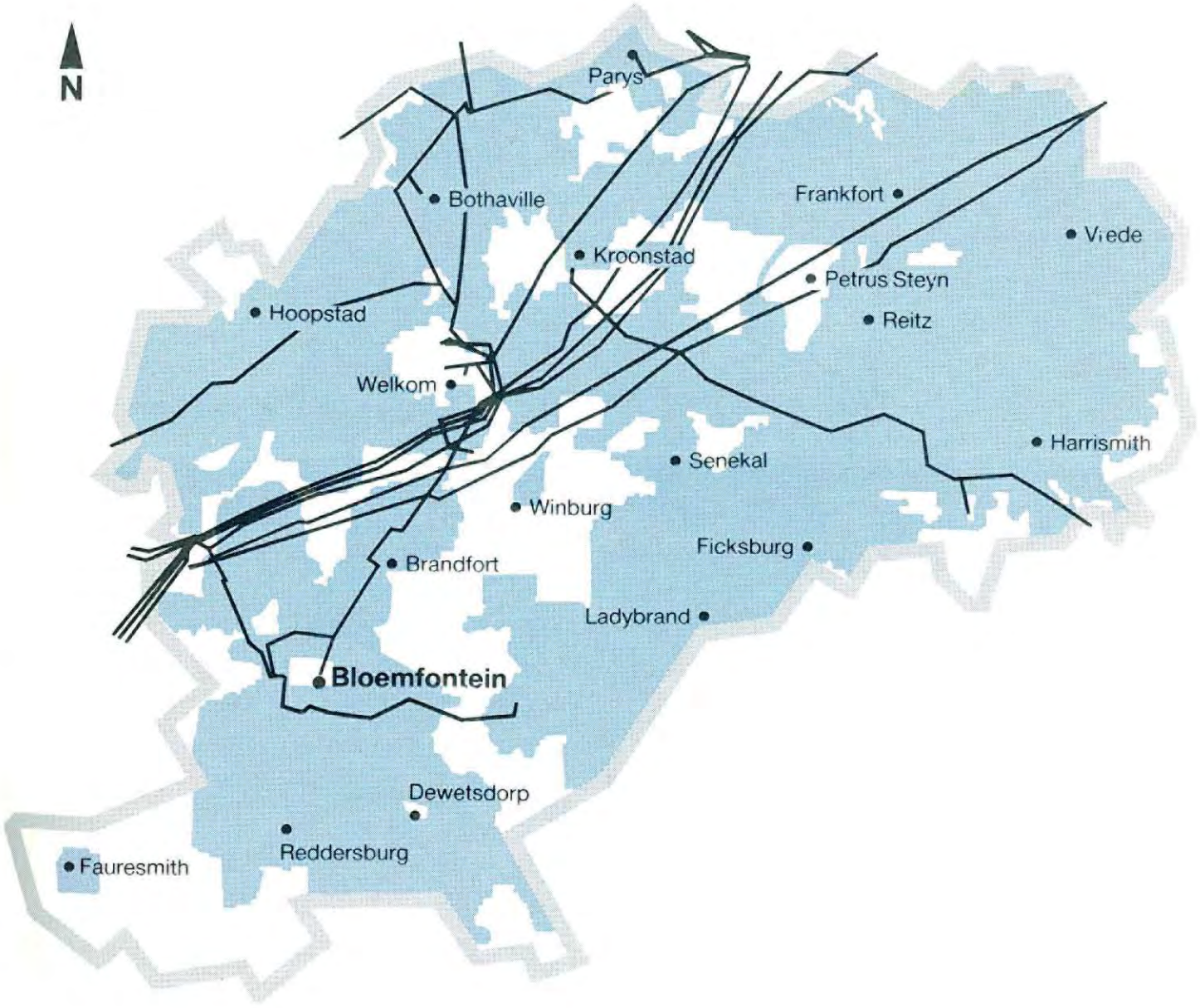
Kilometers
10 0 50 100

Area of supply
Transmission lines
Reticulated areas

Northern Cape Region Regional Office: Kimberley	(0531) 2-1371
Upington District	(0541) 5742
Kimberley District	(0531) 2-1371
Jan Kempdorp District	(05332) 4-1079
Kuruman District	(01471) 2-2151

Map 8

Orange Free State Distribution Region



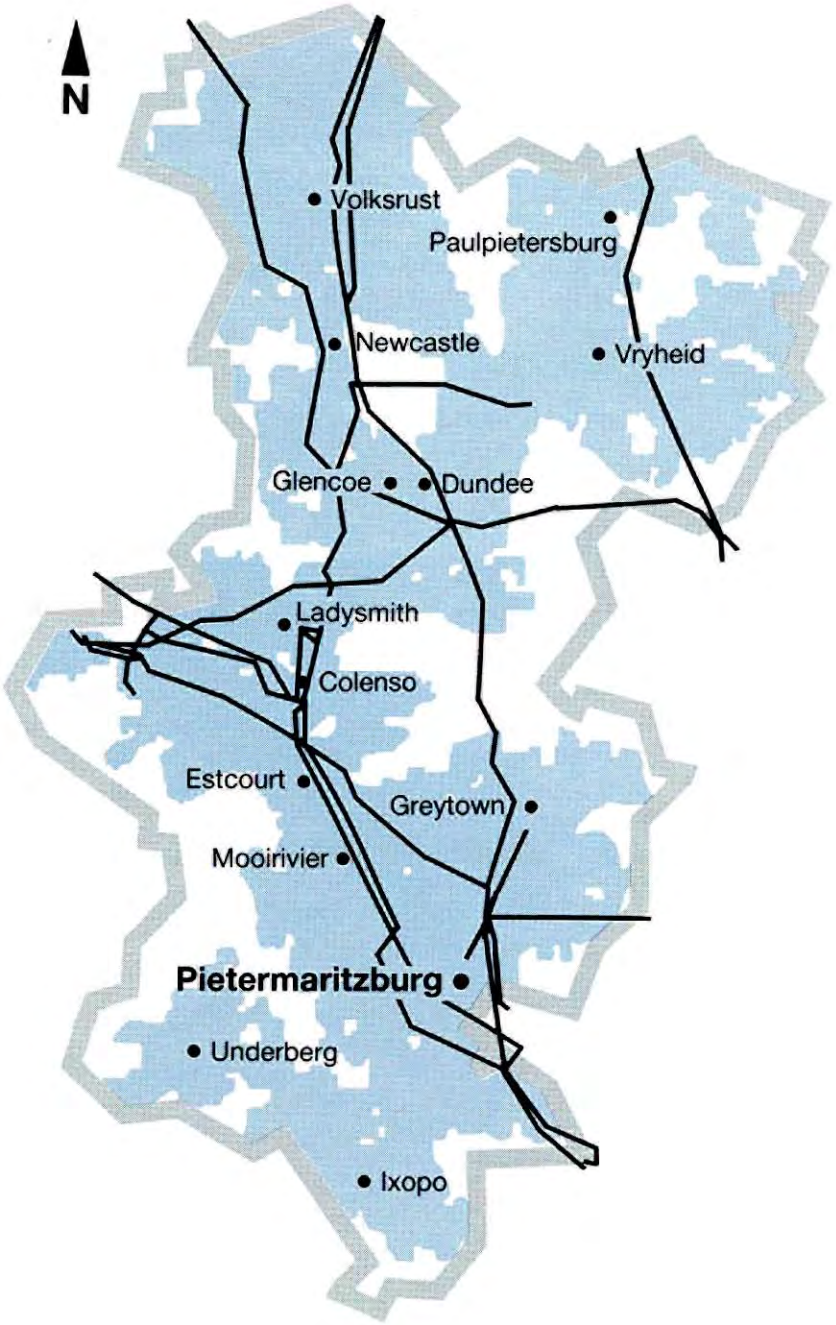
Kilometers
10 5 0 50

Area of supply
Transmission lines
Transmission lines under construction
Reticulated areas

Orange Free State Region Regional Office: Bloemfontein	(051) 30-2411
Bloemfontein District	(051) 35-2853
Welkom District	(0171) 2-4236
Bethlehem District	(01431) 3-5133
Bothaville District	(014141) 2118/2110
Parys District	(01601) 2341
Kroonstad District	(01411) 3-2757/8/9

Map 9

Western Natal Distribution Region



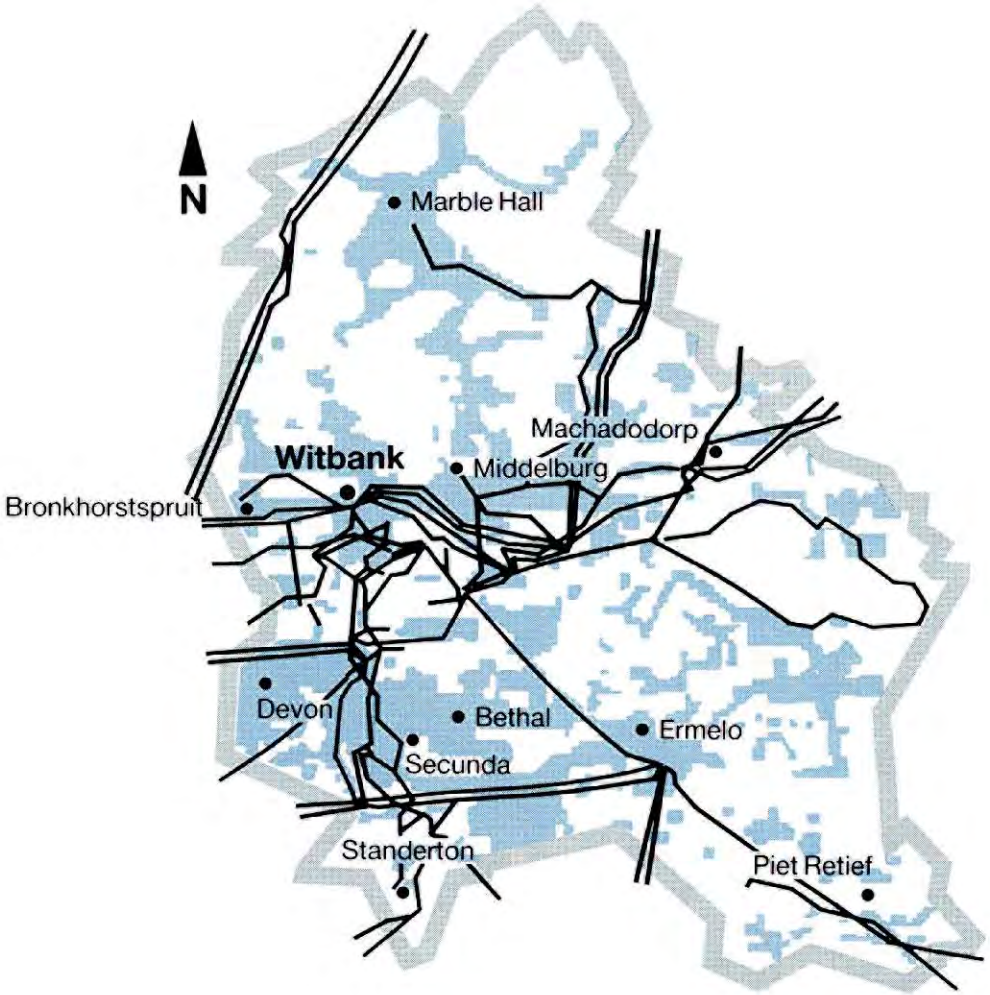
Kilometers
10 5 0 50

Area of supply
Transmission lines
Reticulated areas

Western Natal Region Regional Office: Pietermaritzburg	(0331) 94-7245
Newcastle District	(03431) 6351
Colenso District	(03622) 2232
Pietermaritzburg District	(0331) 94-7351/2/3

Map 10

Eastern Transvaal Distribution Region



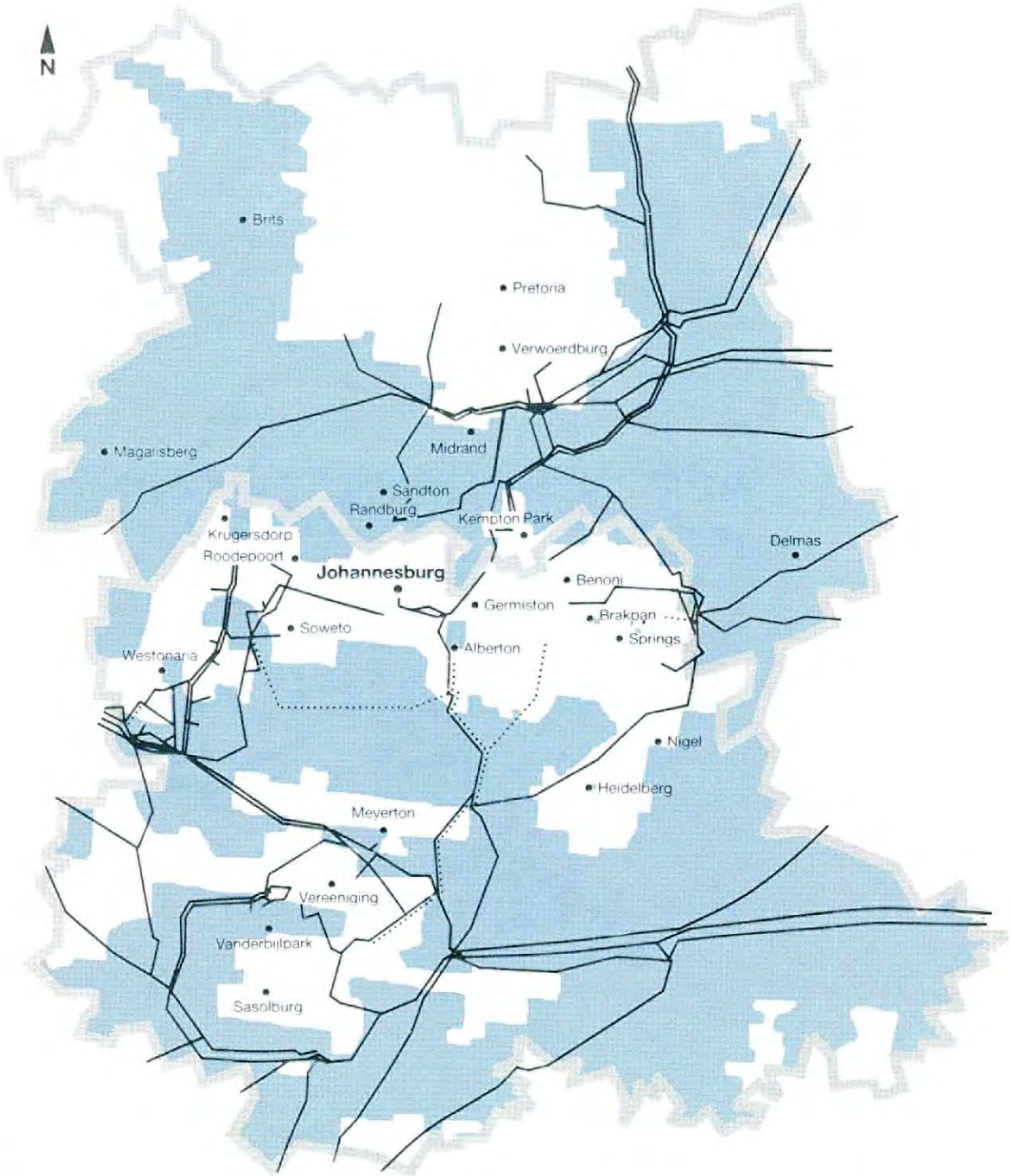
Kilometers
10 5 0 50

Area of supply
Transmission lines
Reticulated areas

Eastern Transvaal Region Regional Office: Witbank	(01351) 67-9111
Wildebees District	(01363) 7-1130
Ermelo District	(01341) 7450/1/2/3/4
Witbank District	(01351) 67-3200
Middelburg District	(01321) 2-7128/9
Groblersdal District	(01202) 4039

Map 11

Central and Southern Transvaal Distribution Regions



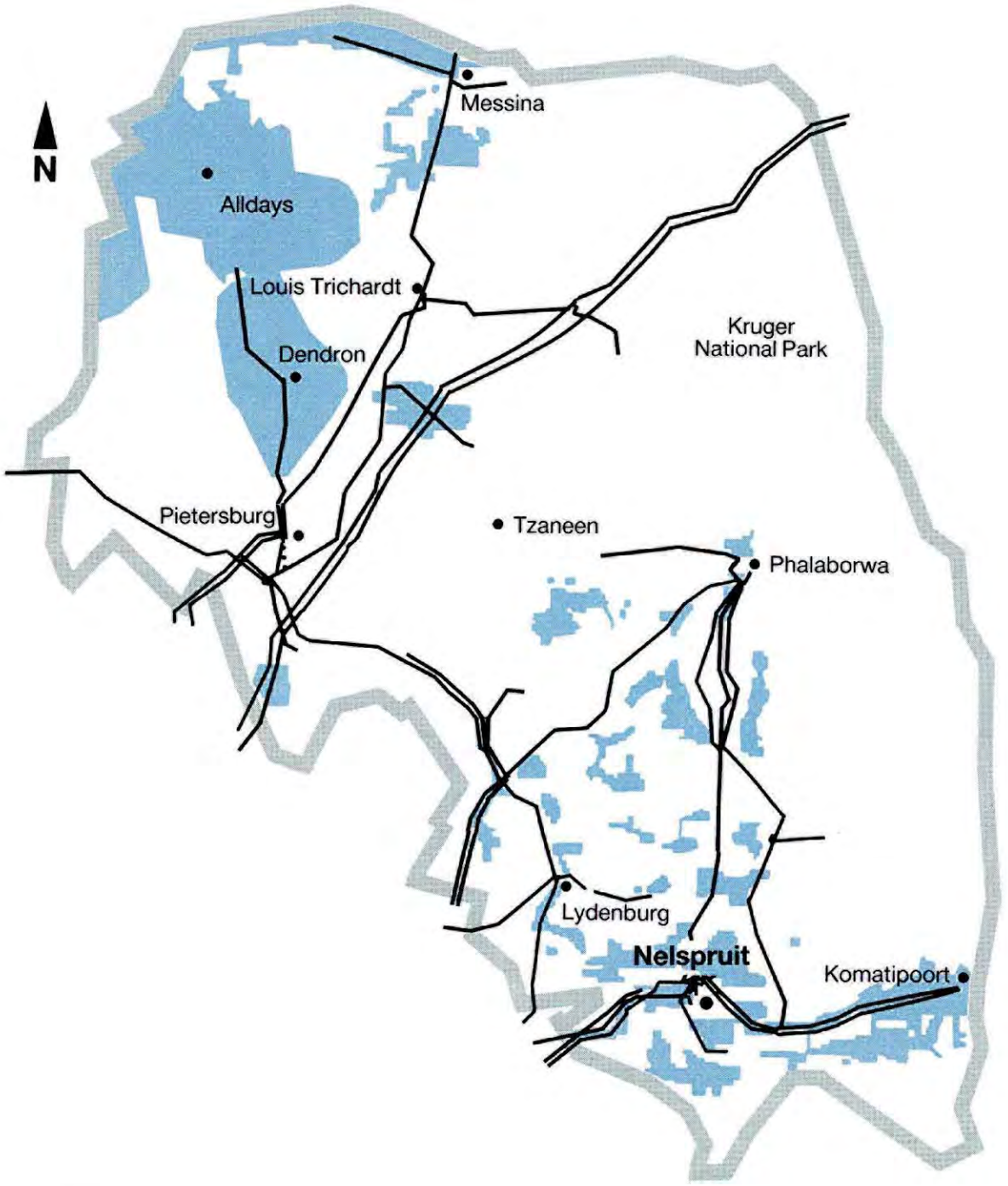
Kilometers
5 0 5 10 15

- Area of supply
- Transmission lines
- Transmission lines under construction
- Reticulated areas

Central Transvaal Region Regional Office: Johannesburg	(011) 711-9111	**Southern Transvaal Region** Regional Office: Johannesburg	(011) 711-9111
Irene District	(012) 61-2236	Nigel District	(011) 739-2161
Sandton District	(011) 786-4746	Vereeniging District	(016) 21-3410
Midrand District	(011) 702-2307/8/9	Westonaria District	(011) 693-5348/9
Randburg District	(011) 711-2913	Alberton District	(011) 869-1811
Petit District	(011) 54-8356	Brakpan District	(011) 55-8266

Map 12

North-eastern Transvaal Distribution Region



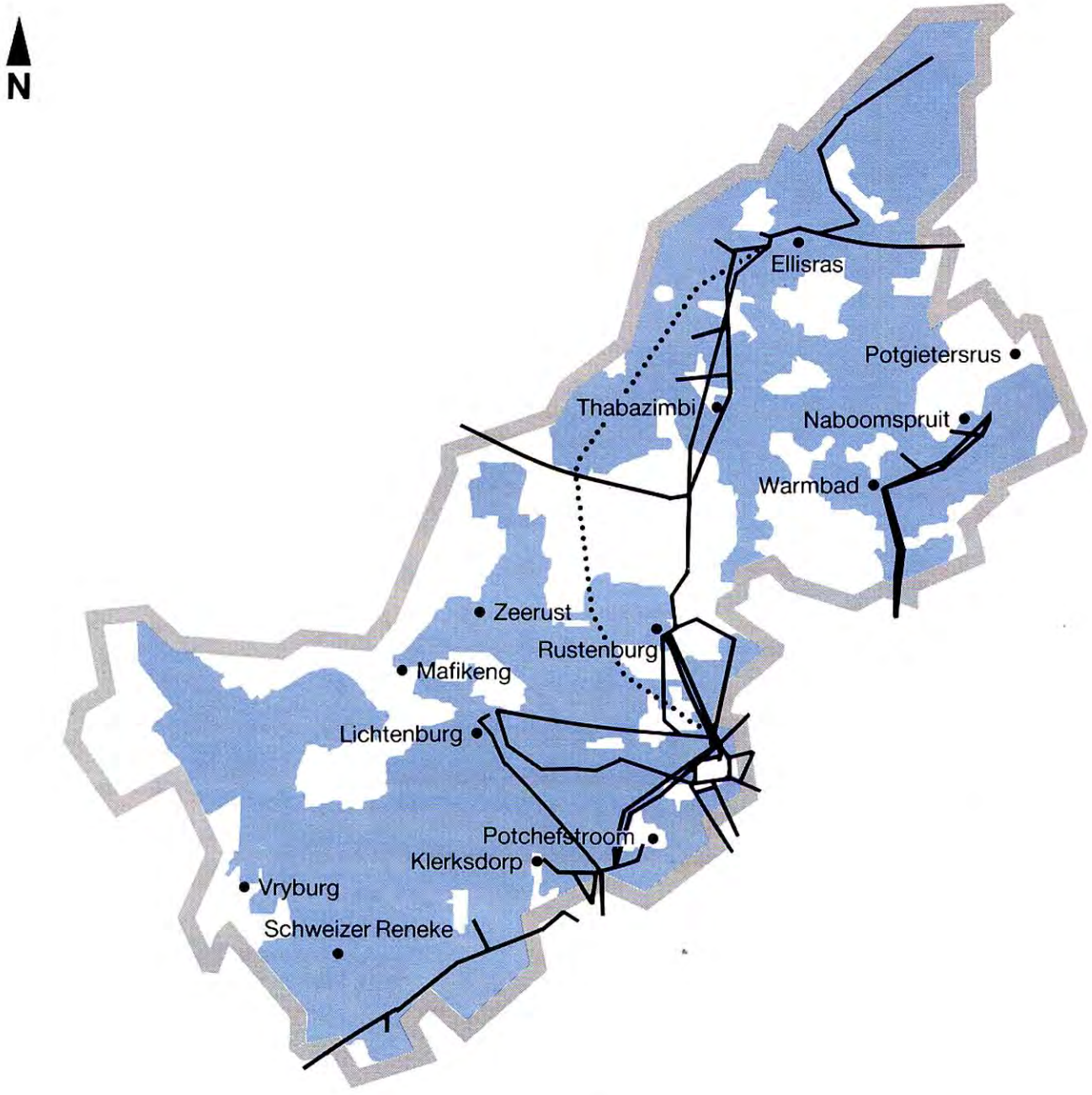
Kilometers
10 5 0 50

Area of supply
Transmission lines
Transmission lines under construction
Reticulated areas

North-eastern Transvaal Region Regional Office: Nelspruit	(01311) 5-2001
Soutpansberg District	(01521) 7-4821/2/3/4
Nelspruit District	(01311) 5-2316
Lydenburg District	(01323) 2314
Phalaborwa District	(01524) 5888

Map 13

Western Transvaal Distribution Region



Kilometers
10 0 50 100

- Area of supply
- Transmission lines
- Transmission lines under construction
- Reticulated areas

Western Transvaal Region Regional Office: Johannesburg	(011) 711-9111
Carletonville District	(01491) 7-2064/5
Klerksdorp District	(018) 2-4544/2-4740
Vryburg District	(01451) 6276/5741/2/3
Lichtenburg District	(01441) 2-6284/5/6
Rustenburg District	(01421) 2-0217 ext 225
Thabazimbi District	(01537) 2-1291/2/3
Warmbaths District	(015331) 2140

Production and consumption of electricity in Republic of South Africa

Reprinted from Central Statistical Services Statistical News Release P4101, census of Electricity, Gas and Steam, 1986

Census year	Gross production of electricity	Purchases outside Republic	Consumed in power stations	Lost in distribution	Sales outside Republic	Total no. of units consumed in South Africa	Electricity supplied for consumption					
							S.A. Transport Services					
							In mining	Traction	Other purposes	For domestic purposes	Manufacturing commerce, etc *	For other purposes **
	GW.h	GW.h	GW.h	GW.h	GW.h	GW.h	GW.h	GW.h	GW.h	GW.h	GW.h	GW.h
1964	29 399	—	4 142		—	25 213	9 758	1 389	277	4 221	8 617	951
1965	34 423	—	2 484	2 862	—	29 077	10 482	1 676	347	4 960	10 251	1 428
1967	39 636	—	2 738	2 861	—	34 037	11 759	1 913	409	5 682	12 464	1 810
1969	45 968	—	2 905	3 453	—	39 610	12 882	2 142	535	6 714	15 246	2 091
1971	54 647	—	3 552	3 865	14	47 216	14 457	2 676	602	8 088	19 282	2 111
1973	64 390	—	4 116	4 325	194	55 755	16 102	2 904	616	9 265	24 408	2 461
1975	74 894	25	4 753	5 369	283	64 514	17 749	3 159	696	9 991	29 784	3 136
1976	79 358	1 214	4 865	5 694	327	69 686	18 994	3 356	735	10 474	32 558	3 569
1977	80 324	4 288	4 704	5 843	417	73 648	20 318	3 538	775	11 302	33 615	4 099
1978	84 496	6 973	5 070	6 767	1 441	78 190	22 400	3 517	796	11 718	35 427	4 332
1979	89 748	10 356	5 690	6 879	1 794	85 739	23 939	3 730	915	12 330	40 101	4 723
1980	98 951	9 645	6 524	7 556	1 871	92 646	25 260	4 323	989	13 521	43 049	5 502
1981	113 656	2 660	7 854	8 040	2 232	98 190	26 311	4 652	999	14 738	45 735	5 755
1982	119 012	2 167	9 893	8 649	2 406	100 230	27 166	4 883	1 115	14 618	45 691	6 757
1983	121 122	5 084	10 994	9 373	2 875	102 965	28 336	4 339	921	14 490	49 232	6 177
1986	146 456	312	13 248	9 600	3 634	120 285	29 942	4 783	828	17 648	59 910	7 174

*Private businessess
**Rand Water Board, regional water supply commissions, government departments, provincial administrations, local authorities, etc.

Table 22

NATIONAL

Gross production of electricity by type of ownership

Reprinted from Central Statistical Services Statistical News Release P4101, census of Electricity, Gas and Steam, 1986

Census year	Public supply undertakings				Self-producers			
	Total	Eskom	Local authorities	Other	Total	Mines	Manufacturing	S.A. Transport Services and Other
	GW.h	GW.h	GW.h	GW.h	GW.h	GW.h	GW.h	GW.h
1964	28 332	22 713	5 609	10	1 605	640	884	81
1965	32 791	26 347	6 430	14	1 699	519	1 070	110
1967	37 705	30 422	7 269	14	1 931	473	1 352	106
1969	44 294	35 967	8 312	15	1 675	463	1 112	100
1971	52 665	43 473	9 178	15	1 982	447	1 436	99
1973	62 382	53 040	9 341	1	2 008	391	1 512	105
1975	72 904	65 479	7 421	3	1 990	404	1 510	75
1976	77 433	70 287	7 143	3	1 924	345	1 502	77
1977	78 405	70 986	7 415	3	1 919	334	1 513	72
1978	82 703	75 186	7 514	3	1 793	208	1 519	66
1979	87 749	80 248	7 492	9	1 999	91	1 842	66
1980	95 973	88 577	7 392	4	2 978	92	2 824	62
1981	110 802	103 452	7 345	5	2 853	85	2 685	84
1982	115 479	108 665	6 813	2	3 532	81	3 379	72
1983	115 862	109 250	6 610	1	5 261	82	5 111	68
1986	139 867	133 563	6 289	16	6 589	93	6 430	65

South African municipal statistics

Source: 1985, 1986 & 1988 South African Municipal Yearbook

Town	Financial year ended	Number of consumers: Domestic	Business	Industry	Not defined and other	Total	KW.h sold: Domestic	Business	Industry	Not defined and other	Total	Maximum demand MW/MVA	Average monthly load factor	Distribution loss as a % of KW.h sold	Population: Total
Transvaal Statistics															
Alberton	30.6.86	18 000 [b]	638 [b]	290	1	18 929	—	—	—	590 000	590 000	136,0	62,1	5,0	218 700
Amalia	1986	—	—	—	—	0	—	—	—	—	0	—	—	—	389
Attridgeville	1986	—	—	—	10 500	10 500	—	—	—	—	0	27,6	85,0	—	88 467
Barberton	1986	1 560	240	—	—	1 800	18 542	12 785	—	3 971	35 298	0,9	63,0	—	17 452
Bedfordview	1986	2 406 [a]	76	14	—	2 496	82 460	4 520	66950	—	153 930	32,4	67,0	5,8	28 000
Belfast	1986	612	72	1	1	686	5 960	2 485	495	768	9 708	2,5	45,1	11,8	8 237
Benoni	30.6.85	19 751 [b]	1 584 [b]	269 [b]	2	21 606	197 625	54 573	306 310	138 607	697 115	159,3	63,0	1,7	244 919
Bethal	1986	1 881	263	8	1	2 153	16 465	4 744	23 244	—	44 453	12,8	61,7	2,6	23 510
Bloemhof	30.6.85	505	122	6	—	633	3 989	1 755	3 863	2 903	12 510	2,2	67,6	6,6	6 432
Boksburg	30.6.85	20 455	848	182	—	21 485	214 561	57 642	400 414	35 431	708 048	159,0	62,8	3,4	201 842
Brakpan	1985	13 272	1 373	355	—	15 000	99 953	17 403	71 501	41 143	230 000	55,0	60,0	11,0	100 953
Brits	1986	2 397	626	93	—	3 116	22 660	27 505	100 218	—	150 383	34,6	50,2	8,3	10 129
Bronkhorstspruit	1986	1 243 [b]	143 [b]	38 [b]	34	1 458	—	—	—	33 201	33 201	7,5	53,4	3,5	7 567
Carletonville	1986	5 951 [b]	750 [b]	—	—	6 701	76 282	12 914	—	11 666	100 862	21,2	49,1	1,0	187 450
Carolina	86/87	—	—	—	720	720	—	—	—	10 440	10 440	—	—	—	7 580
Christiana	1986	715	86	808	—	1 609	7 772	1 297	2 907	—	11 976	4,0	37,0	—	7 844
Delareyville	1986	529	136	12	—	677	4 528	1 779	1 585	—	7 892	2,5	37,5	7,6	1 245
Delmas	1985	1 377	157	20	1	1 555	14 197	4 020	7 182	88	25 487	6,4	60,0	8,8	17 179
Deneysville	1986	280	28	1	—	309	3 312	1 528	798	—	5 638	1,6	61,5	—	2 050
Edenvale	1986	8 372 [a]	232 [c]	294 [c]	—	8 898	100 797	5 851	61 583	—	168 231	39,2	49,3	3,2	44 125
Ermelo	30.6.86	3 412	452	—	—	3 864	37 086	32 918	—	40	70 044	18,0	62,0	7,2	46 523
Evander	1986	212 [c]	209 [b]	70 [b]	1 909	2 400	20 951	6 270	5 040	—	32 261	1,2	59,0	9,6	34 500
Fochville	30.6.86	2 120	180	—	—	2 300	20 450	5 113	—	—	25 563	7,2	48,2	5,9	13 158
Germiston	30.6.86	24 615 [c]	3 437 [c]	779 [c]	2	28 833	275 731	56 001	624 531	38 312	994 575	210,5	64,3	1,0	145 320
Graskop	—	—	—	—	—	0	—	—	—	—	0	—	—	—	2 050
Groblersdal	1986	—	—	—	—	0	—	—	—	19 173	19 173	5,0	—	—	2 611
Hartbeesfontein	30.6.86	436 [b]	79	9	—	524	2 338	1 880	1 001	—	5 219	1,6	38,6	9,7	4 439
Heidelberg	—	3 196	281	38	—	3 515	30 991	12 791	48 830	2 829	95 441	21,3	55,0	4,0	25 177
Hertzogville	1985	214	27	2	—	243	1 385	—	—	—	1 385	6,2	—	—	460
Hoopstad	1985	380	20	10	—	410	3 027	865	432	—	4 324	1,4	—	8,9	6 650
Ikageng	—	1 623	210	—	—	1 833	—	—	—	—	0	—	—	—	0
Johannesburg	30.6.86	109 085 [a]	4 312 [a]	3 293 [a]	—	116 690	1 949 307	189 753	2 977 896	110 643	5 227 599	1 248,3	63,9	4,7	1 739 000
Katlehong	1.12.85	—	—	—	—	0	—	—	—	—	0	—	48,0	5,0	350 000
Kempton Park	30.6.86	20 676	968	253	—	21 897	265 200	82 600	79 600	—	427 400	101,9	67,4	5,6	278 233
Kinross	30.6.86	878	108	12	—	998	5 879	1 235	6 188	—	13 302	—	—	5,8	3 500
Klerksdorp	31.12.86	12 724 [a]	1 226 [a]	73 [a]	–	14 023	118 119	30 351	63 119	32 336	243 925	52,1	65,9	4,1	92 494
Koster	1986	—	—	—	—	0	—	—	—	7 410	7 410	—	—	16,5	5 140
Krugersdorp	30.6.86	15 102	1 290	567	354	17 313	144 268	37 064	216 003	19 809	417 144	98,5	59,0	4,7	133 514
Kwa-Thema	—	—	—	—	—	0	—	—	—	—	0	—	—	—	111 523
Leeudoringstad	30.6.85	530	30	—	—	560	—	—	—	6 122	6 122	1,6	34,1	3,7	4 700
Lichtenburg	1986	3 159	306	123	—	3 588	29 446	9 715	8 123	7 602	54 886	12,5	84,4	3,6	19 729
Louis Trichardt	1986	2 405	438	79	127	3 049	35 114	121 172	—	4 049	160 335	26,0	92,0	19,3	8 889
Lydenburg	30.6.86	1 425	197	35	—	1 657	14 714	3 351	6 404	31	24 500	7,0	73,0	15,0	12 830
Makwassie	30.6.86	256	63	1 [a]	1	321	3 100	—	—	—	3 100	1,0	91,0	8,0	4 361
Marble Hall	30.6.86	553 [c]	161 [c]	15 [c]	—	729	5 889	3 892	4 815	211	14 807	5,5	—	12,4	2 750
Messina	30.6.86	580	140	4	—	724	7 295	909	970	—	9 174	2,4	75,0	11,7	11 306
Meyerton	30.6.86	1 757	2 627	62	—	4 446	2 430	738	4 220	98 078	105 466	202,6	70,1	9,5	11 827
Mhluzi	1 986	—	—	—	—	0	—	—	—	—	0	5,0	—	—	26 396
Middelburg	30.6.86	6 329 [a]	1 020 [c]	167 [c]	3	7 519	57 306	12 193	50 029	31 868	151 396	41,0	60,0	8,7	44 730
Midrand	1 986	2 073 [b]	30 [b]	47 [b]	—	2 150	16 232	2 223	94 251	1 228	113 934	261,8	59,6	6,0	21 150
Naboomspruit	30.6.86	925 [b]	158 [b]	2 [b]	—	1 085	11 454	4 179	338	—	15 971	3,8	72,2	9,8	6 724
Nelspruit	31.12.86	5 759	325	177	—	6 261	79 656	14 187	13 403	—	107 246	31,0	62,0	7,0	50 887
Nigel	30.6.86	5 526	531	138	—	6 195	59 153	9 101	62 430	—	130 684	33,7	56,0	11,0	85 904
Nylstroom	1986	1 173	184	50	126	1 533	7 502	3 692	6 570	—	17 764	4,5	64,6	17,6	10 810
Oranjeville	30.6.86	204	16	—	—	220	716	102	—	—	818	0,3	57,4	—	1 216

South African municipal statistics

Source: 1985, 1986 & 1988 South African Municipal Yearbook

Town	Financial year ended	Number of consumers: Domestic	Business	Industry	Not defined and other	Total
Orkney	31.12.86	3 256	314	—	43	3 613
Phalaborwa	30.6.86	2 981 [c]	393 [c]	51 [c]	—	3 425
Piet Retief	—	—	—	—	1 743	1 743
Pietersburg	30.6.86	9 590 [b]	534 [b]	109 [b]	—	10 233
Potchefstroom	30.6.85	—	—	—	10 650	10 650
Potgietersrus	30.6.86	3 304	545	68	1	3 918
Pretoria	30.6.86	121 806 [c]	4 200 [c]	410 [b]	4 423	130 839
Randburg	30.6.86	15 298	1 167	198	—	16 663
Randfontein	30.6.86	8 964	783	110	—	9 857
Roodepoort	30.6.86	30 048 [c]	1 528 [c]	132 [c]	256	31 964
Rustenburg	30.6.86	9 657	1 225	66	36 204	47 152
Sabie	1 985	—	—	—	450	450
Sandton	1986/87	7 802	158	61	—	8 021
Schweizer-Reneke	30.6.84	810	159	12	—	981
Springs	1985	15 335 [c]	1 790 [c]	283 [c]	–	17 408
Standerton	30.6.86	4 761 [b]	436 [b]	5 [b]	1	5 203
Stilfontein	1986	—	—	—	4 155	4 155
Trichardt	1984/85	518	15	2	—	535
Tzaneen	1986	1 529	402	29	1 800	3 760
Vanderbijlpark	30.6.86	16 506 [c]	1 021 [c]	129 [c]	37	17 693
Ventersdorp	1985	—	—	—	1 100	1 100
Vereeniging	30.6.86	12 803 [c]	922 [c]	141 [c]	–	13 866
Verwoerdburg	1 986	14 072 [c]	210 [c]	45 [c]	—	14 327
Vosloorus	1986	5 899 [a]	100 [a]	1 [a]	—	6 000
Vrede	30.6.85	500 [a]	55 [a]	4 [a]	—	559
Wakkerstroom	—	—	—	—	—	0
Warmbaths	30.6.86	—	—	—	1 785	1785
Waterval Boven	1986	449	73	1	4	527
Westonaria	1986	3 760	775	165	—	4 700
White River	1986	1 657	423	55	—	2 135
Witbank	1986	10 431 [b]	878	14	1	11 324
Wolmaransstad	30.6.86	625	143	19	—	787
Zeerust	—	1 019 [b]	195 [b]	29 [b]	—	1 243
TOTAL TRANSVAAL		630 013	44 843	10 536	76 435	761 827

MW.h sold: Domestic	Business	Industry	Not defined and other	Total	Maximum demand MW/MVA	Average monthly load factor	Distribution loss as a % of KW.h sold	Population: Total
35 677	10 755	—	—	46 432	12,6	73,6	5,1	37 058
31 943	7 067	18 761	4 501	62 272	14,6	64,2	7,8	14 000
—	—	—	29 884	29 884	7,4	47,2	—	16 900
81 550	41 309	77 717	—	200 576	46,6	60.8	12,7	172 146
—	—	—	246 169	246 169	53,5	66,6	15,0	0
48 998	18 772	16 992	5 112	89 874	20.5	59.6	11.4	12 450
1 119 527	430 398	2 393 753	225 876	4 169 554	872,8	5,5	789 750	
233 697	31 819	114 737	—	380 253	99,0	62,0	6,9	101 589
80 581	22 182	116 631	—	219 394	—	60,0	5,2	103 015
344 480	52 012	105 533	74 100	576 125	139,8	67,2	9,8	155 949
92 812	36 634	7 604	89 691	226 741	47,2	64,6	7,9	39 000
—	—	—	29 000	29 000	—	—	—	13 940
98 343	2 053	27 632	—	128 028	46,4	55,0	8,8	117 584
8 593	1 785	635	—	11 013	2,6	55,1	12,6	11 650
163 516	44544	316 319	39 469	563 848	122,3	65,9	4,3	0
53 001	16 600	31 990	1 320	102 911	25,0	42,0	7,8	40 375
—	—	—	58 896	58 896	119,1	52,0	2,9	15 093
—	—	—	8 102	8 102	—	—	—	2 200
73 103	47 037	35 202	26 244	181 586	52,0	70,0	12,5	12 030
143 108	28 516	58 877	3 589	234 090	53,5	66,4	6,7	109 091
—	—	—	12 909	12 909	—	—	—	0
150 184	71 062	129 724	—	350 970	98,1	63,6	5,3	127 397
149 958	15 921	120 727	15 581	302 187	71,4	63,5	6,6	0
27 867	1 206	120	—	29 193	11,0	50,0	4,0	95 000
5 643	2 644	609	451	9 347	2,8	38,7	4,4	0
—	—	—	—	0	—	—	—	4 217
—	—	—	28 735	28 735	6,5	43,5	12,6	13 484
—	—	—	5 429	5 429	1,6	39,6	4,3	8 558
45 363	9 356	1 985	—	56 704	7,9	65,8	—	164 988
13 360	1 000	7 000	374	21 734	8,0	62,9	9,9	4 700
—	—	—	255 649	255 649	67,8	49,0	12,4	136 700
4 954	2 361	3 159	11 898	22 372	—	—	13,3	15 130
9 793	5 800	1 785	—	17 378	—	—	—	6 350
7 089 893	1 753 929	8 908 735	2 420 938	20 173 495				6 882 915

South African municipal statistics

Town	Financial year ended	Number of consumers: Domestic	Business	Industry	Not defined and other	Total	MW.h sold: Domestic	Business	Industry	Not defined and other	Total	Maximum demand MW/MVA	Average monthly load factor	Distribution loss as a % of KW.h sold	Population: Total
Natal Statistics															
Amanzimtoti	—	—	—	—	—	0	—	—	—	—	0	—	—	—	26 00
Camperdown	—	—	—	—	—	0	—	—	—	—	0	—	—	—	1 850
Cedarville	—	—	—	—	—	0	—	—	—	—	0	—	—	—	595
Colenso	30.6.86	480 [b]	50	1	—	531	3 751	694	164	—	4 609	0,7	50,7	—	3 030
Dalton	—	—	—	—	—	0	—	—	—	—	0	—		—	1 641
Dundee	1986	1 949	380	184	—	2 513	19 513	14 781	11 191	—	45 485	10,6	57,0	—	17 805
Durban	1986	203 632	24 081	477	3	228 193	1 583 335	940 004	3 452 947	129 108	6 105 394	1 084,9	73,4	5,3	909 530
Empangeni	1986	3 387 [b]	931 [b]	12 [b]	—	4 330	30 576	36 501	17 012	—	84 089	20,0	58,0	7,8	11 510
Eshowe	1985	—	—	—	1 090	1 090	7 773	2 740	7 178	522	18 213	4,5	46,4	—	13 717
Estcourt	1986	2447 [c]	461 [c]	24	44	2 976	20 025	12 642	105 623	3 101	141 391	24,4	74,0	3,1	10 622
Glencoe	30.6.86	1 073	80	6	2	1 161	8 111	899	2 859	2 495	14 364	3,7	54,4	7,0	10 618
Greytown	1986	1 070	274	15	127	1 486	10 476	3 147	4 222	6 160	24 005	4,9	57,2	5,6	15 733
Harding	30.6.85	329	72	4	—	405	—	—	—	4 520	4 520	1,4	62,0	—	3 650
Howick	31.12.86	1 466 [b]	86	22	5 426	7 000	13 558	3 644	10 900	—	28 102	—	54,5	5,7	11 600
Isipingo	—	—	—	—	—	0	—	—	—	—	0	—	—	—	22 500
Kingsburgh	—	—	—	—	—	0	—	—	—	—	0	—	—	—	16 500
Kloof	—	—	—	—	—	0	—	—	—	—	0	—	—	—	19 750
Ladysmith	30.6.86	5 251 [b]	789 [b]	80 [b]	210	6 330	52 626	15 788	131 891	5 145	205 450	40.3	67,2	3,4	56 585
Mandini	—	—	—	—	—	0	—	—	—	—	0	—	—	—	3 594
Matatiele	—	—	—	—	—	0	—	—	—	—	0	—	—	—	3 700
Melmoth	30.12.85	470	30	—	—	500	4 225	1 811	—	—	6 036	1,5	50,0	14,6	2 657
Mooiriver	30.6.86	531	63	2	47	643	—	—	—	31 998	31 998	5,8	62,5	3,3	8 309
Mtunzini	—	—	—	—	—	0	—	—	—	—	0	—	—	—	1 230
New Germany	—	—	—	—	—	0	—	—	—	—	0	—	—	—	8 200
Newcastle	1.12.86	8 997	832	71	—	9 900	84 964	14 820	430 409	—	530 193	110,0	78,0	12,4	36 877
Pietermaritzburg	30.6.86	41 166	—	404	1	41 571	281 503	75 277	452 267	7 547	816 594	172,8	62,8	3,8	239 030
Pinelands Durb	—	—	—	—	—	0	—	—	—	—	0	—	—	—	154
Pinetown	—	—	—	—	—	0	—	—	—	—	0	—	—	—	111 500
Port Shepstone	30.6.86	2 453	320	7	—	2 780	9 700	10 347	7 843	275	28 165	10,5	33,0	15,7	7 100
Queensburgh	—	—	—	—	—	0	—	—	—	—	0	—	—	—	27 820
Richards Bay	30.6.86	3 393 [c]	220 [a]	46 [b]	—	3 659	34 790	26 057	329 399	—	390 246	96,0	58,0	6,0	22 186
Richmond	—	—	—	—	—	0	—	—	—	—	0	—	—	—	34 500
Scottsburgh	—	—	—	—	—	0	—	—	—	—	0	—	—	—	6 000
Stanger	1986/87	2 834 [b]	646 [c]	79 [b]	1 072	4 631	28 521	20 348	110 558	30 840	190 267	29,3	72,3	6,2	0
Tongaat	30.6.86	4 634	233	36	—	4 903	30 824	10 284	73 055	—	114 163	29,0	40,0	5,0	60 000
Utrecht	30.6.86	543	58 [b]	10	—	611	5 812	1 525	951	—	8 288	3,0	47,7	7,4	3 950
Uvongo	–	–	–	–	–	0	—	—	—	—	0	—	—	—	7 660
Verulam	–	–	–	–	–	0	—	—	—	—	0	—	—	—	30 050
Vryheid	–	3 323 [b]	572	73	1	3 969	30 224	14 207	25 486	—	69 917	16,8	55,0	9,0	20 500
Wartburg	–	–	–	–	–	0	—	—	—	—	0	—	—	—	990
Westville	–	–	–	–	–	0	—	—	—	—	0	—	—	—	27 426
Winterton	–	–	–	–	–	0	—	—	—	—	0	—	—	—	280
TOTAL NATAL		289 428	30 178	1 553	8 023	329 182	2 260 307	1 205 516	5 173 955	221 711	8 861 489				1 816 949

South African municipal statistics

Source: 1985, 1986 & 1988 South African Municipal Yearbook

Town	Financial year ended	Number of consumers: Domestic	Business	Industry	Not defined and other	Total	MW.h sold: Domestic	Business	Industry	Not defined and other	Total	Maximum demand MW/MVA	Average monthly load factor	Distribution loss as a % of KW.h sold	Population: Total
Orange Free State Statistics															
Allanridge	30.6.85	—	—	—	—	0	—	—	—	—	0	—	—	—	8 300
Arlington	—	—	—	—	—	0	—	—	—	—	0	—	—	—	3 250
Bethlehem	1986	3 488 [b]	645 [c]	49 [b]	1	4 183	31 294	21 126	34 339	5 828	92 587	21,1	66,0	4,2	54 000
Bethulie	30.6.84	365 [a]	49 [a]	1 [a]	20	435	2 707	147	24	—	2 878	1,0	39,5	5,6	5 550
Bloemfontein	31.12.86	25 909 [c]	2 580	326	—	28 815	219 871	91 631	354 003	—	665 505	174,0	60,0	7,2	224 400
Bothaville	30.6.85	1 101 [b]	286 [b]	18 [b]	—	1 405	8 634	5 765	4 035	—	18 434	6,0	65,0	10,0	26 500
Brandfort	30.6.86	657	147	14	—	818	3 896	1 577	1 423	—	6 896	1,3	59,5	11,0	8 563
Bultfontein	31.12.86	636 [b]	178 [b]	6 [b]	—	820	3 314	2 370	261	1 667	7 612	1,8	87,0	11,0	6 455
Clarens	30.6.86	—	—	—	—	0	—	—	—	—	0	—	—	—	963
Clocolan	30.6.84	473	92	15	—	580	5 657	629	1 569	—	7 855	1,8	62,5	20,3	7 075
Dewetsdorp	30.6.85	—	—	—	364	364	2 824	380	162	416	3 782	1,3	49,9	—	6 200
Edenburg	30.6.86	402	43	—	—	445	1 296	910	—	—	2 206	0,6	46,1	9,0	3 714
Excelsior	30.6.86	—	—	—	230	230	—	—	—	2 549	2 549	6,9	49,9	—	3 500
Fauresmith	30.6.86	194 [b]	25 [b]	—	24	243	974	290	—	377	1 641	0,5	50,0	5,0	3 195
Ficksburg	1986	929 [b]	238 [b]	24 [b]	—	1 191	7 910	3 806	5 921	1 178	18 815	6,4	79,1	10,5	22 420
Frankfort	1987	692 [b]	150 [b]	8 [b]	8	858	5 483	3 533	1 871	—	10 887	4,6	45,0	2,5	14 500
Harrismith	1986	—	—	—	2 032	2 032	11 831	6 608	16 937	9 632	45 008	13,5	—	—	23 011
Heilbron	—	—	—	—	—	0	—	—	—	—	0	—	—	—	16 560
Hennenman	30.6.84	1 110	144	5	—	1 259	6 697	2 390	9 643	364	19 094	5,1	49,7	11,4	10 800
Hobhouse	1985/86	92	14	—	—	106	870	120	—	—	990	0,3	43,0	—	1 734
Koppies	1986	418 [b]	138 [b]	2 [b]	6	564	2 706	2 283	2 850	617	8 456	—	61,0	7,3	4 094
Kroonstad	30.6.85	5 627 [b]	898 [b]	232 [b]	4	6 761	—	—	—	124 193	124 193	34,7	43,9	7,5	92 500
Ladybrand	—	—	—	—	—	0	—	—	—	—	0	—	—	2,5	14 021
Lindley	30.6.85	341	35	1	1	378	1 411	681	68	93	2 253	0,9	38,8	16,6	5 396
Odendaalsrus	31.12.86	—	—	—	—	0	—	—	—	3 207 383	3 207 383	8,8	68,1	9,0	28 746
Parys	31.12.86	2 810	284	7	1	3 102	20 253	8 053	12 957	2 696	43 959	10,4	57,3	5,9	32 550
Petrus Steyn	30.6.86	315	56	—	—	371	1 600	2 968	—	—	4 568	1,0	—	4,0	4 570
Petrusburg	30.6.84	243	42	2	19	306	1 247	657	27	563	2 494	—	—	20.2	4 135
Philippolis	30.6.86	172	16	—	—	188	786	312	—	228	1 326	—	—	—	2 331
Reitz	30.6.86	644	124	—	—	768	6 057	6 469	—	—	12 526	4,0	49,8	7,5	7 335
Sasolburg	30.6.86	7 776 [b]	377 [b]	—	847	9 000	74 961	18 108	—	8 255	101 324	25,5	64,2	—	51 000
Senekal	30.6.85	810 [b]	144 [b]	6	—	960	5 690	3 134	9 428	4 031	22 283	5,2	51,6	5,7	10 450
Theunissen	1986	494	56	2	—	552	3 644	2 110	2 856	—	8 610	2,1	54,7	—	19 500
Tweeling	1985	205	35	1	—	241	867	319	50	—	1 236	—	—	—	2 685
Viljoenskroon	12,86	576	133	8	1	718	4 645	2 368	1 304	199	8 516	3,5	—	18,7	13 500
Villiers	30.6.85	344 [b]	60 [b]	5 [b]	—	409	2 656	1 145	706	—	4 507	1,4	37,0	9,0	5 700
Virginia	30.6.86	4 576 [b]	508 [b]	27 [b]	1	5 112	54 059	18 131	5 539	2 704	80 433	21,3	66,2	7,8	34 670
Vredefort	31.12.86	423	36	7	184	650	472	162	216	4 675	5 525	—	—	5,7	9 364
Warden	—	—	—	—	—	0	—	—	—	—	0	—	—	—	5 510
Welkom	31.12.86	14 324	1 597 [b]	151 [b]	—	16 072	140 532	53 456	81 768	—	275 756	69,0	63,0	6,6	130 890
Winburg	30.6.86	375	118	7	—	500	2 556	1 278	2 556	—	6 390	1,9	60,5	21,0	6 973
Zastron	30.6.86	—	—	—	700	700	—	—	—	5 048	5 048	2,0	—	—	4 877
TOTAL ORANGE FREE STATE		76 521	9 248	924	4 443	91 136	637 400	262 916	550 513	3 382 696	4 833 525				941 487

South African municipal statistics

Source: 1985, 1986 & 1988 South African Municipal Yearbook

Town	Financial year ended	Number of consumers: Domestic	Business	Industry	Not defined and other	Total	MW.h sold: Domestic	Business	Industry	Not defined and other	Total	Maximum demand MW/MVA	Average monthly load factor	Distribution loss as a % of KW.h sold	Population: Total
Cape Province and Walvis Bay Statistics															
Adelaide	30.6.85	338	75	2	—	415	2 753	1 308	225	—	4 286	10.8	37,1	10.8	10 988
Alexandria	1 982	260	50	3	20	333	2 473	1 582	984	—	5 039	1,2	50,0	6,3	6 812
Alicedale	1985	176	1	—	—	177	—	—	—	—	0	—	—	—	7 833
Aliwal North	30.6.86	1 790	10	1	—	1 801	10 420	13 000	750	—	24 170	6,7	55,0	12,0	23 540
Atlantis	1986	6 769	170	76	—	7 015	31 526	7 412	136 368	—	175 306	39,4	59,1	3,8	713 940
Barkly East	30.6.86	336	59	—	—	395	2 016	1 236	—	—	3 252	0,1	—	—	10 930
Barkly West	1986	500	40	10	—	550	—	—	—	5 160	5 160	1,4	90,0	10,0	7 200
Bathurst	—	—	—	—	—	0	—	—	—	—	0	—	—	—	3 275
Beacon Bay	1986	2 248	65	8	—	2 321	21 389	1 651	1 957	890	25 887	65,6	48,7	2,9	11 000
Beaufort West	1986	2 288	401	—	—	2 689	10 932	11 147	—	—	22 079	5,6	54,2	11,1	22 670
Bellville	—	—	—	—	—	0	—	—	—	—	0	—	—	—	93 499
Betty's Bay	—	—	—	—	—	0	—	—	—	—	0	—	—	—	154
Bitterfontein	30.6.84	65	18	—	—	83	150	110	—	—	260	—	—	—	796
Brackenfell	31.12.86	3 185	170	20	—	3 375	2 206	10 072	19 723	—	32 001	14,0	35,0	7,6	13 302
Bredasdorp	30.6.85	1 036 [c]	161 [a]	13 [a]	—	1 210	—	—	—	7 782	7 782	2,4	58,0	10,0	7 413
Britstown	1986	401 [a]	—	—	—	401	2 090	—	—	—	2 090	2,1	20,0	11,3	6 016
Burgersdorp	—	—	—	—	—	0	—	—	—	—	0	—	—	—	13 539
Caledon	–	–	–	–	–	0	—	—	—	—	0	—	—	—	6 965
Calitzdorp	30.6.86	217	51	5	—	273	294	673	286	—	1 253	0,8	—	—	3 854
Calvinia	12.86	583 [b]	136 [b]	3 [a]	—	722	2 917	1 290	460	—	4 667	1,5	52,8	9,8	7 016
Cape Town	1985/1986	—	—	—	221 729	221 729	—	—	—	3 119 574	3 119 574	686,5	65,1	7,0	1 017 064
Ceres	1986	2 002	212	42	540	2 796	13 154	3 858	24 279	6 072	47 363	15,0	55,7	14,7	12 864
Citrusdal	1986	255 [b]	66 [b]	7 [b]	—	328	1 483	1 110	756	—	3 349	1,1	49,0	—	2 526
Clanwilliam	30.6.85	450 [a]	68 [a]	11 [a]	—	529	2 552	390	60	211	3 213	—	—	21,0	2 971
Cradock	1986	1 587	160	55	—	1 802	11 982	3 457	6453	—	21 892	5,3	56,9	—	35 784
Darling	—	—	—	—	—	0	—	—	—	7 000	7 000	2,0	51,0	—	3 724
De Aar	30.6.86	1 694 [b]	289 [b]	26 [b]	—	2 009	10 922	4 181	7 141	1 504	23 748	6,4	59,1	17,0	29 115
De Rust	30.6.87	390	10	—	—	400	—	—	—	—	0	—	—	—	1 650
Despatch	1985	4 118	140	—	—	4 258	26 579	3 030	—	—	29 609	8,0	55,0	—	24 500
Dordrecht	30.6.84	355	31	1	72	459	433	199	146	1 171	1 949	0,6	—	—	7 068
Douglas	1986	364 [b]	77 [b]	8 [b]	—	449	3 343	1 592	3 050	—	7 985	2,0	43,0	8,5	5 700
Durbanville	—	—	—	—	—	0	—	—	—	—	0	—	—	—	17 887
East London	30.6.86	20 578 [b]	2 352	[a a]	1 464	24 624	145 356	50 664	309 947	137 509	643 476	138,6	54,5	6,1	127 483
Eendekuil	—	—	—	—	—	0	—	—	—	—	0	—	—	—	604
Elliot	—	—	—	—	—	0	—	—	—	—	0	—	—	—	9 110
Fish Hoek	—	—	—	—	—	0	—	—	—	—	0	—	—	—	12 300
Franschhoek	—	417	154	6	—	577	2 242	3 018	2 461	—	7 721	—	—	—	2 510
Fraserburg	30.6.84	—	—	—	505	505	—	—	—	1 074	1 074	0,4	35,8	10,2	2 420
Galeshewe	1986	13 000 [a]	—	—	—	13 000	5 500	—	—	—	5 500	23,0	85,0	0,2	103 000
George	30.6.86	8 043	1 113	147	1	9 304	47 418	16 824	55 375	5 182	124 799	28,4	56,5	11,9	49 520
Gonubie	—	—	—	—	—	0	—	—	—	—	0	—	—	—	9 400
Goodwood	—	—	—	—	—	0	—	—	—	—	0	—	—	—	35 410
Gordons Bay	1986	12 48 [b]	52 [b]	—	—	1 280	7 552	2 994	—	—	10 546	2,5	54,2	5,4	3 090
Graaf Reinet	30.6.86	2 146 [b]	305 [b]	2 [a]	32	2 485	8 188	8 400	360	4 410	21 358	6,0	58,8	26,0	39 500
Grabouw	—	—	—	—	—	0	—	—	—	—	0	—	—	—	10 300
Grahamstown	30.6.86	4 287	860	49	—	5 196	24 256	9 598	26 870	5 395	66 119	13,9	61,4	6,3	73 574
Great Brak River	30.6.86	1 358 [b]	11 [c]	1 [a]	1	1 371	3 697	194	2 208	—	6 099	19,2	—	—	7 004
Griekwastad	1986	300	32	3	—	335	1 554	80	172	—	1 806	0,6	42,0	4,2	4 677
Hartenbos	1986/87	865 [b]	44 [b]	10 [b]	61	980	—	—	—	3 961	3 961	1,6	—	7,0	2 010
Hartswater	30.6.86	512	198	13	—	723	4 207	3 843	4 345	—	12 395	4,2	41,6	9,4	2 941
Heidelberg	30.6.86	557 [b]	74 [b]	—	—	631	1 692	2 573	—	393	4 658	11,0	—	5,7	5 098
Herbertsdale	—	—	—	—	—	0	—	—	—	—	0	—	—	—	452
Hermanus	1986	3 032 [b]	254	17	—	3 303	14 618	3 599	4 601	—	22 818	6,1	54,0	5,1	6 180
Hofmeyer	30.6.84	110	20	—	1	131	429	100	—	50	579	0,3	34,7	23,8	3 122
Hopefield	—	199	28	1	7	235	1 304	474	10	183	1 971	—	—	—	2 850

South African municipal statistics

Source: 1985, 1986 & 1988 South African Municipal Yearbook

Town	Financial year ended	Number of consumers: Domestic	Business	Industry	Not defined and other	Total	MW.h sold: Domestic	Business	Industry	Not defined and other	Total	Maximum demand MW/MVA	Average monthly load factor	Distribution loss as a % of KW.h sold	Population: Total
Hopetown	30.6.84	350	33	—	11	394	1 088	910	—	577	2 575	0,7	50,6	17,0	4 840
Humansdorp	30.6.86	850	150	10	2	1 012	7 480	4 320	850	12 250	24 900	6,0	44,0	11,0	2 500
Jacobsdal	—	—	—	—	—	0	—	—	—	—	0	—	—	—	3 474
Jan Kempdorp	30.6.86	744	87	9	—	840	4 057	1 923	3 508	—	9 488	3,2	41,5	8,5	7 500
Jansenville	30.6.86	215	65	—	—	280	960	387	—	—	1 347	—	—	15,8	3 268
Jeffreys Bay	30.6.86	1 236	185	—	—	1 421	—	—	—	9 435	9 435	5,0	75,0	9,9	4 311
Joubertinia	—	—	—	—	—	0	—	—	—	—	0	—	—	—	5 543
Kakamas	30.6.86	492 [c]	25 [b]	12 [b]	1	530	2 597	1 844	1 780	2 989	9 210	2,7	—	7,0	5 951
Kathu en Dingle	30.6.86	1 930	98	—	—	2 028	19 686	7 352	—	—	27 038	8,0	72,0	4,0	9 400
Kei Mouth	—	—	—	—	—	0	—	—	—	—	0	—	—	—	1 448
Keimoes	1986	639	33	1	—	673	3 777	1 307	1 632	—	6 716	1,9	48,0	4,3	15 270
Kimberley	30.6.86	17 631	—	210	—	17 841	128 891	6 748	128 031	—	263 670	60,6	65,2	9,1	149 546
King Williams Town	31.12.86	3 821	466	65	—	4 352	25 469	12 550	22 621	—	60 640	13,5	56,0	8,0	21 568
Kirkwood	30.6.85	314	100	2	—	416	1 605	1 615	559	—	3 779	1,2	36,7	4,6	500
Kleinmond	1985	—	—	—	1 041	1 041	—	—	—	4 022	4 022	1,5	30.6	—	2 179
Klipplaat	30.6.86	74	2	—	—	76	201	8	—	—	209	—	68,0	10,0	2 945
Knysna	1986	2 975	433	30	—	3 438	—	—	—	33 440	33 440	7,1	58,0	11,0	29 130
Koringberg	—	—	—	—	—	0	—	—	—	—	0	—	—	—	288
Kraaifontein	—	—	—	—	—	0	—	—	—	—	0	—	—	—	37 700
Kuilsriver	—	—	—	—	—	0	—	—	—	—	0	—	—	—	23 204
Kuruman	31.12.86	1 630	352	21	2	2 005	13 940	2 399	6 475	—	22 814	6,7	52,8	13,6	7 500
Ladysmith	—	837	40	3	—	880	2 298	98	1 416	—	3 812	—	—	3,4	0
Laingsburg	30.6.85	300	40	—	—	340	—	—	—	—	0	—	—	1,0	3 900
Lamberts Bay	1986	558	25	—	—	583	2 038	522	—	—	2 560	0,9	50,0	—	4 525
Langebaan	30.6.84	—	—	—	—	0	—	—	—	—	0	—	—	—	1 600
Malmesburg	30.6.86	2 125 [b]	292 [b]	34 [b]	449	2 900	13 381	4 738	15 183	1 974	35 276	9,0	59,0	5,0	15 626
McGregor	—	—	—	—	—	0	—	—	—	—	0	—	—	—	2 250
Middelburg	30.6.86	980 [b]	140 [b]	34 [b]	—	1 154	7 911	2 739	4 564	—	15 214	4,0	59,4	12,2	17 005
Milnerton	—	—	—	—	—	0	—	—	—	—	0	—	—	—	35 762
Molteno	30.6.86	216	18	4	—	238	1 223	1005	536	—	2 764	0,9	32,4	3,9	15 464
Montagu	31.12.86	1 021 [c]	110 [c]	34 [c]	—	1 165	4 908	1 779	6 070	—	12 757	3,2	62,0	11,5	6 730
Moorreesburg	30.6.86	1 122 [b]	115 [b]	13 [b]	—	1 250	3 833	4 384	1 403	—	9 620	2,5	35,3	6,8	6 402
Mossel Bay	1986	—	—	—	4 300	4 300	—	—	—	53 500	53 500	11,0	58,0	9,0	28 417
Nieuwoudtville	30.6.84	101 [a]	16 [a]	—	—	117	—	—	—	—	0	0,2	—	—	1 910
Noupoort	30.6.86	1 248	52	—	—	1 300	2 884	1 015	—	—	3 899	4,5	60,0	—	8 640
Olifantshoek	30.6.86	254 [c]	67 [c]	—	—	321	279	2 700	—	—	2 979	0,9	48,4	3,8	6 143
Onrusrivier	—	—	—	—	—	0	—	—	—	—	0	—	—	—	623
Onseepkans	—	—	—	—	—	0	—	—	—	—	0	—	—	—	1 532
Oudtshoorn	1986	5 009	239	—	—	5 248	—	—	—	60 091	60 091	17,7	93,0	—	46 839
Paarl	31.12.86	14 780	2 260	210	—	17 250	—	—	—	274 723	274 723	55,1	65,3	4,3	83 470
Pacaltsdorp	30.6.86	632	9	—	—	641	—	—	—	5 075	5 075	0,6	50,0	5,0	8 445
Parow	—	—	—	—	—	0	—	—	—	—	0	—	—	—	71 000
Patensie	—	—	—	—	—	0	—	—	—	—	0	—	—	—	2 500
Pearston	1986	—	—	—	210	210	—	—	—	108	108	—	—	—	7 231
Piketberg	30.6.86	1 310	70	6	—	1 386	3 497	5 030	458	610	9 595	—	45,6	4,5	0
Pinelands Cape	—	—	—	—	—	0	—	—	—	—	0	—	—	—	11 510
Plettenberg Bay	31.12.86	—	—	—	—	0	—	—	—	23 863	23 863	7,5	48,0	9,0	8 559
Port Alfred	1986	1 784	219	—	—	2 003	5 927	2 286	—	—	8 213	2,4	49,9	9,8	16 103
Port Elizabeth	30.6.86	58 362 [c]	6 030 [c]	428 [c]	9 999	74 819	447 835	129 431	794 849	389 470	1 761 585	342,6	65,7	6,3	506 041
Port Nolloth	30.6.84	197 [b]	42 [b]	—	—	239	887	258	—	—	1 145	0,4	46,4	29,8	4 100
Prieska	1985/86	738	121	1	1	861	2 833	5 769	8 632	4 078	21 312	4,9	40,1	8,1	12 226
Prince Albert	—	—	—	—	—	0	—	—	—	—	0	—	—	—	1 800
Queenstown	1985	—	—	—	4 319	4 319	25 935	—	41 727	—	67 662	18,3	38,5	—	0
Riebeeck East	—	—	—	—	—	0	—	—	—	—	0	—	—	—	100
Riversdale	30.6.86	1 058	254	15	—	1 327	8 953	2 413	808	—	12 174	3,0	48,3	6,8	8 600
Robertson	1983	2 916 [b]	652	30	—	3 598	14 503	21 540	18 331	1 791	56 165	14,5	61,2	11,5	29 895

South African municipal statistics

Source: 1985, 1986 & 1988 South African Municipal Yearbook

Town	Financial year ended	Number of consumers: Domestic	Business	Industry	Not defined and other	Total	MW.h sold: Domestic	Business	Industry	Not defined and other	Total	Maximum demand MW/MVA	Average monthly load factor	Distribution loss as a % of KW.h sold	Population: Total
Simonstown	–	–	–	–	–	(	—	—	—	—	0	—	—	—	6 340
Sishen Kathu	30.6.85	2000 [b]	15 [b]	3 [a]	–	2 018	28 200	1 628	750	—	30 578	8,0	70,2	4,0	8 451
Somerset East	31.12.85	1 602	491	12	2	2107	5 870	11 756	8 972	—	26 598	6,5	67,0	13,7	0
Somerset West	30.6.86	7 000	582	73	–	7 65	54 338	20 959	2 329	—	77 626	18,8	65,4	6,0	23 670
Stanford	–	251	–	–	–	251	1 131	—	—	—	1 131	—	—	—	1 162
Stella	–	–	–	–	–	(	—	—	—	—	0	—	—	—	560
Stellenbosch	30.6.86	6 125	537	40	3 608	10 31(	48 827	25 091	76 434	2 870	153 222	36,4	54,6	5,0	44 262
Sterkstroom	30.6.86	207	22	4	2	23	—	—	—	1 158	1 158	0,8	—	—	4 138
Steynsburg	–	–	–	–	1 303	1 303	1 130	753	—	253	2 136	—	—	—	0
Strand	1986	8 503	56	–	–	8 55	41 687	7 578	16 062	2 098	67 425	16,0	60,0	6,4	32 895
Strydenburg	30.6.84	129	10	–	–	13	374	125	—	—	499	0,2	32,0	10,0	2 000
Swellendam	30.6.86	1 203	199	15	–	1 41	6 548	2 604	3 383	—	12 535	3,0	53,0	7,5	8 448
Uitenhage	1986	12 230	995	46	2	13 27	45 831	18 172	222 887	32 884	319 774	70,7	57,6	2,6	217 507
Upington	30.6.85	3 931 [c]	430 [c]	99 [a]	–	4 46(	33 431	35 831	—	—	69 262	17,2	60,8	9,4	58 205
Vanderkloof	30.6.86	356 [a]	15 [c]	–	–	37	903	318	—	—	1 221	0,5	50,0	26,6	846
Vanrhynsdorp	30.6.85	356 [a]	48 [a]	–	–	40	—	—	—	2 500	2 500	0,6	52,0	9,4	404
Vanwyksvlei	30.6.85	70	7 [b]	–	–	7	—	—	—	208	208	—	—	—	1 313
Villiersdorp	30.6.86	488	58	2	–	54	3 016	1 070	224	—	4 310	1,2	—	—	4 300
Vredenberg/Saldanha	31.12.86	3 253	422	87	–	3 76	19 711	7 952	34 361	—	62 024	13,9	58,2	4,4	28 096
Vredendal	30.6.86	954	236	34	1 002	2 22	5 976	3 984	2 490	—	12 450	3,0	54,0	7,2	6 796
Vryburg	30.6.85	–	–	–	–	(	—	—	—	—	0	—	—	—	32 550
Walvis Bay	30.6.86	4 271 [b]	244 [b]	77 [b]	–	4 59	21 188	3 754	30 891	4 535	60 368	14,0	49,0	4,1	22 956
Warrenton	30.6.85	1 200	149	14	–	1 36	8 297	101	916	—	9 314	2,2	—	—	20 230
Wellington	30.6.85	2 985	307	29	55	3 37	18 746	4 076	23 650	2 934	49 406	11,2	53,4	3,2	23 300
Willowmore	30.6.85	316	54	–	–	37(	1 050	383	—	—	1 433	0,5	35,9	—	4 950
Wolseley	30.6.86	397	78	8	–	48	3 723	1 652	—	—	5 375	1,2	—	—	5 054
Worcester	30.6.86	7 413	1 167	82	–	8 66	45 822	10 692	60 395	—	116 909	25,9	62,6	5,9	54 096
TOTAL CAPE PROVINCE & WALVIS BAY		281 728	26 919	2 567	250 742	561 95	1 582 302	555 208	2 152 164	4 234 957	8 524 631				4 569 692
TOTAL SOUTH AFRICA		1 277 690	111 188	15 580	339 643	1 744 101	11 569 902	3 777 569	16 785 367	10 260 302	42 393 140				14 211 043

Notes:

1. Number of consumers. If a block of flats or business complex is regarded as a single consumer, (a) is placed against the relevant figure. If not, (b) is placed against the figure and (c) is placed against the figure if both multiple and individual consumers are indicated.

2. Where latest figures are not available previous year's figures have been used.

3. Due to lack of data not all of the South African municipalities are listed.

4. Where data is not available (-) has been used.

Installed generating capacity in Southern Africa 1985

Sources: SADCC (South African Developing Coorodinating Conference), Escom, Official South African Municipal Yearbook and SWAWEK

Country	Hydro power	Pumped storage	Coal	Other	Nuclear	Total	% of total
Angola	289	—	—	140	—	429	1,18
Ciskei	—	—	—	—	—	0	—
Bophuthatswana	—	—	—	—	—	0	—
Botswana	—	—	95	30	—	125	0,34
Lesotho	—	—	—	2	—	2	0,01
Malawi	125	—	—	24	—	149	0,41
Moçambique	2 164	—	58	185	—	2 407	6,62
South Africa	542	1 180	24 537	792	1 930	28 981	79,73
SWA/Namibia	240	—	120	46	—	406	1,12
Swaziland	41	—	8	45	—	94	0,26
Tanzania	249	—	—	164	—	413	1,14
Transkei	61	—	—	—	—	61	0,17
Venda	—	—	—	—	—	0	—
Zambia	1 669	—	—	130	—	1 799	4,95
Zimbabwe	666	—	750	68	—	1 484	4,08
Total	6 046	1 180	25 568	1 626	1 930	36 350	

This table has not been updated due to unavailability of data.

Net consumption of electricity in Southern Africa 1980 to 1985

Sources: SADCC, SWAWEK and Central Statistical Services, Pretoria

Country	Consumption in GW.h 1980	1981	1982	1983	1984	1985	% Growth 1984-1985	Average Growth 1980-1985
Angola	623	651	706	697	691	640	–7,4	0,5
Ciskei	24	31	84	104	134	164	22,4	47,3
Bophuthatswana	1 213	1 325	1 182	1 243	1 490	1 750	17,5	7,6
Botswana	440	504	560	575	629	644	2,4	7,9
Lesotho	88	102	105	94	96	109	13,5	4,4
Malawi	353	343	362	400	411	414	0,7	3,2
Moçambique	677	648	655	667	591	518	–12,4	–5,2
South Africa	92 646	98 190	100 230	102 965	110 465	115 988	5,0	4,6
SWA/Namibia	1 021	1 061	1 065	1 121	1 158	1 153	–0,5	2,5
Swaziland	450	478	541	547	530	540	1,9	3,7
Tanzania	732	752	706	693	714	783	9,7	1,4
Transkei	99	104	138	163	198	217	9,7	17,0
Venda	16	20	24	27	35	45	28,4	22,7
Zambia	5 632	5 938	6 133	6 203	6 175	6 149	–0,4	1,8
Zimbabwe	6 943	7 137	7 317	6 973	7 033	7 631	8,5	1,9
Total	110 957	117 283	119 807	122 472	130 350	136 746	4,9	4,3

This table has not been updated due to unavailability of data.

Production of electricity in Southern Africa (million kW.h)

Sources: SADCC, SWAWEK and Central Statistical Services, Pretoria

Year	Hydro Power	Pumped Storage	Coal	Other Thermal	Nuclear	Total
1975	14 122	0	75 566	674	0	90 362
1976	16 577	0	79 256	493	0	96 326
1977	20 649	0	80 014	494	0	101 157
1978	23 364	0	84 330	761	0	108 455
1979	27 100	0	90 285	721	0	118 106
1980	27 238	242	99 254	777	0	127 511
1981	21 041	715	112 551	772	0	135 079
1982	20 288	1 762	117 638	692	0	140 380
1983	22 876	2 200	119 775	752	0	145 603
1984	*	*	*	*	3 925	154 570**
1985	*	*	*	*	5 315	161 771**
Growth 1984 – 1985					35,4%	4,7%
Average annual growth 1975 to 1985						6,0%

*Figures not available
**Estimated
This table has not been updated due to unavailability of data.

African net installed generating capacity – 1985

(in thousands of kilowatts)
Source: 1985 Energy Statistical Yearbook – United Nations 1987.

	Self-Producers and Public					
Country	Total	Thermal	Hydro(1)	Nuclear	Geothermal	% of Total
Algeria	3 546	3 261	285	—	—	5.6
Angola	600	200	400	—	—	1.0
Benin	15	15	—	—	—	0.0
Burkina Faso	40	40	—	—	—	0.1
Burundi	9	7	2	—	—	0.0
Cameroon	570	73	497	—	—	0.9
Cape Verde	4	4	—	—	—	0.0
Central African Rep.	30	10	20	—	—	0.0
Chad	38	38	—	—	—	0.1
Comoros	4	3	1	—	—	0.0
Congo	149	29	120	—	—	0.2
Djibouti	40	40	—	—	—	0.1
Egypt	5 850	3 150	2 700	—	—	9.3
Equatorial Guinea	7	6	1	—	—	0.0
Ethiopia	335	113	222	—	—	0.5
Gabon	200	75	125	—	—	0.3
Gambia	11	11	—	—	—	0.0
Ghana	1 060	108	952	—	—	1.7
Guinea	175	125	50	—	—	0.3
Guinea-Bissau	7	7	—	—	—	0.0
Cote d'Ivoire	1 163	278	885	—	—	1.9
Kenya	559	160	354	—	45	0.9
Liberia	325	244	81	—	—	0.5
Libyan Arab Jamah.	1 460	1 460	—	—	—	2.3
Madagascar	102	57	45	—	—	0.2
Malawi	160	34	126	—	—	0.3
Mali	56	36	20	—	—	0.1
Mauritania	55	55	—	—	—	0.1
Mauritius	274	220	54	—	—	0.4
Morocco	1 982	1 370	612	—	—	3.2
Mozambique	1 803	280	1 523	—	—	2.9
Niger	65	65	—	—	—	0.1
Nigeria	4 025	2 125	1 900	—	—	6.4
Reunion	149	24	125	—	—	0.2
Rwanda	58	3	55	—	—	0.1
St. Helena & Depend	2	2	—	—	—	0.0
Sao Tome-Principe	6	4	2	—	—	0.0
Senegal	180	180	—	—	—	0.3
Seychelles	19	19	—	—	—	0.0
Sierra Leone	106	102	4	—	—	0.2
Somalia	60	60	—	—	—	0.1
South African Cústoms Union	29 669	25 075	2 064	1 930	—	47.2
Sudan	313	165	148	—	—	0.5
Togo	36	32	4	—	—	0.1
Tunisia	1 414	1 350	64	—	—	2.3
Uganda	163	7	156	—	—	0.3
United Republic of Tanzania	440	180	260	—	—	0.7
Western Sahara	56	56	—	—	—	0.1
Zaire	2 166	55	2 111	—	—	3.4
Zambia	1 729	191	1 538	—	—	2.8
Zimbabwe	1 539	906	633	—	—	2.4
AFRICA	62 824	42 710	18 139	1 930	45	100.0
WORLD	2 418 114	1 607 712	555 463	250 697	4 242	

(1) *Includes pumped storage*

African production of electricity – 1985

(in million kilowatt hours)
Source: 1985 Energy Statistical Yearbook – United Nations 1987.

	Self-Producers and Public					
Country	Total	Thermal	Hydro	Nuclear	Geothermal	% of Total
Algeria	12 274	11 628	646	—	—	5.4
Angola	1 790	455	1 335	—	—	0.8
Benin	5	5	—	—	—	0.0
Burkina Faso	115	115	—	—	—	0.1
Burundi	2	2	—	—	—	0.0
Cameroon	2 237	112	2 125	—	—	1.0
Cape Verde	26	26	—	—	—	0.0
Central African Rep.	75	4	71	—	—	0.0
Chad	65	65	—	—	—	0.0
Comoros	10	10	—	—	—	0.0
Congo	237	2	235	—	—	0.1
Djibouti	150	150	—	—	—	0.1
Egypt	23 220	12 600	10 620	—	—	10.2
Equatorial Guinea	15	13	2	—	—	0.0
Ethiopia	831	191	640	—	—	0.4
Gabon	540	280	260	—	—	0.2
Gambia	42	42	—	—	—	0.0
Ghana	3 036	41	2 995	—	—	1.3
Guinea	500	420	80	—	—	0.2
Guinea-Bissau	14	14	—	—	—	0.0
Cote d'Ivoire	1 785	427	1 358	—	—	0.8
Kenya	2 492	476	1 680	—	336	1.1
Liberia	904	562	342	—	—	0.4
Libyan Arab Jamah.	8 170	8 170	—	—	—	3.6
Madagascar	449	204	245	—	—	0.2
Malawi	514	27	487	—	—	0.2
Mali	164	29	135	—	—	0.1
Mauritania	103	103	—	—	—	0.0
Mauritius	521	406	115	—	—	0.2
Morocco	6 950	6 540	410	—	—	3.0
Mozambique	1 945	410	1 535	—	—	0.9
Niger	51	51	—	—	—	0.0
Nigeria	9 000	6 860	2 140	—	—	3.9
Reunion	567	5	562	—	—	0.2
Rwanda	163	3	160	—	—	0.1
St. Helena & Depend	2	2	—	—	—	0.0
Sao Tome-Principe	15	7	8	—	—	0.0
Senegal	696	696	—	—	—	0.3
Seychelles	62	62	—	—	—	0.0
Sierra Leone	278	278	—	—	—	0.1
Somalia	145	145	—	—	—	0.1
South African Cústoms Union	122 293	117 658	710	3 925	—	53.6
Sudan	1 037	525	512	—	—	0.5
Togo	34	30	4	—	—	0.0
Tunisia	4 021	3 913	108	—	—	1.8
Uganda	653	9	644	—	—	0.3
United Republic of Tanzania	875	260	615	—	—	0.4
Western Sahara	78	78	—	—	—	0.0
Zaire	4 615	135	4 480	—	—	2.0
Zambia	10 090	35	10 055	—	—	4.4
Zimbabwe	4 342	952	3 390	—	—	1.9
AFRICA	228 198	175 233	48 704	3 925	336	100.0
WORLD	9 675 347	6 198 662	1 995 611	1 453 181	27 893	

African production, trade & consumption of electricity – 1985

(Quantities in million kilowatt hours & kilowatt hours per capita)
Source: 1985 Energy Statistical Yearbook – United Nations 1987.

Country	Production	Consumption				
		Imports	Exports	Total	% of Total	Per Capital
Algeria	12 274	172	86	12 360	5.4	569
Angola	1 790	—	—	1 790	0.8	204
Benin	5	85	—	90	0.0	22
Burkin Faso	115	—	—	115	0.1	17
Burundi	2	150	—	152	0.1	32
Cameroon	2 237	—	—	2 237	1.0	227
Cape Verde	26	—	—	26	0.0	80
Central African Rep.	75	—	—	75	0.0	29
Chad	65	—	—	65	0.0	13
Comoros	10	—	—	10	0.0	23
Congo	237	27	—	264	0.1	152
Djibouti	150	—	—	150	0.1	412
Egypt	23 220	—	—	23 220	10.2	495
Equatorial Guinea	15	—	—	15	0.0	38
Ethiopia	831	—	—	831	0.4	19
Gabon	540	—	—	540	0 2	469
Gambia	42	—	—	42	0.0	65
Ghana	3 036	—	270	2 766	1.2	204
Guinea	500	—	—	500	0.2	82
Guinea-Bissau	14	—	—	14	0.0	16
Cote d'Ivoire	1 785	—	—	1 785	0.8	182
Kenya	2 492	215	—	2 707	1.2	131
Liberia	904	—	—	904	0.4	413
Libyan Arab Jamah.	8 170	—	—	8 170	3.6	2 266
Madagascar	449	—	—	449	0.2	45
Malawi	514	—	1	513	0.2	74
Mali	164	—	—	164	0.1	20
Mauritania	103	—	—	103	0.0	55
Mauritius	521	—	—	521	0.2	496
Morocco	6 950	—	—	6 950	3.0	317
Mozambique	1 945	100	505	1 540	0.7	110
Niger	51	287	—	338	0.1	55
Nigeria	9 000	—	140	8 860	3.9	93
Reunion	567	—	—	567	0.2	1 068
Rwanda	163	12	1	174	0.1	29
St. Helena & Depend	2	—	—	2	0.0	333
Sao Tome-Principe	15	—	—	15	0.0	155
Senegal	696	—	—	696	0.3	108
Seychelles	62	—	—	62	0.0	816
Sierra Leone	278	—	—	278	0.1	77
Somalia	145	—	—	145	0.1	31
South African Cústoms Union	122 293	500	206	122 587	53.6	3 294
Sudan	1 037	—	—	1 037	0.5	48
Togo	34	213	—	247	0.1	83
Tunisia	4 021	—	—	4 021	1.8	568
Uganda	653	—	32	621	0.3	40
United Republic of Tanzania	875	—	—	875	0.4	39
Western Sahara	78	—	—	78	0.0	503
Zaire	4 615	10	125	4 500	2.0	150
Zambia	10 090	20	3 100	7 010	3.1	1 052
Zimbabwe	4 342	3 000	—	7 342	3.2	836
AFRICA	228 198	4 791	4 466	228 523	100.0	412
WORLD	9 675 347	216 821	216 071	9 676 097	—	1 996

World electricity production – total net production (a) (f)

**Source: Handbook of Electricity Supply Statistics 1986.
The Electricity Council, London.**

	1970	1973	1976	1977	1978	1979	1980	1981	1982	1983
	TW.h									
EEC[b]	816	987	1 069	1 091	1 143	1 200	1 209	1 206	1 203	1 229
Austria	29	30	34	37	37	39	41	42	42	42
Bulgaria	18	21	26	27	29	30	32	35	38	40
Czechoslovakia	40	48	58	60	64	63	66	68	67	68
Finland	21	25	28	32	34	37	39	39	39	40
Germany (GDR)	61	70	83	83	85	86	88	90	93	94
Hungary	13	16	21	21	23	24	24	24	24	25
Iceland	2	2	2	3	3	3	3	3	3	4
Norway	57	72	82	73	80	88	84	91	92	105
Poland	60	78	97	102	107	109	113	107	109	117
Portugal	7	10	9	13	14	16	15	13	14	17
Romania	33	44	54	57	60	61	63	64	65	65
Spain	54	74	86	90	95	101	105	108	108	111
Sweden	59	76	84	87	90	92	94	97	97	106
Switzerland	35	37	36	45	43	46	48	52	52	52
Turkey	8	12	17	20	21	22	23	24	26	27
USSR	693	854	1 051	1 088	1 135	1 168	1 220	1 255	1 295	1 341
Yogoslavia	25	33	41	46	48	51	55	56	61	62
Total Europe[c]	**2 036**	**2 491**	**2 880**	**2 980**	**3 114**	**3 241**	**3 326**	**3 379**	**3 438**	**3 519**
Egypt[d]	8	10	14	14	16	17	18	19	21	22
Zimbabwe	6	7	7	5	6	7	9	10	10	10
Rep. of South Africa[d][g]	51	64	79	80	85	90	99	114	119	121
Total Africa[c]	**82**	**107**	**128**	**136**	**149**	**162**	**179**	**187**	**194**	**200**
Canada	205	263	295	317	336	353	367	378	376	395
USA	1 640	1 959	2 113	2 211	2 285	2 319	2 354	2 302	2 302	2 374
Total North America[c]	**1 845**	**2 230**	**2 410**	**2 528**	**2 620**	**2 672**	**2 721**	**2 678**	**2 678**	**2 769**
Argentina[d]	25	26	25	29	30	34	36	36	37	39
Brazil	46	64	84	98	107	113	124	137	146	152
Chile[d]	8	9	9	10	10	11	11	12	12	13
Colombia[d]	8	10	14	14	15	18	20	22	23	25
Mexico	28	37	46	50	56	59	61	69	75	79
Peru[d]	5	6	8	9	9	9	10	11	11	12
Venezuela[d]	12	16	21	22	25	28	32	37	39	41
Total Central & South America[c]	**150**	**213**	**220**	**274**	**299**	**326**	**326**	**380**	**402**	**411**
China[d]	73	106	130	210	256	282	301	309	327	349
India[d]	60	69	89	91	100	106	108	117	129	137
Japan[e]	340	451	487	508	537	562	551	556	554	586
Taiwan[d]	13	18	23	25	28	30	31	32	34	36
Total Asia[c]	**600**	**750**	**800**	**850**	**900**	**1 070**	**1 260**	**1 300**	**1 330**	**1 390**
Australia[d]	54	69	77	82	86	90	96	103	105	109
New Zealand[d]	14	18	22	21	22	24	22	23	24	26
Total Oceania[c]	**67**	**85**	**98**	**102**	**107**	**113**	**118**	**127**	**130**	**136**
Total World[c]	**4 780**	**5 906**	**6 540**	**6 870**	**7 190**	**7 580**	**7 963**	**8 116**	**8 172**	**8 425**

(a) Supplied from power stations. Includes production from private generation.
(b) German Fr, France, Italy, Netherlands, Belgium, Luxembourg, U.K., Ireland, Denmark, Greece.
(c) Rounded totals – including production from unlisted countries.
(d) Gross production (units generated)
(e) Year from 1 April – 31 March.
(f) This table has not been updated due to unavailability of data – will be updated next year.
(g) Updated figures from Statistical News Release P4101, 1986 – compiled by Central Statistical Services, Pretoria.

Conversion factors and equivalents (a)

Heat/energy*

1 kW.h	= 3 412,14 Btu = 3,6 MJ = 859,845 kcals
1 therm	= 29,307 1 kW.h = 100 000 Btu = 105,506 MJ = 25,199 6 Mcals
1 GJ	= 277,778 kW.h = 9,478 17 therms = 238,846 Mcals
1 CHU[b]	= 1,8 Btu = 1 900,4 J (approx)
1 Q	= 10^{18} Btu
1 quad	= 10^{15} Btu

Calorific value, mass basis*

1 Btu/lb	= 2,326 kJ/kg

Pressure*

1 lb/in^2	= 6,894 76 kPa (or kN/m^2) = 0,070 31 kg/cm^2 = 0,068 947 6 bar
1 bar	= 100 kPa = 10^5 N/m^2 = 14,503 68 lb/in^2

Other

1 cu sec	= 0,028 317 m^3/s
1 mile	= 1,609 344 km
1 lb	= 0,453 592 37 kg
1 gal (imp)	= 4,546 09 litres (1 litre = 1 dm^3 = 1 000 cm^3)
1 gal (US)	= 3,785 412 litres
1 ton (long)	= 1,016 05 tonnes (metric ton)
1 ton (short)	= 0,907185 tonnes (metric ton)
1 hp (UK)	= 745,700 W (or J/s)
1 hp (metric)	= 735,499 W (or J/s)

Approximate equivalents*

1 ft^3 natural gas	approximately equals	1,000 Btu
1 tonne gas/diesel oil	approximately equals	431 therms
1 tonne crude oil	approximately equals	7,35 barrels or 432 therms
1 tonne fuel oil	approximately equals	6,55 barrels or 406 therms
1 tonne power station oil	approximately equals	406 therms
1 tonne power station coal[c]	approximately equals	231 therms
1 tonne industrial coal	approximately equals	261 therms

Power station equivalents*

475 tonnes of coal or 160 tonnes of oil will produce about 1 GW.h (e) in a typical modern power station. One tonne of natural uranium, when used in a Magnox reactor, will supply about 30 GW.h (e).

(a) Where appropriate, conversion factors conform to 'Conversion factors and tables' BS 350: Part 1: 1974.
(b) Centrigrade heat unit.
(c) For South African Power Stations:
Tutuka: 1 ton approx. equals 200 therms or 21,12 GJ
Lethabo: 1 ton approx. equals 147 therms or 15,48 GJ

***Source: Handbook of Electricity Supply Statistics, 1984. Issued by The Electricity Council, London, U.K.**