Electricity Supply Commission.

Electricity House,

82, Marshall Street,

Johannesburg,

May, 1931.

To the Honourable

The Minister of Mines and Industries,

Pretoria.

SIR,

In conformity with the provisions of Section 14 of the Electricity Act, 1922, the Commission has the honour to submit its Eighth Annual Report, covering its operations for the year ended 31st December, 1930, together with a brief review of its activities up to 30th April, 1931.

The Commission's five Electricity Undertakings have been in commercial operation throughout the year under review and the Commission is pleased to be in a position to record that the operation of its Undertakings during the year has been satisfactory and that there has again been a substantial increase in the aggregate output.

The Commission is not alone amongst electricity suppliers in South Africa in recording a steadily increasing output during recent years, and it is a matter of some significance that these increases have, on the whole, been maintained in spite of the world-wide depression which has made itself felt in South Africa during the past twelve months.

So far as the Commission's Undertakings are concerned, there has been an increase, during 1930, in the aggregate output and in the sales to each class of consumer, with the single exception of supplies for railway traction purposes. Railway electricity require-

ments for traction purposes are to a large extent dependent upon the traffic to be handled, and the decline in the railway traction supplies, both in Natal and at the Cape, is a reflex of the decreased volume of railway traffic. Increased sales to other classes of consumers have, however, more than offset the decline in railway traction supplies.

The output of most other electricity undertakings in South Africa, both Municipal and private, continues to expand and the extent of the development is exemplified in the comparatively large number of extensions in progress and under consideration at the present time. For example, during 1930, the electricity extension schemes of Urban Local Authorities reported upon by the Commission, in terms of Section 38 of the Electricity Act, 1922, involved an estimated total capital expenditure of over £750,000.

It is abundantly evident that the recognition of the advantages of electricity as a medium for the variety of purposes to which it is adaptable, in both the domestic and industrial spheres, is spreading and it is to be anticipated that the progressive increase in the demand thus created will continue. In fact, it may truthfully be said that, with one or two notable exceptions, the market for electricity supply in South Africa is only just being opened up.

Electrical Development Association. During the past eighteen months, active consideration has been given to the formation in Southern Africa of an Electrical Development Association on the lines of similar associations in overseas countries, where the movement has been markedly successful. It is the intention that the Association be representative of electrical manufacturers and contractors as well as of electricity suppliers, the objective being, by co-ordinating publicity and propaganda work, to extend and intensify the campaign for bringing to the notice of existing and potential consumers the advantages and amenities afforded by electricity in the numerous uses to which it can be applied.

An Organising Committee, upon which the Commission is represented, has been formed and it is hoped that the Association will be launched in the near future and that the effect of its activities will be manifest in an accelerated rate of development in the electricity business with beneficial results to consumers as well as to those engaged in the electrical industry.

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The Commission's five Undertakings are as follows:-

Commission's Undertakings.

Name of Undertaking.		apacity of Mai denerating Sets Kilowatts.	Date of Commencement of Supply.	
Natal Central			 60,000	 March, 1926
Witbank		•••	 100,000	 May, 1926
Capetown			 30,000	 May, 1926
Durban			 *36,000	 July, 1928
Sabie			 1,350	 November, 1925

The figures of primary interest in connection with the operation 1930 of the Commission's Undertakings for the year 1930 are:—

Total Capita	1 Expendit	ture at	31st D	ecember,	1930		£8,083,558
Total Reven	ue			***			£1,005,795
†Total Produ	ction Costs	(inclu	ding Ca	apital Cha	arges,		
Reserve :	Fund Cont	ribution	s, etc.)	•••			£1,002,271
Excess of R	evenue ove	er Prod	uction	Costs			£3,524
Total Capaci	ty of Mair	Gener	ating S	ets	•••	(kilowatts)	227,350
Total Electri	city Sales					(units)	889,611,924
Average Cos	t per Unit	Sold		•••	•••		0·270d.
Total Coal	Consumpti	on				(tons)	765,372
Number of C	lonsumers						1,658
Total Area of	of Supply	(approx	.)		***	(square miles	11,000
Total Mea (n puppiy	(approx.	.)	•••	•••	(square mines	, 11,00

The total revenue for the year 1930 is made up as follows:— Revenue

Revenue and Production

	SALES OF ELECTRI	CITY.	Amount.	% of Total.	Average Price per Unit Sold. d.
(a)	Traction Supplies	****	 399,583	40.3%	0.739
(b)	Bulk Supplies	***	 454,995	45.8%	0.156
(c)	Industrial and Mining	Supplies	 124,198	12.5%	0.518
(d)	Domestic and Lighting	Supplies	 13,950	1.4%	3.318
	Total	•••	 £992,726	100.0%	0·268d.
(e)	Other Revenue		 13,069		
	GRAND TOT	AL	 £1,005,795		

^{*} An additional 12,000 kilowatt generating set is in course of installation at the Congella (Durban) Power Station. This will bring the capacity of that station up to 48,000 kilowatts.

[†] For subdivision of Total Production Costs, see page 5.

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	Production Costs eserve Fund Cont				arges,		£1,002,271
Exces	s of Revenue ov	er Produ	ction (Costs			£3,524
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Total	Electricity Sales					(units)	889,611,924
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				£		d.	
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(a) Traction Supplies:

The revenue from traction supplies is derived from the Natal Central and Capetown Undertakings from which electricity is supplied to the South African Railways and Harbours Administration for railway traction purposes. The railway traction supplies are transmitted by the Commission over relatively long distances, converted from alternating to direct current and delivered by the Commission to the Railway Administration at intermediate points on the railway track. These are important factors which must be borne in mind in making any comparison of revenue and price per unit from traction supplies with revenue and prices per unit from other classes of consumers.

(b) Bulk Supplies:

The two largest bulk supplies, accounting for nearly 90 per cent. of the revenue under this heading, are the supplies to The Victoria Falls and Transvaal Power Company, Limited, and the Durban Corporation. In both cases, the supplies are delivered by the Commission at the Power Stations (Witbank and Congella respectively), no distribution costs being involved on the Commission's part. In addition, Witbank Power Station is operated as a base load station, with coal at pit-head prices from the adjoining collieries, the Victoria Falls Company taking the whole of the output available after the requirements of the Commission's other consumers have been met These are the principal considerations accounting for the much lower average price per unit under the heading of Bulk Supplies, as compared with other classes of supplies.

(c) Industrial and Mining Supplies:

This item represents electricity sold by the Commission direct to industrial and mining consumers.

(d) Domestic and Lighting Supplies:

Supplies of electricity direct to domestic and lighting consumers are on a comparatively small scale owing to the fact that most of the larger Municipalities and Local Authorities in the Commission's areas of supply purchase electricity from the Commission in bulk and themselves undertake house-to-house distribution. The scope for direct development of this class of business by the Commission is therefore somewhat limited.

The total production costs for the year 1930 are made up as follows :-

			Amount.	% of Total.	Price per Unit Sold. d.
Generation			324,045	32.3%	0.087
Distribution			38,602	3.8%	0.011
General Expenses			93,966	9.4%	0.025
Interest and Rede	mption		450,694	45.0%	0.121
Reserve Fund			94,964	9.5%	0.026
Total		• • • •	£1,002,271	100.0%	0·270d.

A diagram showing the sub-division of the Commission's total production costs during the year 1930 is reproduced on the following page.

The surplus, representing the excess of total revenue over total production costs, for the year 1930, amounting to £3,524, is made up as follows:-

Und	lertaking			$_{\mathfrak{L}}^{ ext{Deficit.}}$		
Natal Centr	al	•••		_	•••	
Witbank	***		•••	251		
Capetown				1,940		—
Durban		****		1,337	•••	
Sabie			•••			4
To	tals		•••	£3,528		£4
				4		==
NE	T SUF	RPLUS		£3,524	(*)	

The Electricity Act, 1922, lays down the principle that the Commission's Undertakings shall be operated, as far as possible, "neither at a profit nor at a loss." The Commission's objective is, therefore, to achieve, as nearly as practicable, a balance between the revenue and production costs of each of its Undertakings.

The Commission's total electricity sales during the year 1930, Electricity amounting to 889,611,924 units, represent an increase of 92,613.573 units, or approximately 11.6 per cent. as compared with the year 1929.

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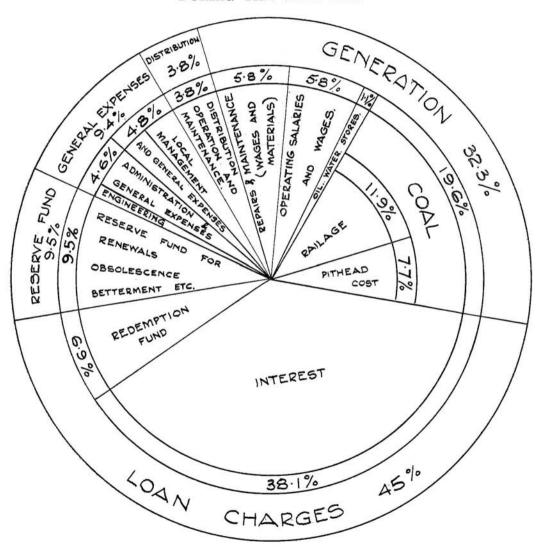
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Electricity Supply Commission.

DIAGRAMMATIC SUBDIVISION OF TOTAL PRODUCTION COSTS DURING THE YEAR 1930.



Note.—Under the heading "General Expenses" is included miscellaneous expenditure such as maintenance of quarters, stores expenses, assessment rates, wayleaves, rents; insurance, audit expenses, pension fund contributions, legal expenses; etc.

The following statement shows the units sold to all consumers during the past five years:—

		UNITS SC	LD.		
Undertaking.	1926.	1927.	1928.	1929.	1930.
Natal Central	 719,666	104,206,235	114,213,037	123,911,774	117,075,484
Witbank	 160,031,213	439,061,722	464,267,213	543,091,138	618,951,364
Capetown	 280,242	5,811,836	31,038,697	47,945,690	49,772,016
Durban	 -	3	15,563,460	78,873,576	99,228,000
Sabie	 727,401	1,938,940	2,829,888	3,176,173	4,585,060
Totals	 161,758,522	551,018,733	627,912,295	796,998,351	889,611,924

The distribution of the units sold during 1930 as between the various classes of consumers, was as follows:—

UNITS SOLD, 1930.

Undertaking.		Domestic and Lighting.	Industrial and Mining.	Traction.	Bulk Supplies.	Total.
Natal Central	•••	243,285	2,893,822	101,518,710	12,419,667	117,075,484
Witbank		418,132	34,144,785	-	584,388,447	618,951,364
Capetown		347,165	15,902,284	28,273,054	5,249,513	49,772,016
Durban			-	_	99,228,000	99,228,000
Sabie	•••	588	4,584,472	_	-	4,585,060
Totals		1,009,170	57,525,363	129,791,764	701,285,627	889,611,924

A chart showing the development of electricity sales is reproduced on the following page.

The average cost per unit sold during 1930 from all the Com-Average ion's Undertakings was 0.270d. as compared with 0.298d. in Unit Sold. mission's Undertakings was 0.270d. as compared with 0.298d. in 1929. As was explained in the Commission's last Annual Report, there is very wide variation in the average cost per unit as between one Undertaking and another, due to the entirely different conditions obtaining. It will, therefore, be apparent that misunderstandings are likely to arise if comparisons are made between one Undertaking and another, unless the differences in conditions are taken into account and their significance appreciated.

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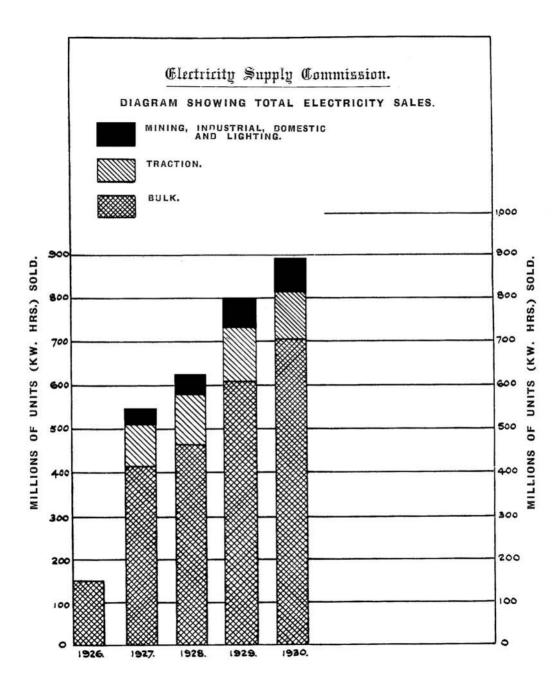
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The average cost per unit during 1930 on each Undertaking, and the comparative figures in respect of the more important factors accounting for the variations in cost per unit as between one Undertaking and another, are set out in the following table:—

			ate Proportion Expenditure.	Cost of	Ratio of		
Undertaking.		Power Station.	Transmission, Distribution & Conversion.	Coal per ton (2,000 lbs.)	Maximum Demand to Installed Capacity.	Load Factor.	Average Cost per Unit Sold.
Natal Central		44.4%	55.6%	8/-	46%	50.9%	0.666d.
Witbank		94.4%	5.6%	2/2	90%	83.3%	0·117d.
Capetown		57.9%	42.1%	23/5	45%	43.5%	0·996d.
Durban		100 %		13/2	68%	50.0%	0·376d.
Sabie		80.2%	19.8%	Hydro	74%	54.7%	0·717d.

The foregoing table amply exemplifies the pitfalls open to the unwary in making comparisons of costs per unit from two or more Undertakings operating under different circumstances, and illustrates the extent to which the cost of the electrical unit is influenced by local conditions and load characteristics.

Considerations of a similar character account for the variations in cost per unit as between one class of consumer and another on the same Undertaking.

During the year 1930, the coal consumed at the Commission's Coal four steam-using power stations, amounting to a total of 765,372 tons, was as follows:—

		COA	L CONSUM	L CONSUMED.		B.T.U.'s.		
Power Station.		Tons. (2,000 lbs.)	Per Unit Gener- ated.	Per Unit Sent Out.	Average per lb. of Coal.	Average per Unit Sent Out.	Thermal Efficiency on Units Sent Out.	
			Lbs.	Lbs.			%	
Colenso (Natal Central)		98,235	1.50	1.60	12,500	20,000	17.1%	
Witbank		551,504	1.68	1.78	11,400	20,300	16.8%	
Salt River (Capetown)		43,013	1.61	1.70	13,150	22,400	15.2%	
Congella (Durban)		72,620	1.34	1.46	13,000	19,000	18.0%	

The variations in efficiency as between one power station and another, reflected in the foregoing table, are due to a number of factors which must be taken into account before making comparisons. Amongst the more important are the differences in load

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characteristics, physical conditions and power station design, the latter also having been influenced by the relative prices and calorific values of fuel. The ultimate object in each case is to obtain the most favourable overall result.

The cost of coal during 1930 represented 19.6 per cent. of the total production costs of the four Undertakings concerned.

Railage and Sidings charges in respect of coal consumed in 1930 amounted to approximately £120,000. Omitting Witbank, where practically no railage is involved, railage and sidings charges represent approximately 85 per cent. of the cost of coal.

Consumers

The number of consumers being supplied with electricity from the Commission's Undertakings as at 31st December, 1930, was 1,658, an increase of 641 during the year.

The following table shows the number of consumers of the various classes on each Undertaking at the end of the year 1930:—

1	Underta	king.		Domestic and Lighting.	Industrial and Mining.	Traction.	Bulk Supplies.	Total.
Natal Cent	tral		•••	158	14	1	7	180
Witbank				386	30		2	418
Capetown	•••			1,019	32	1	4	1,056
Durban					-	_	1	1
Sabie		•••		1	2	_		3
To	tals	•••		1,564	78	2	14	1,658
Units Sold Consur Percen Sold	ner ex		as a Units	0.1%	6.5%	14.6%	78.8%	100%

It will be apparent from this table that the major portion of the Commission's output is supplied in large blocks of power.

Financial.

The Report of the Auditors and the Commission's Balance Sheet, as at 31st December, 1930, are embodied in Annexure "A" to this Report.

It does not appear to be generally understood how the establishment of the Commission and its Undertakings has been financed.

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tral			158	14	1	7	180
•••			386	30		2	418
			1,019	32	1	4	1,056
•••					_	1	1
•••	•••		1	2	_	_	3
otals			1,564	78	2	14	1,658
mer e	xpressed	as a	0.104	6.5%	14.6%	5 0.00/	100%
	tral otals d to i	otals d to Each Clar mer expressed	tral	Undertaking. and Lighting. tral 158 386 1,019 1 otals 1,564 d to Each Class of mer expressed as a	Undertaking. and Lighting. and Mining. tral 158 14 386 30 1,019 32 1 2 otals 1,564 78	Undertaking. and Lighting. and Mining. Traction. tral 158 14 1 386 30 — 1,019 32 1 1 2 — otals 1,564 78 2 d to Each Class of mer expressed as a stage of Total Units at tage of Total Units	Undertaking. and Lighting. and Mining. Traction. Supplies. tral 158 14 1 7 386 30 — 2 1,019 32 1 4 1 2 — — otals 1,564 78 2 14

It will be apparent from this table that the major portion of the Commission's output is supplied in large blocks of power.

Financial.

The Report of the Auditors and the Commission's Balance Sheet, as at 31st December, 1930, are embodied in Annexure "A" to this Report.

It does not appear to be generally understood how the establishment of the Commission and its Undertakings has been financed.

Statutory provision was made for the Treasury to make advances to the Commission in the initial stages of development. These advances, which were limited to a period of seven years, were subject to cost of raising and interest charges (calculated from the date of each advance) and were repayable by the Commission in full. During construction, the cost of raising and interest charges were capitalised, but as each Undertaking reached the revenue producing stage, interest was paid to the Treasury on the capital invested therein. The position in this respect as at 31st December, 1929, was as follows:—

Advances received	from Tr	easury				£7,309,965
Cost of Raising (apitalised	ı		£212,125	
Interest Capitalis	ed	•••	•••		477,910	
						690,035
Total		•••				£8,000,000
Interest Paid to 7						
Undertakings				···		£649,458

As will be seen from the foregoing, during the years 1923 to 1929 inclusive, the amount of interest paid to the Treasury plus interest capitalised was £1,127,368. From the year 1930 onwards, the Commission's liability for interest, as mentioned hereunder, amounts to £401,440 per annum.

Provision was made in the Electricity Act, 1922, for the raising of loans by the Commission by means of the issue of stock or debentures, redeemable within a period not exceeding thirty years. As a result, however, of negotiations between the Commission and the Treasury, arrangements were agreed upon whereby the total advances (including capitalised interest and cost of raising charges) made to the Commission, up to 31st December, 1929, were consolidated into two loans of £3,000,000 and £5,000,000 respectively, these arrangements being subsequently approved by Parliament and embodied in the Financial Adjustments Act, 1930.

This is an ordinary business transaction between the Commission and the Government, and the two loans are the equivalent of an issue of stock or debentures by the Commission to the Government, the provisions regarding interest and redemption applicable thereto being as follows: Interest at the rate of 5.018 per cent. per

annum (amounting to £401,440 per annum) is payable by the Commission to the Treasury half-yearly on 30th June and 31st December. The loan of £3,000,000 is redeemable not later than 31st December, 1954, and the loan of £5,000,000 not later than 31st December, 1979. Contributions from revenue to the Redemption Fund in respect of the loan of £5,000,000 commence in 1940.

The allocation of the two loans as between the Commission's several Undertakings is as follows:—

Loan No. 1 (£3,000,000): Withank, Durban and Sabie Undertakings.

Loan No. 2 (£5,000,000): Natal Central and Capetown Undertakings.

In so far as present-day costs are concerned, the provisions governing the redemption of Loan No. 2 are more favourable, the object thereof being to afford a measure of assistance, through the medium of power costs, to the Railway Administration in respect of the Natal Main Line and Cape Suburban electrification schemes.

In paragraph (2) of their Report, the Commission's Auditors have drawn attention to the Reserve Fund in respect of the Natal Central and Capetown Undertakings as affected by the loan redemption provisions applicable to Loan No. 2 (£5,000,000), which has been allocated to these two Undertakings.

The Auditors' comments in this respect are significant, not only in relation to the particular aspect of the case to which they have invited attention but also in relation to the opinion which has been expressed in certain quarters that contributions made by the Commission to its Reserve Fund were on too liberal a scale. In the circumstances, it might be desirable for the Commission also to comment briefly on this subject.

As regards the Statutory provisions applicable to the Commission in this matter, it is important that it should be appreciated—

(a) that the limitations imposed by Section 9 of the Electricity Act, 1922, in respect of the Reserve Fund were fixed on the basis that the redemption periods of the Commission's loans would not exceed 30 years—vide Clause 1 of the Schedule to the Electricity Act. 1922 and

(b) that a relaxation of the provisions of that Schedule as affecting loan redemption (such as has been made in the case of the loan of £5,000,000) inevitably raises the question as to the probable adequacy of the Reserve Fund, as limited by Section 9 of the Electricity Act, 1922.

The Commission's policy in this matter is steadily to build up the Reserve Fund within the limits at present prescribed, to maintain its Undertakings at a high degree of efficiency and to carry out regular and complete overhauls of its plant and equipment so as to eliminate, as far as is practicable, breakdowns involving extensive repairs and replacements. Whilst the Reserve Fund is designed, in part, to take care of contingencies, the Commission is hopeful that, by pursuing this policy, it will not be necessary to have alterations made in the limitations imposed upon the Reserve Fund under Section 9 of the Electricity Act, 1922.

The opinions expressed by the Commission's Auditors serve, however, to draw attention to the possibility of these limitations having to be raised.

The Commission's Capital Expenditure to 31st December, 1930, was £8,083,558. Net revenue from the sale of electricity during construction and other revenue accruing prior to the commencement of commercial operation of various works, amounts, up to 31st December, 1930, to £150,441. In the case of the Natal Central and Capetown Undertakings, the amounts set aside up to 31st December, 1929, as provision for repayment of moneys borrowed, amounted to £218,751. These two items, amounting in total to £369,192, have been credited to Capital. The net expenditure on Capital Account, therefore, amounts to £7,714,366.

A schedule of expenditure on Capital Account is embodied in Annexure "A" to this Report.

Separate accounts of the Redemption Fund and Reserve Fund and Revenue and Expenditure Accounts in respect of each of the Commission's five Undertakings are also embodied in Annexure "A" to this Report.

The standard prices for the supply of electricity from the Com- Tariffs. mission's Undertakings and the conditions attaching thereto are

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embodied in the Licences and Permit granted to the Commission by the Electricity Control Board. These prices are subject to adjustment from time to time in terms of the Electricity Act, 1922, and the prices for the time being in force are published annually by the Commission in the Gazette and local newspapers.

Annexure "B" to this Report embodies the standard prices at present in force. In the case of the Natal Central and Witbank Undertakings, it will be observed that item (b) of the tariffs, viz., the maximum demand charge, has been altered from £5 per annum to 8s. 4d. per month for each kilowatt ampere of the maximum demand, i.e., the basis of these two tariffs has been altered from annual maximum demand to monthly maximum demand. These amendments have been granted by the Electricity Control Board with effect from the commencement of the year 1931.

The standard prices are subject, where necessary, to variation in terms of Section 26 of the Electricity Act, 1922, depending upon the situation, extent and characteristics of consumers' loads and they apply (except with the approval of the Electricity Control Board) to consumers whose notified maximum demands are not less than 50 kilovolt amperes.

In the case of small consumers, such as domestic and lighting supplies, the tariffs, which are also subject to the approval of the Electricity Control Board, are based on the standard prices plus the additional costs of house-to-house reticulation.

The staff employed by the Commission as at 31st December, 1930, numbered 668, made up as follows:—

Europeans		•••	 ***	***	332
Non-Europeans	•••		 		336
Total		***	 	***	668

The foregoing figures exclude the staff employed at the Commission's Witbank Power Station, which is operated, on the Commission's behalf, by The Victoria Falls and Transvaal Power Company, Limited.

Staff.

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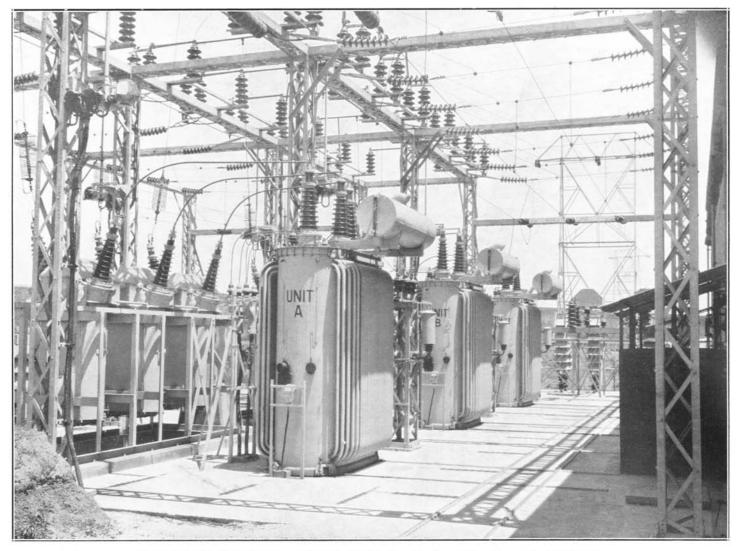
Staff.

A trial is at present being given to the employment of white labour, in place of natives, on certain classes of unskilled power station work. It is hoped that, as a result of this experiment, it may be found economically practicable gradually to extend the use of white labour on the Commission's Undertakings, and that, with the opportunities thus afforded them, the men will qualify for promotion to more responsible work.

The operations and developments of the individual Under-General takings is reviewed in greater detail in the following pages. Reference is also made therein to the Commission's work, in an advisory capacity, to the Administrators of the several Provinces, in relation to Municipal electricity schemes.

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Natal Central Undertaking: Estcourt Sub-Station Outdoor Structure and Equipment.

NATAL CENTRAL UNDERTAKING.

The Natal Central Undertaking serves the area along the route of the Natal Main Line between Pietermaritzburg and Newcastle. Railway traction requirements, for the electrified section between Pietermaritzburg and Glencoe, absorb a large proportion of the output of this Undertaking, but electricity is also supplied therefrom to Municipalities and a number of industrial and other consumers between Pietermaritzburg and Newcastle.

The units generated at the Colenso Power Station during the Working year 1930 total 130,942,430. The units sent out from the power 1930. station total 122,731,155 and the maximum half-hourly demand was 27,520 kilowatts, the load factor being 50.9 per cent. The thermal efficiency of the power station on units sent out was 17.1 per cent.

The units sold, during the year 1930, total 117,075,484, a decrease of 6,836,290, or $5\frac{1}{2}$ per cent. as compared with the year 1929. This decrease was due to the reduction in the Railway Administration's requirements for traction purposes, as is illustrated hereunder:-

		Unit	s Sold.	Increase or Decrease.		
		1929.	1930.	Units.	%	
Railway Administration		110,960,117	101,518,710	-9,441,407	-8.5%	
Railway Administration Other Purposes	on:	2,232,480	2,294,839	+62,359	+2.8%	
Other Consumers		10,719,177	13,261,935	+2,542,758	+23.7%	

The reduction in the supply for railway traction purposes reacts upon the cost per unit to the Railway Administration. Sales of electricity to consumers, other than the Railway Administration, have shown progressive increases year by year since the supplies were commenced in 1926. The sales to these consumers are shown hereunder:-

SALES TO CONSUMERS OTHER THAN S.A.R. AND H.

Year.			Units Sold.
1926	 	 	719,666
1927	 	 ***	1,894,952
1928	 	 	5,712,004
1929	 	 1772	10,719,177
1930	 	 	13,261,935

The financial results of the operation of the Natal Central Undertaking for the year 1930 are given in Annexure "A" (Account No. 3) to this Report.

Consumers.

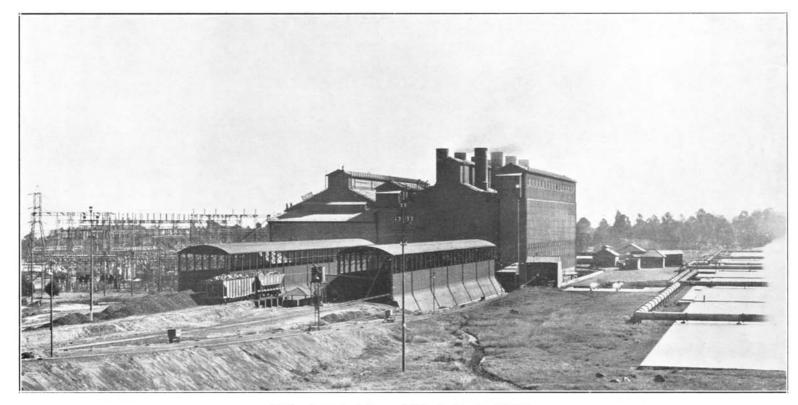
The principal new consumer to whom supply was commenced during the year 1930 was the Newcastle Municipality, this supply having been made available on 20th November, 1930. During December and early in January, 1931, several serious interruptions took place in the supply of electricity to Newcastle, much to the Commission's regret. The first interruption took place on 9th December, and was due to an exceptionally severe lightning storm, which passed over Northern Natal, causing a number of fatalities and considerable damage to property. Several insulators on the Commission's transmission line between Glencoe and Newcastle were shattered by direct lightning hits and subsequent interruptions were traceable mainly to the insulation damage caused by this storm. Steps were immediately taken by the Commission to rectify matters, and with a view to maintaining a satisfactory supply in the future.

Amendment of Licence. On 16th February, 1931, application was made by the Commission to the Electricity Control Board for certain amendments to the standard prices set out in the Commission's Licence in respect of the Natal Central Undertaking. This application has since been granted by the Board, the amended prices, details of which are set out in Annexure "B" to this Report, taking effect from the commencement of the year 1931.

Extension of Undertaking.

An extension of Railway electrification in Natal from Mason's Mill, the southern terminus of the existing electrification, to Cato Ridge has been decided upon by the South African Railways and Harbours Administration, and the supply of electricity for this section involves an extension of the Commission's Undertaking, viz., the erection of a new sub-station at Thornybush with an installation of two 2,000 kilowatt motor generator sets, one of which is being transferred from the existing triple-unit sub-station at Estcourt. The supply will be transmitted to the Thornybush substation from Pietermaritzburg by a 33,000 volt overhead transmission line which, by arrangement between the Commission and the Administration, will be carried on railway track structures.

It is estimated that the Administration's electricity requirements for the electrified section between Mason's Mill and Cato Ridge will amount to approximately 15,000,000 units per annum.



Witbank Undertaking: Witbank Power Station.

WITBANK UNDERTAKING.

The Witbank Undertaking serves the area in and around Withank within a radius of 25 miles, and the balance of the output of the power station after meeting the requirements of consumers in this area is taken by The Victoria Falls and Transvaal Power Company, Limited. The Witbank Power Station is, therefore, operated as a base load station, and this fact, coupled with its situation in the heart of the coalfields, results in a very cheap supply of electricity being available in the Witbank district.

The installation at Witbank of the fifth 20,000 kilowatt turbo alternator, referred to in the Commission's last Annual Report, was completed in August, 1930, the total installation being now 100,000 kilowatts.

In the Witbank district, the Commission's 21,000 volt reticulation system extends from Middelburg in the north-east to Kendal in the south-west, in addition to which there is a 2,200/380/220 volt distribution system in and adjoining the Witbank Municipal area.

The units generated at the Witbank Power Station during the Working year 1930 total 657,633,791. The units sent out from the Power Station total 619,498,231, and the maximum hourly demands were as follows :-

	Milowatts.
Prior to the Installation of the Fifth 20,000 kw. Set	 81,438
Subsequent to Installation of the Fifth 20,000 kw. Set	89,532

the mean load factor for the year being 83.3 per cent. The thermal efficiency of the Witbank Power Station on units sent out was 168 per cent.

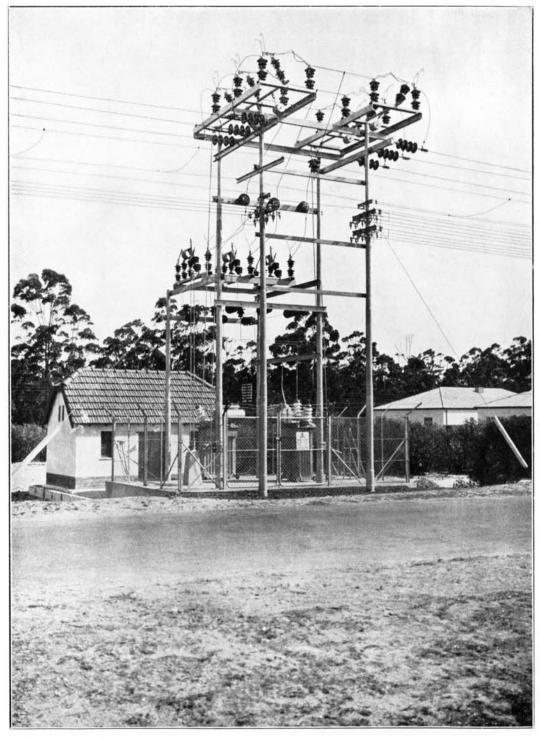
The units sold from the Witbank Undertaking during 1930 total 618,951,364, of which 34,962,217 units were supplied to consumers in the Witbank district. The increase in sales in the Witbank district during the past five years is reflected in the following table:

SALES TO CONSUMERS IN WITBANK DISTRICT.

Year.				Units Sold.
1926	***			 499,057
1927	•••		• • •	 13,389,333
1928	***	***	***	 19,950,004
1929	***	•••		 29,731,115
1930			• • •	 34,962,217

The financial results of the operation of the Witbank Undertaking for the year 1930 are given in Annexure "A" (Account No. 4) to this Report. A surplus of revenue over expenditure of £251 was realised on the working of the Undertaking during the year. This amount, together with the balance of £7,647 brought forward from the year 1929, has been carried forward to the year 1931.

Amendment of Licence. On 16th February, 1931, application was made by the Commission to the Electricity Control Board for certain amendments to the standard prices set out in the Commission's Licence in respect of the Witbank Undertaking. This application has since been granted by the Board, the amended prices, details of which are set out in Annexure "B" hereto, taking effect as from the commencement of the year 1931.



Capetown Undertaking: Typical Step-Down Sub-Station on 33,000 Volt System.

CAPETOWN UNDERTAKING.

From the Capetown Undertaking, which commenced commercial operation in June, 1929, electricity is supplied by the Commission to the South African Railways and Harbours Administration for traction purposes, to the Salt River Workshops, Table Bay Docks, and to a number of Municipalities, industries and other consumers in the rural areas eastwards of the Cape Peninsula. The Commission's Undertaking is interconnected with the Capetown Corporation's Undertaking, the power stations of the respective parties being operated, normally, in parallel.

The units generated at the Salt River Power Station in 1930 Working total 53,504,505. The units sent out from the power station total 50,526,667, and the maximum half-hourly demand was 13,393 kilowatts, the load factor being 435 per cent. The thermal efficiency of the power station on units sent out was 152 per cent.

The units sold during the year 1930 total 49,772,016, an increase of 1,826,326, or 3.8 per cent. as compared with the year 1929. As in the case of the Natal Central Undertaking, there has been a decrease in the requirements of the Railway Administration for traction purposes but for which there would have been a larger increase in the aggregate output of the Undertaking. The position in this respect is illustrated hereunder.

	Unit	Units Sold.		Decrease.
	1929.	1930.	Units.	%
Railway Administration:				
Traction	28,942,013	28,273,054	-668,959	-2.3%
Railway Administration:				**
Other Purposes	7,574,970	8,309,950	+734,980	+9.7%
Cape Rural Supplies	11,231,658	13,182,512	+1,950,854	+17.4%

The Commission's system in the Cape Rural Areas comprises Cape Rural System. a 33,000 volt transmission system extending into Paarl, Stellenbosch and Malmesbury Districts, and low-tension distribution networks in a number of the townships in this area.

The development of sales on this system since the supply was made available in 1926 is shown in the following table: CADE DIDAT GYGMEN

UA	LOU TOL	THE DIE	OT TOTAL.	
				Units Sold.
				280,242
				4,690,009
				9,767,699
				11,231,658
				13,182,512

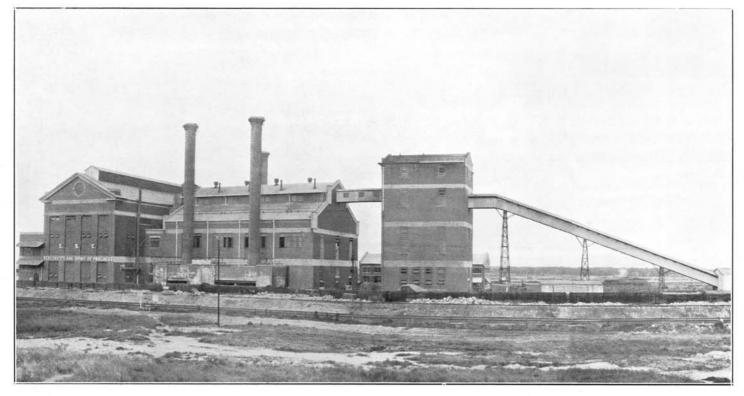
In the development of the supplies of electricity from the Capetown Undertaking, the Commission is faced with a number of difficulties, not all of which are encountered to the same extent elsewhere.

In Capetown and the Cape Peninsula itself, electricity (other than for the Administration's traction, workshops and docks requirements) is supplied by the Capetown Corporation, the Commission's activities, in the matter of development, being confined to the more sparsely populated rural districts eastwards of Capetown. In such an area the cost of transmission per consumer is high and electricity prices are necessarily higher than in the case of more densely populated and industrialised urban areas.

In addition, the comparatively high cost of coal at Capetown, viz., 23s. 5d. per ton (including 20s. per ton for railage) is an important factor, representing, as it does, approximately 0.24d. per unit sold. These considerations intensify the competition with which electricity is faced from alternative sources and mediums of power supply—for example, oil engines, the cost of imported fuel oils being at a minimum in the Cape area where the cost of coal is at a maximum.

Having regard to these circumstances, the development which has been achieved cannot be regarded as other than encouraging.

The financial results of the operation of the Capetown Undertaking for the year 1930 are given in Annexure "A" (Account No. 5) to this Report. The working of the Undertaking during the year resulted in a surplus of £1,940. Taking into account the deficit of £1,166 brought forward from the year 1929, there is a net surplus, as at 31st December, 1930, of £774, which has been carried forward to the year 1931.



Durban Undertaking: Congella Power Station.

DURBAN UNDERTAKING.

The Durban Undertaking, which was placed in commercial operation on 1st January, 1930, supplies electricity in bulk to the Durban Corporation, the Corporation being at present the Commission's only consumer.

The Congella Power Station has an installation of 36,000 kilowatts of generating plant in four generating sets, two of 12,000 kilowatts each and two of 6,000 kilowatts each. The boiler plant comprises six boilers, each of a normal capacity of 60,000 lbs. of steam per hour. The boilers are fired by pulverised coal.

The units generated at the Congella Power Station during the working Results year 1930 total 108,781,460. The maximum half-hourly demand was 24,500 kilowatts, the load factor being 500 per cent. The thermal efficiency of the power station on units sent out was 18 per cent.

The units sent out from the Congella Power Station and supplied to the Durban Corporation during 1930 total 99,228,000, an increase of 20,354,424, or 25.8 per cent., as compared with the year 1929.

During the year under review, negotiations have been proceed- Extension ing between the Commission and the Durban Corporation regarding of Congella Power Station arrangements for meeting the increasing requirements of the Corporation, based on the following output as from April, 1932, viz.:-

- (a) a maximum demand of 30,000 kilowatts, and
- (b) a minimum supply of 115,000,000 units per annum.

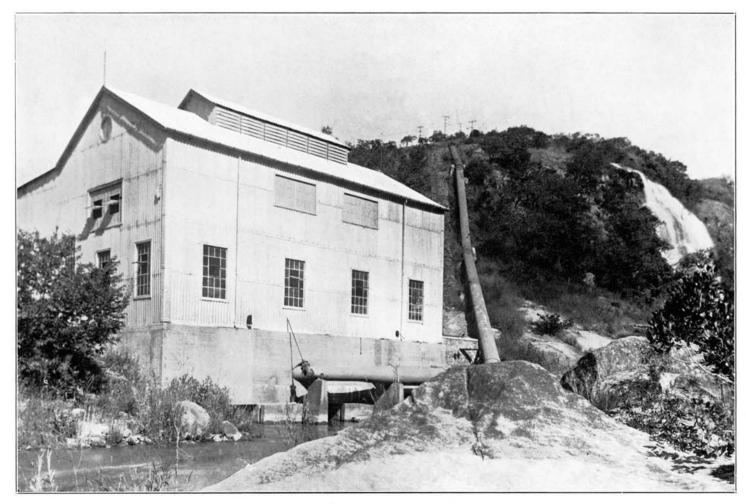
These negotiations have been completed and a revised agreement between the Commission and the Corporation was entered into on 18th December, 1930. In terms of this agreement, the Commission is proceeding with the installation of an additional 12,000 kilowatt generating set at the Congella Power Station and two additional pulverised coal-fired boilers, each with a normal rating cf 120,000 lbs. of steam per hour. This additional plant will be accommodated in the existing turbine and boiler houses, in which space was provided for extensions in the original construction programme.

With effect from April, 1932, when the additional plant aforesaid is placed in commission, the tariff to the Durban Corporation, for the increased load, will be substantially reduced. On 1st February, 1931, application was made by the Commission to the Electricity Control Board for the necessary amendments to the Schedule of Standard Prices in the Durban Licence, 1927, to take effect concurrently with the availability of the increased supply, the revised standard prices being as follows:—

- (a) a charge of £4 4s. (reduced from £5 8s.) for each kilowatt of the maximum demand supplied in each year, plus
- (b) a charge of 0.175d. (reduced from 0.2d.) for each unit supplied.

These amendments have since been granted by the Electricity Control Board.

The financial results of the operation of the Durban Undertaking for the year 1930 are given in Annexure "A" (Account No. 6) to this Report. The working of the Undertaking during the year resulted in a surplus of £1,337, which has been carried forward to the year 1931.



Sable Undertaking: Sable Gorge Hydro-Electric Power Station.

SABIE UNDERTAKING.

The Sabie Hydro-Electric Undertaking was established primarily to meet the power requirements of the gold mining industry at Sabie, and the whole output of the Undertaking is now being supplied to two mining companies operating in this district.

The units generated at the Sabie Gorge Power Station during Working the year 1930 total 4,858,200. The units sent cut from the Power Results. Station total 4,788,700 and the maximum half-hourly demand was 1,000 kilowatts, the load factor being 54.7 per cent.

The units sold from the Sabie Undertaking during 1930 total 4,585,060, an increase of 1,408,887 units, or 44.4 per cent., as compared with the year 1929. The average cost per unit sold during 1930 was 0.717d. as compared with 1.04d. in 1929.

During the earlier part of the year 1930, one of the three mining companies at Sabie, which obtained its electricity requirements from the Commission, discontinued mining operations and has since gone into voluntary liquidation. Coincident with the closing down of this mine, the Commission's two remaining consumers, who had previously generated a considerable portion of their electricity requirements at power stations of their own, decided to draw the whole of their requirements from the Commission's Undertaking, and to this is attributable the comparatively large increase in the output of the Sabie Undertaking during 1930, as compared with previous years, and the substantial reduction in the average cost per unit sold. The actual output of the Undertaking from July to December, 1930, inclusive was 3,151,031 units, or at the rate of 6,302,062 units per annum. The marked effect of an increase in output upon the average cost per unit, particularly in the case of hydro-electric undertakings, is exemplified by the results at Sabie.

The financial results of the operation of the Sabie Undertaking for the year 1930 are given in Annexure "A" (Account No. 8) to this Report. The working of the Undertaking during the year resulted in a deficit of £4, which has been carried forward to the year 1931.

MUNICIPAL ELECTRICITY SUPPLY SCHEMES.

Up to 31st December, 1930, 203 electricity schemes of Urban Local Authorities have been reported upon by the Commission in terms of Section 38 of the Electricity Act, 1922, and supplementary reports upon tenders have been submitted in respect of 87 schemes.

During the year 1930 the following 35 schemes, of which 10 were new schemes, were reported upon by the Commission:—

CAPE.

Bredasdorp. Hermanus. Port Alfred.

*Cradock. Kingwilliamstown. Queenstown.

*Fort Beaufort. Kokstad. Tarkastad.

Fransch Hoek. Kuruman. Tulbagh.

Gordon's Bay. Montague. Umtata.

*Heidelberg. Victoria West.

TRANSVAAL.

Hartebeestfontein. † Louis Trichardt. Pretoria.

Johannesburg. Lydenburg. Springs.

Klerksdorp. *Ventersdorp.

ORANGE FREE STATE.

Boshof. Ficksburg. Koffiefontein.

*Clocolan. Marquard.

*Dewetsdorp. Parys.

NATAT.

Dundee. Glencoe.

SOUTH-WEST AFRICA.

Windhoek.

* Report on Tenders only. † Supplementary Report.

Of the total of 203 schemes reported upon by the Commission up to the end of the year 1930, 93 were new schemes.

The following table shows the total number of Urban Local Authorities in the respective Provinces of the Union and in South-West Africa, and the numbers in each case which have established or are in course of establishing electricity supply schemes:—

LOCAL AUTHORITIES IN UNION AND SOUTH-WEST AFRICA.

LOCAL AUTHORI	TIES II	I OM	ION AN	D 3001	11-XX 12.	JI AFILI	OA.	
				1	PROVINCE	c.	sw.	
			Cape.	Transvaal.	O.F.S.	Natal.	Africa.	Total
No. of Municipalities			128	24	61	9	7	229
No. of Other Local Authorities		270727	127	63	7	29	9	235
	Total		255	87	68	38	16	464
Local A	uthorities	with	Electrici	ty Supply	Schen	ies.		
Local Authorities Generating ing Electricity:	and Distr	ibut-						
Established	***		59	15	26	7	2	09
Under Construction			2	2	1	-	-	5
	Total		61	17	27	7	2	114
Local Authorities Purchasing and carrying out their own Established Under Construction	n Distribu 	oplies tion: 	14	23	2	9	_	48
	Total	•••	14	23	2	9		48
Cases in which Supply and undertaken by Third Parti	l Distrib	ution						
Established Under Construction			9	4	_	11	3	27
	Total		9	4		11	3	27
			1					
Total Schemes Established	d	•••	82	42	28	27	5	184
Total Schemes under Con	struction	•••	2	2	1	-	-	5
Grand	Total	•••	84	44	29	27	5	189

ACCOUNTS.

The Commission submits for the year 1930, as Annexure "A," to this Report:—

The Report of the Auditors.

Balance Sheet.

Schedule of Expenditure on Capital Account.

Statement showing the Investments of the Redemption Fund.

Account No. 1: Redemption Fund Account.

Account No. 2: Reserve Fund Account.

Revenue and Expenditure Accounts in respect of

Account No. 3: Natal Central Undertaking.

Account No. 4: Witbank Undertaking.

Account No. 5: Capetown Undertaking.

Account No. 6: Durban Undertaking.

Account No. 7: Sabie Undertaking.

TARIFFS.

Annexure "B" to this Report embodies the standard prices in force in respect of the Commission's several Undertakings.

GENERAL.

The Commission submits, for the year 1930, as Annexure "C" the following statements:—

No. 1: Summary of principal plant and equipment installed.

No. 2: Summary of principal plant and equipment in course of installation or on order.

No. 3: Statement showing the price or rent of land or rights or interest in or over land and other property acquired or hired by the Commission.

UNION STATISTICS.

By the courtesy of the Department of Census and Statistics, the Commission is able to publish some interesting information (extracted from the 1928/1929 Industrial Census) bearing upon the production and distribution of electricity in the Union. This information is embodied in Annexure "D" to this Report.

I have the honour to be,

Sir,

Your obedient servant,

CHAIRMAN.

ANNEXURE "A": ACCOUNTS.

The Report of the Auditors.

Balance Sheet.

Schedule of Expenditure on Capital Account.

Statement Showing Investments of Redemption Fund.

Account No. 1: Redemption Fund Account.

Account No. 2: Reserve Fund Account.

Revenue and Expenditure Accounts in respect of:

Account No. 3: Natal Central Undertaking.

Account No. 4: Witbank Undertaking.

Account No. 5: Capetown Undertaking.

Account No. 6: Durban Undertaking.

Account No. 7: Sabie Undertaking.

THE REPORT OF THE AUDITORS.

Johannesburg, 23rd May, 1931.

The Chairman and Members,
Electricity Supply Commission,
Johannesburg.

GENTLEMEN,

We have completed the audit of the Books and Accounts of the Commission for the year ended December 31st, 1930, and have to report as follows:—

NEW LOAN ARRANGEMENTS.

(1) In terms of Section 3 of the Financial Adjustments Act 1930 the advances by the Treasury to the Commission amounting to £8,000,000 were consolidated into two loans of £3,000,000 and £5,000,000 respectively.

These two loans are redeemable as follows:-

- The £3,000,000 Loan in not more than 25 years from January 1st, 1930.
- (2) The £5,000,000 in not more than 50 years from January 1st, 1930, provided that no provision shall be made for redemption before the year 1940.

The Financial Adjustments Act makes no stipulation with regard to the way in which the £3,000,000 and the £5,000,000 loans are to be allocated between the Commission's Undertakings but it was understood between the Commission and the Treasury that the £3,000,000 loan should be allocated to the Witbank, Durban and Sabie Undertakings and the £5,000,000 loan to the Natal Central and Capetown Undertakings.

In view of the fact that in the case of the latter loan there are no redemption obligations before the year 1940, the Natal Central and Capetown Undertakings are relieved of any charge towards repayment of the capital invested therein until the beginning of 1940 and the cost of production of Power at these Undertakings has consequently been reduced.

DEPRECIATION AND OBSOLESCENCE OF PLANT AT NATAL CENTRAL AND CAPETOWN UNDERTAKINGS.

(2) As pointed out above in the case of the Natal Central and Capetown Undertakings the obligation to provide for repayment of loan funds has been deferred until the beginning of 1940. Up to the end of 1929 provision on a thirty years' redemption period basis was made for the repayment of the money invested in these Undertakings. While there is a divergence of opinion as to the effective life of an Electrical Power Plant we considered that the formation of a redemption fund to repay the cost of the Plant over thirty years constituted reasonable protection for obsolescence.

Now, however, that complete redemption is not necessary before the end of 1979 and that no redemption is to be provided before 1940, the position is changed and the same protection against obsolescence is not available.

It is true that a reserve fund is provided for by section 9 of the Act which is available for the replacement of obsolete machinery or plant and generally for the betterment of the plant or for exceptional repairs or emergencies; but the amount to be contributed to the fund shall not exceed 3 per cent. per annum or 15 per cent. in all at any one time on the loan moneys invested in each Undertaking.

In view of the fact that the amount of the fund is subject to these limitations and is available for purposes additional to the replacement of losses caused by depreciation or obsolescence, we have grave doubts whether the Reserve Fund will be adequate to compensate for the decreased amortisation provision due to the lengthened period of redemption of the loan. In the year under review, only slightly over 1 per cent. has been set aside to the Reserve Fund for these Undertakings.

CHARGES TO CONSUMERS AT NATAL CENTRAL AND CAPETOWN UNDERTAKINGS.

(3) At these Undertakings, of which the South African Railways and Harbours Administration is the principal consumer, special arrangements with the Administration exist.

In the case of the Natal Central Undertaking the Administration is charged the cost of running the Undertaking after deducting the revenue derived from sale of electricity to other consumers. The Revenue and Expenditure Account of the Undertaking therefore shews no balance of profit or loss. The arrangement was approved by the Electricity Control Board up to the end of 1929 and application has been made for the approval of the Board to an extension of the arrangement to the end of 1931. The matter is still under consideration by the Board.

In the case of the Capetown Undertaking a similar arrangement exists, under which the Administration has been charged a fixed price which has been subject to periodical revision. The effect of this is that any profit or loss on the Undertaking is ultimately absorbed in alteration of price charged to the Administration alone. This arrangement constitutes a variation of the Standard Tariff in the Licence of the Undertaking, and application has been made to the Electricity Control Board for its approval and the matter is still under the consideration of the Board.

The arrangements referred to above are, we are informed, of a temporary character but so long as they continue it is impossible for the Commission to comply strictly with the terms of the Electricity Act.

WITBANK UNDERTAKING.

(4) In view of the terms of the Agreement between the Commission and The Victoria Falls and Transvaal Power Company, Limited, this Undertaking really divides itself into two portions, viz:—

- (1) The Power Station and the interest of the Victoria Falls Company therein . . . and
- (2) The Local and Municipal consumers including their interest in the Power Station and the distribution of the power taken by them.

The first section makes no profit or loss because the cost of operating the Power Station is, in terms of the Agreement, divided between the Victoria Falls Company and the second section of the Undertaking.

The balance shown on the Witbank Revenue and Expenditure Account therefore represents the surplus of working the second section. Similarly, the Reserve Fund of the Undertaking has been divided in the Commission's Books into two sections.

REDEMPTION FUND.

(5) In view of the consolidation of advances by the Treasury into two loans of £3,000,000 and £5,000,000 as set out in paragraph (1) of this Report, the provisions of the Schedule to the Electricity Act 1922 have now come into operation.

Up to the end of 1929 amounts had been provided for the repayment of moneys borrowed as follows:—

- (1) For the Natal Central and Capetown Undertakings to which the £5,000,000 loan has been allocated ... £218,750 12 10
- (2) For the Witbank and Sabie Undertakings to which (together with Durban) the £3,000,000 has been allocated £109,667 1 5

In the case of the Natal Central and Capetown Undertakings, as there are no statutory obligations to make any provision for redemption until 1940, the amount of £218,750 12 10 has been appropriated in reduction of the capital expenditure of these two Undertakings respectively and is shewn in the Balance Sheet as a deduction from the expenditure on Capital Account.

In the case of the other Undertakings the sum of £109,667 1 5 has been transferred to the Redemption Fund of the £3,000,000 loan.

This latter Fund has been increased during the year under review by adequate further provision and as required by Clause 16 (3) of the schedule to the Electricity Act we have certified an account of this Fund.

PENSION FUND.

(6) During the year the provision for the above Fund has been increased by a sum equal to 6 per cent. of the pensionable emoluments together with interest on the amount standing to the credit of the Fund which now amounts to £20,400 18s 2d. as shewn in the Balance Sheet. No separate investment of this amount has been made but a pension scheme is, we are informed, under the consideration of the Commission and will shortly be put into operation.

HEAD OFFICE ADMINISTRATION AND ENGINEERING EXPENSES.

(7) As contemplated in Section 11 (2) of the Electricity Act the Commission has, as previously, made an allocation of overhead and administration charges as between the various Undertakings.

GENERAL.

- (8) As the result of our Audit of the Books and Accounts of the Commission for the year 1930 and, subject to the foregoing remarks, in terms of Clause 13 (4) of the Electricity Act 1922, we certify as follows:—
 - (a) We have found the accounts of the Commission to be in order.
 - (b) The accounts issued present a true and correct view of the financial position of the Commission and of its transactions and of the results of trading.
 - (c) Due provision has been made for the redemption and repayment of moneys borrowed in view of the circumstances as explained in this report.
 - (d) The value of the assets of the Commission is correctly stated.
 - (e) Sums fixed by the Commission have been set aside to the Reserve Fund under Section 9 as prescribed.
 - (f) All our requirements and recommendations as Auditors have been complied with and carried out.

Yours faithfully,

(Sgd.) ALEX. AIKEN & CARTER, ... B. HALSEY.

Electricity Supply

Incorporated under the

BALANCE SHEET at

Loan Capital		•••						£8,000,000	0	0
Treasury of the Union of	South .	Africa:						Participant of the Participant		
Loan No. 1, Redeema ber, 1954	ble not	later than	31st	Decem-	£3,000,000	0	0			
Loan No. 2, Redeema	ble not	later than	31st		£ 000 000	0	0			
ber, 1979	•••	•••	•••	•••	5,000,000	0	U			
Sundry Creditors and Credit	Balano	es	••••	•••			_	91,559	7	6
Provision for Pensions	***	•••						20,400	18	2
Redemption Fund (Loan No.	1)							184,918	4	9
Reserve Fund		•••						247,700	15	0
Balance on Revenue Accounts	3							10,004	12	6
Witbank Undertaking					7,897	19	0			
Capetown Undertaking					773	12	3			
Durban Undertaking	•••	•••		,	1,337	3	0			
					£10,008	14	3			
Less-Sabie Undertaking	***	•••			4	1	9			
							_			

Note.—In addition to the Liabilities shown above, the Commission has approved of expenditure amounting to approximately £122,255 in connection with the completion and extension of its undertakings. Also £6,210 chargeable against Reserve Fund.

£8,554,583 17 11

H. J. VAN DER BIJL, Chairman.

A. E. HARTE, C.A. (S.A.), Chief Accountant.

Johannesburg, 24th April, 1931.

Commission.

Electricity Act, 1922.

31st DECEMBER, 1930.

		1	16	£77,657					Land and Rights
		1			•••			s	Buildings and Civil Works
		3							Machinery and Plant
	00 000 555	0	16	115,956	•••	•••	***	***	Miscellaneous Equipment
12	£8,083,557	5	10	150 441			truction	g Const	Less-Net Revenue during
		10	12	218,750	appro-	vances.	ent of Ad	epayme	Act, 1930, for re
3	369,192								
9	7,714,365								
2	97,842							***	s and Materials
5	95,988				•••	•••	•••	lances	ry Debtors and Debit Bal
6	242,857						•••		stments
		0	10	107,932	***		Bills	easury	Union of South Africa Tre
		0	0	133,000		•••	***		Cash on Deposit at Intere
		4	16	1,924		•••	•••		interest Accrued
7	19,884					•••	and	on Ha	on Current Account and
10	152,198				***	1)	oan No.	ınd (L	stment of Redemption Fu
17	231,447						***		stment of Reserve Fund
		3	5	230,270	South	ion of	and Un	nicipal	Amount invested in Mun Africa Local Stocks
	3 9 2 5 6	97,842 2 95,988 5	1 3 0 — £8,083,557 12 5 10 — 369,192 3 7,714,365 9 97,842 2 95,988 5 242,857 6 0 0 4 19,884 7 152,198 10	16 1 4 3 16 0 10 5 28,083,557 12 12 10 369,192 3 7,714,365 9 97,842 2 95,988 5 242,857 6 10 0 0 0 16 4 19,884 7 152,198 10	5,541,142 4 3 115,956 16 0 	2,348,800 16 1 5,541,142 4 3 115,956 16 0 150 441 10 5 218,750 12 10 369,192 3 7,714,365 9 95,988 5 97,842 2 95,988 5 242,857 6 107,932 10 0 133,000 0 0 1,924 16 4 19,884 7 152,198 10 231,447 17	2,348,800 16 1 5,541,142 4 3 115,956 16 0 150 441 10 5 Adjustments vances, appro- 1 Expenditure 218,750 12 10 369,192 3 7,714,365 9 97,842 2 95,988 5 95,988 5 107,932 10 0 133,000 0 0 1,924 16 4 19,884 7 152,198 10 152,198 10 231,447 17	2,348,800 16 1 5,541,142 4 3 115,956 16 0 truction 150 441 10 5 truction 150 441 10 5 Trinancial Adjustments ent of Advances, approof Capital Expenditure 218,750 12 10 369,192 3 7,714,365 9 97,842 2 95,988 5 242,857 6 Bills 107,932 10 0 133,000 0 0 1,924 16 4 and 19,884 7 toan No. 1) 152,198 10 231,447 17	2,348,800 16 1 5,541,142 4 3

£8,554,583 17 11

Referred to in our Report of 23rd May, 1931.

ALEX. AIKEN & CARTER, B. HALSEY,

Auditors.

SCHEDULE OF EXPENDITURE ON CAPITAL ACCOUNT to 31st December, 1930

to 31st 1	December, 193	0	
Expenditure in connection with Electricity Undertakings.	Total to 31st December, 1929.	Year ended 31st December, 1930.	Total to 31st December, 1930.
NATAL CENTRAL UNDERTAKING: Land and Rights Buildings and Civil Works Machinery and Plant Miscellaneous Equipment General Expenditure Interest during Construction and Cost of Raising Money	£17,065 15 9 750,558 2 3 2,480,424 16 4 6,713 12 10 18,913 2 10 109,484 18 9	£476 17 9 30,868 19 2 106,762 12 8 14,922 16 11 Cr. 109,484 18 9	£17,542 13 6 781,427 1 5 2,587,187 9 0 21,636 9 9
Net Revenue during Construction Provision made prior to Financial Adjustments Act, 1930, for repayment of advances, appropriated in reduction of Capital Expenditure	£3,383,160 8 9 2,279 10 6	£24,633 4 11 116 16 6 200,767 19 10	£3,407,793 13 8 2,396 7 0 200,767 19 10
	£3,380,880 18 3	Cr. £176,251 11 5	£3,204,629 6 10
WITBANK UNDERTAKING: Land and Rights Buildings and Civil Works Machinery and Plant Miscellaneous Equipment General Expenditure Interest during Construction and Cost of Raising Money	£7,064 15 7 433,699 1 0 1,125,351 4 6 14,197 6 7 168,676 7 6 182,102 17 10	£1,831 13 2 129,677 3 8 345,338 2 4 30,397 16 3 Cr. 168,676 7 6 Cr. 182,102 17 10	£8,896 8 9 563,376 4 8 1,470,689 6 10 44,595 2 10
	£1,931,091 13 0	£156,465 10 1	£2,087,557 3 1
Less-Net Revenue during Construction	103,448 14 11	11 5 0	103,459 19 11
	£1,827,642 18 1	£156,454 5 1	£1,984,097 3 2
Land and Rights	£19,986 8 0 498,266 6 3 774,111 8 5 7,348 5 1 169,017 12 6	£1,039 7 10 125,187 14 7 197,179 9 8 27,585 5 5 Cr. 169,017 12 6 Cr. 127,487 7 1	£21,025 15 10 623,454 0 10 971,290 18 1 34,933 10 6
Net Revenue during Construction Provision made prior to Financial Adjustments Act, 1930, for repayment of advances, appropriated in reduction of Capital Expenditure	£1,596,217 7 4 19,695 16 10	£54,486 17 11 — 17,982 13 0	£1,650,704 5 3 19,695 16 10 17,982 13 0
princed in reduction of copies Emporations	£1,576,521 10 6	£36,504 4 11	£1,613,025 15 5
DURBAN UNDERTAKING: Land and Rights Buildings and Civil Works Machinery and Plant Miscellaneous Equipment General Expenditure Interest during Construction and Cost of Raising Money	£29,650 10 6 236,876 17 5 377,319 4 9 3,889 19 4 86,152 4 2 53,857 11 8	£32 7 6 77,866 19 2 96,869 11 10 2,437 0 7 Cr. 86,152 4 2 Cr. 53,857 11 8	£29,682 18 0 314,743 16 7 474,188 16 7 6,326 19 11
	£787,746 7 10 15,764 10 10	£37,196 3 3	£824,942 11 1
Less-Net Revenue during Construction	£771,981 17 0	£37,196 3 3	15,764 10 10 £809,178 0 3
Land and Rights	£510 0 0 65,952 8 5 38,157 19 3 2,517 0 11	Cr. £152 15 10 Cr. 372 5 6 Cr. 12 15 4	£510 0 0 65,799 12 7 37,785 13 9 2,504 5 7
Less-Net Revenue during Construction	£107,137 8 7 9,124 15 10	Cr. £537 16 8	£106,599 11 11 9,124 15 10
estration and the research services and the services of the services and the services are the services and the services and the services are the services are the services and the services are t	£98,012 12 9	Cr. £537 16 8	£97,474 16 1
HEAD OFFICE: Furniture and Office Equipment		£5,960 7 5	£5,960 7 5
SUMMARY: Land and Rights Buildings and Civil Works Machinery and Plant Miscellaneous Equipment General Expenditure Interest during Construction and Cost of Raising Money	£74,277 9 10 1,985,352 15 4 4,795,364 13 3 34,666 4 9 442,759 7 0 472,932 15 4	£3,380 6 3 363,448 0 9 745,777 11 0 81,290 11 3 Cr. 442,759 7 0 Cr. 472,932 15 4	£77,657 16 1 2,348,800 16 1 5,541,142 4 3 115,956 16 0
Less— Net Revenue during Construction Provision made prior to Financial Adjustments	£7,805,353 5 6 150,313 8 11	£278,204 6 11 128 1 6	£8,083,557 12 5 150,441 10 5
1 . t 1000 fee management of allegans		The second secon	010 750 10 10
Act, 1930, for repayment of advances, appro- priated in reduction of Capital Expenditure	<u>-</u> £7,655,039 16 7	£59,325 12 7	£7,714,365 9 2

STATEMENT SHOWING DETAILS OF INVESTMENTS ON BEHALF OF THE REDEMPTION FUND IN RESPECT OF THE £3,000,000 TREASURY LOAN (LOAN No. 1) AS AT 31st DECEMBER, 1930.

£78,710	Union	of	South	Africa	5%	Loan,	1935	***			 ****	£78,611	12	3
£76,000	Union	of	South	Africa	41%	Local	Regis	stered	Stock,	1953	 	71,345	0	0
Interest	Accrue	ed .	···					•••			 •••	2,241	18	2
												£152,198	10	5

A. E. HARTE, C.A. (S.A.), Chief Accountant.

Johannesburg,

24th April, 1931.

Br.

Redemption Fund Account for the Year ended 31st December, 1930

Cr.

in respect of £3,000,000 Treasury Loan (Loan No. 1) redeemable not later than the 31st December, 1954.

${ m To}$ Balance as per Balance Sheet		***	***				£184,918	4 8	By Amount transferred from "				of					
Witbank Undertaking	***	***	***	***	£154,520	0 6 1			Moneys Borrowed' a	t 1st	January,	1930	•••			£109,667	1	5
Durban Undertaking					20,32	7 16 9			Witbank Undertaking	•••	***	***	•••	£103,308	1 9			
Sabie Undertaking					10,070	1 11			Sabie Undertaking	•••		•••	•••	6,358 1	9 8			
									,, Amounts Contributed out of	Rever	nue			7.0		68,343	5	2
									Witbank Undertaking	•••	***	***	•••	45,091 1	1 4			
									Durban Undertaking			***		19,933 1	5 10			
									Sabie Undertaking		•••			3,317 1	8 0			
									" Interest Earned on Investme	nts				13	_	6,907	18	2
									Witbank Undertaking					6,120 1	3 0			
									Durban Undertaking					394	0 11			
									Sabie Undertaking			•••		393	4 3			
							Asserted a visitor care	- 100						18	_			_
							£184,918	4 9								£184,918	4	9

A. E. HARTE, C.A. (S.A.), Chief Accountant.

We certify that we are satisfied both as to the correctness of the Accounts and Books of the Redemption Fund and as to the Maintenance of the Fund at the amount required by the Schedule to the Electricity Act, 1922, as amended by Section 3 of the Financial Adjustments Act, 1930.

Johannesburg, 24th April, 1931.

ALEX. AIKEN & CARTER, B. HALSEY, Auditors.

Electricity Supply

Commission.

Br.

Reserve Fund Account for the Year ended 31st December, 1930.

Cr.

To Expenditure during the Year of	n Replacem	ents and E	Bettermen	ıt	£2,937 17 5	By Balance at 31st December, 192	9, brought	forward	•••		£145,517 19 3
Natal Central Undertaking			***	£538 8 3		Natal Central Undertaking .			***	£76,311 6 1	
Witbank Undertaking				1,970 18 0		Witbank Undertaking .			•••	45,157 13 11	
Capetown Undertaking			***	195 5 11		Capetown Undertaking .			•••	21,092 1 9	
Durban Undertaking				9 0 10		Sabie Undertaking				2,956 17 6	
Sabie Undertaking		•••		224 4 5							
,, Balance as per Balance Sheet				7	- 247,700 15 0	" Contributions during the Year a	s per Reve	enue Accoun	ts		94,964 7 4
Natal Central Undertaking			•••	121,600 15 8		Natal Central Undertaking .				40,831 9 1	
Witbank Undertaking		***	•••	70,818 2 2		Witbank Undertaking .				24,282 19 6	
Capetown Undertaking			•••	42,018 11 7		Capetown Undertaking .		•••	•••	19,649 18 9	
Durban Undertaking				9,163 9 8		Durban Undertaking .		•••		9,000 0 0	
Sabie Undertaking				4,099 15 11		Sabie Undertaking		1444	•••	1,200 0 0	
					-	" Other Contributions				3) 	1,006 11 4
						" Interest Earned on Investments					9,149 14 6
					£250,638 12 5						£250,638 12 5

NATAL CENTRAL UNDERTAKING.

-					
	a				
78	п	3	Г	٠	

Revenue Account for the Year ended 31st December, 1930.

Cr.

	Generation	of Elect	tricity.										
To Operation-							By Sales of Electricity-						
Fuel				£39,332 1 7			Traction Supplies					£280,292 2 2	
Water, Oil, Waste and Sto	res	***	•••	1,391 7 4			Bulk Supplies	•••	•••	•••	•••	29,508 16 3	
Salaries and Wages		***		15,227 8 2			Industrial Supplies		•••		•••	9,388 7 3	
Other Expenses				94 10 5			Domestic and Lighting	Supplies				1,917 10 9	FARESCONFIGURACIO ACADA - IN
" Maintenance—												8	£321,106 16 5
Stores		***		6,204 3 3			" Other Revenue	***	•••	***	***		3,551 14 8
Salaries and Wages		***		10,523 6 1									
Other Expenses				249 18 8									
					£73,022 15	6							
	Distribution	of Elec	tricity.										
" Operation and Maintenance-													
Stores				2,464 1 5									
Salaries and Wages				15,222 12 3									
Other Expenses				1,670 0 8									
VELEXIBLE CONTROL TO THE PROVIDENCE OF THE STREET					19,356 14	4							
	General	Expens	es.										
" Local Management and Gener	al Expenses			15,546 10 10									
., Head Office Administration ar				8,310 9 5									
" Engineering Expenses				4,194 14 11									
" • • •					28,051 15	2							
					120,431 5	_							
" Interest					162,327 13								
" Provision for Repayment of M					1,068 3								
"Reserve Fund	Dorre	,,,			40,831 9								
					Consumer van	_							
					£324,658 11	1							£324,658 11 1
						=							

A. E. HARTE, C.A. (S.A.), Chief Accountant.

Referred to in our Report of 23rd May, 1931.

WITBANK UNDERTAKING.

Revenue Account for the Year ended 31st December, 1930.

Cr.

AT LANGE TO THE ADMINISTRATION OF THE ADMINI	Genera	ation of	Electric	ity.													
To Operation—								B	y Sales of Electrici	ity—							
Fuel		•••	•••	•••	£59,115				Bulk Supplies			•••			£248,585 14 10		
Water, Oil, Waste and St	ores	***	***	***	5,200 1				Industrial and	Mining	Supplies				45,594 12 11		
Salaries and Wages	***	***	•••		21,161				Domestic and			•••			3,484 7 7		
Other Expenses	•••	•••	•••		1,203	6 0					190.				ACTIVATION IN LIEU	£297,664 15	4
,, Maintenance-								,	, Other Revenue	***						4,395 14	
Stores			***		7,060	3 6											
Salaries and Wages	•••	•••	***	•••	10,759 1	9 4											
Other Expenses		•••			3,393 1	5 9											
	Distrib	ution of	Electric	nitv		_	£107,894 15 4										
" Operation and Maintenance—		ation of	FIGURA	oity.													
Stores					1,075	0.10											
Salaries and Wages					3,242 1												
Other Expenses					2,457 1												
						_	6,775 7 7										
		neral E															
" Local Management and Gener					11,325	6 7											
,, Administration, Engineering operating party (The Vic	and G	Falle un	d Trans	8 Of													
Power Company, Limited)		***		***	6,563 1	2 3											
,, Head Office Administration an	d Gene	ral Expe	nses		3,862	9 1											
" Engineering Expenses	•••			***	1,949 1	1 11											
						_	23,700 19 10										
							138,371 2 9										
" Interest		***		***			94,063 16 4										
,, Redemption Fund							45,091 11 4										
,, Reserve Fund							24,282 19 6										
,, Balance, being Excess of Re-	venue o	ver Exp	enditure	for													
the year carried down		•••	•••				250 19 11										
							£302,060 9 10									£302,060 9	10
																	=
To Balance as per Balance Sheet			***	***			£7,897 19 0	By	y Balance at 31st I	December	, 1929, bro	ought f	orward			£7,646 19	1
								,,	, Balance, being E the year, brou	xcess of	Revenue	over E	xpenditur	e for		255 525	2.50
									the year, brou	ight dow	n	•••	***	::::		250 19	11
							£7,897 19 0									£7,897 19	0
																	=
								_									_

A. E. HARTE, C.A. (S.A.), Chief Accountant.

Referred to in our Report of 23rd May, 1931.

ALEX. AIKEN & CARTER, B. HALSEY,

Auditors.

CAPETOWN

UNDERTAKING.

Dr.		Re	venu	e Account f	or the	Yea	r	ended 31st December, 1930.	Cr	•
Gene	ration o	f Electrici	ty.					<u> </u>		
To Operation—								By Sales of Electricity—		
Fuel	***		***	£50,359 12 4				Traction Supplies £119,290 17 7		
Water, Oil, Waste and Stores	***		***	1,272 4 0				Bulk Supplies 20,260 12 9		
Salaries and Wages				8,755 12 4				Industrial Supplies 55,580 0 8		
Other Expenses				139 8 8				Domestic and Lighting Supplies 8,542 6 2		
,, Maintenance—									2203,623 17	1 :
Stores	***		***	2,332 3 2				,, Amount recovered from the South African Railways and Harbours Administration, being interest on Capital		
Salaries and Wages	***	0.0000	2007	6,506 15 6				rendered idle consequent upon the closing of the Sea		
Other Expenses	***	•••		371 5 0				Point Line	2,609	1 5
The state of the s					£69,737	1	0	, Other Revenue	2,226 19	
" Electricity Interchanged (balance)	***	***			171	2	1			
Distr	ribution	of Electric	ity.							
,, Operation and Maintenance-										
Stores	***	***	***	1,115 4 3						
Salaries and Wages				9,697 1 0						
Other Expenses				1,145 18 7	11,958	2 1	10			
	General	Expenses.		V	11,000		.0			
,, Local Management and General E	xpenses			13,980 12 10						
" Head Office Administration and Ge				6,908 4 0						
" Engineering Expenses				3,486 19 0						
,,					24,375	15	10			
					106,242	2	9			
,, Interest					80,627	18	8			
" Reserve Fund	***	***			19,649	18	9			
,, Balance, being Excess of Revenue the year, carried down	over F	Expenditure	for		1,940	3	5			
Strategy Str. 27 (1994-1992) or respond 300 May 24-2 Medically 27 (1) 50 (1)					£208,460	3	7	$\overline{\mathfrak{x}}$	208,460	1
To Balance at 31st December, 1929, 1	brought	forward			£1,166	3 11	2		4002° 00000	_
Balance as per Balance Sheet			•••		778	3 12		the year, brought down	£1,940 3	5

£1,940 3 5

A. E. HARTE, C.A. (S.A.), Chief Accountant.

ALEX. AIKEN & CARTER,

Referred to in our Report of 23rd May, 1931.

B. HALSEY.

Auditors.

Johannesburg, 24th April, 1931.

" Balance as per Balance Sheet ...

Electricity Supply

DURBAN

Commission. UNDERTAKING.

By Sales of Electricity-

Br.

Revenue Account for the Year ended 31st December, 1930.

Cr.

				Gene	ration o	f Electrici	ty.						
Γo	Operation-												
	Fuel				•••	•••		£47,846	4	3			
	Water, Oil,	Waste	and	Stores	•••		•••	1,359	5	3			
	Salaries and	Wage	8		•••	•••		11,535	14	2			
	Other Expen	ses		•••	•••	•••		480	1	3			
,,	Maintenance-												
	Stores				•••			3,185	12	6			
	Salaries and	Wage	S					6,266	11	10			
	Other Expen	ses	•••		•••	•••	***	769	19	0			
								_		_	£71,443	8	3
				0	eneral	Expenses.							
,,	Local Managem	ent an	d Ge	neral Exp	penses			6,619	19	5			
,,	Head Office Ad	minist	ration	and Ger	neral Ex	penses	•••	6,187	6	11			
,,	Engineering Ex	penses			•••			3,123	1	10			
										_	15,930	8	2
											87,373	16	5
	Interest										39,280	14	2
	Redemption Fur	nd									19,933	15	10
	Reserve Fund										9,000	0	0
.,	Balance, being	Exces	s of	Revenue	over E	penditure	for				90.000		
•	the year as	per Ba	lance	Sheet							1,337	3	0
											£156,925	- 549	

Congration of Electricity

Bulk Supplies		 	 	 	£156,640	6	10	
" Other Revenue	•••	 	 	 	285	2	7	

£156,925 9 5

A. E. HARTE, C.A. (S.A.), Chief Accountant.

Johannesburg,

24th April, 1931.

Referred to in our Report of 23rd May, 1931.

ALEX. AIKEN & CARTER, B. HALSEY,

Auditors.

By Sales of Electricity-

Mining Supplies

Domestic and Lighting Supplies

SABIE UNDERTAKING.

£1,776 8 4

511 4 7

1,906 13 3

£13,694 13 11

Revenue Account for the Year ended 31st December, 1930.

Ør.

£13,690 12 2

4 1 9

£13.684 17 10

...

...

5 14 4

Generation of Electricity. To Operation-Water, Oil, Waste and Stores £63 9 6 Salaries and Wages 1,227 6 3 ., Maintenance-377 2 5 Stores ... Salaries and Wages 99 19 0 Other Expenses 8 11 2

...

Distribution of Electricity. ,, Operation and Maintenance-

General Expenses.

Local Management and General Expenses 794 14 8 Head Office Administration and General Expenses 738 18 11 ... 372 19 8

4.194 6 2 4,982 9 9 Interest Redemption Fund 3.317 18 0 Reserve Fund 1,200 0 0

A. E. HARTE, C.A. (S.A.), Chief Accountant.

24th April, 1931.

Johannesburg.

89 12 3

405 7 8

16 4 8

"Balance, being Excess of Expenditure over Revenue for the year, as per Balance Sheet

£13,694 13 11

Referred to in our Report of 23rd May, 1931.

Auditors.

ALEX. AIKEN & CARTER, B. HALSEY,

Br.

Stores

Salaries and Wages

Other Expenses

Engineering Expenses

ANNEXURE "B": TARIFFS.

EMBODYING-

The standard prices in force in respect of the Commission's several Undertakings.

ANNEXURE "B": TARIFFS.

The standard prices in force on the Commission's several Undertakings are subjoined. These prices and the conditions attaching thereto are more fully set out in the Licences and Permit granted to the Commission by the Electricity Control Board, and are subject to alteration in terms of the Electricity Act, 1922.

Generally speaking, the standard prices are applicable to the supply of three-phase alternating current at standard pressures to consumers whose notified maximum demand is not less than 50 kilovolt amperes, and are subject to variation, in terms of Section 26 of the Electricity Act, 1922, having regard to the situation, extent and conditions of load.

NATAL CENTRAL UNDERTAKING.

- (a) A charge of £25 per annum, plus
- (b) a charge of 8s. 4d. for each kilovolt ampere of the maximum demand supplied in each month, plus
- (c) a charge of 0.3d. for the first million units supplied in each year, a charge of 0.2d. for the next two million units supplied in each year, a charge of 0.15d. for all additional units supplied in each year.

WITBANK UNDERTAKING.

- (a) A charge of £25 per annum, plus
- (b) a charge of 8s. 4d. for each kilovolt ampere of the maximum demand supplied in each month, plus
- (c) a charge of 0.045d. for each unit supplied.

CAPETOWN UNDERTAKING.

- (1) In respect of generation:
 - (a) a charge of £25 per annum, plus
 - (b) a charge of £4 10s. for each kilovolt ampere of the maximum demand supplied in each year, plus
 - (c) a charge of 0.3d. for each unit supplied, plus
- (2) In respect of distribution:
 - (d) a charge to cover the costs of distribution, such charge being subject to the approval of the Electricity Control Board.

DURBAN UNDERTAKING.

- (a) A charge of £5 8s. for each kilowatt of the maximum demand supplied in each year, plus
- (b) a charge of 0.2d. for each unit supplied.

SABIE UNDERTAKING.

By arrangement with the consumers, the total production costs of this Undertaking are apportioned between consumers in proportion to the number of units supplied to each consumer month by month, the average cost during 1930 being 0.717d. per unit.

ANNEXURE "C."

EMBODYING-

Statement No.

- 1. Summary of principal plant and equipment installed as at 31st December, 1930.
- 2. Summary of principal plant and equipment in course of installation or on order at 31st December, 1930.
- 3. Statement showing the price or rent of any land or rights or interest in or over land or any other property acquired or hired by the Commission.

STATEMENT No. 1.

Summary of principal plant and equipment installed at the Commission's several Undertakings as at 31st December, 1930:—

GENERATING PLANT.

No. of Sets.		Capacity each, Kilowatts.		Total Capaci Kilowatts.	
5	•••	20,000		100,000	
7	• • •	12,000		84,000	
3		10,000	•••	30,000	
2		6,000	***	12,000	
1		1,000		1,000	(House Turbine)
3		450		1,350	
1		300	•••	300	(House Turbine)
Total 22				228,650	
=					
		BOILER DI.	A NITT		

BOILER PLANT.

			Capacity	in lbs. of steam (normal rating)	
No. o	f Boilers.		Each.		Total.
	16	•••	70,000	***	1,120,000
	20	• • •	60,000		1,200,000
Total	36				2,320,000
	_				

TRANSMISSION LINES AND CABLES.

				,	6,600, 3,30 and	00	
	88,000 volts. Route Miles.	33,000 volts. Route Miles.	21,000 volts. Route Miles.	12,000 volts. Route Miles.	2,200 volts. Route Miles.	380/220 volts. Route Miles.	Total Route Miles.
Overhead Lines .	275	171	74	-	12	58	590
Cables	_	30	10	8	7	1	56
Total	275	201	84	8	19	59	646

TRANSFORMERS.

(Step-up and Step-down.)

Kilovolt Amperes.

Total capacity installed

. 370,851

CONVERTING SUB-STATIONS.

Motor	GENERA	TOR SETS.	ROTA	RY CON	VERTERS.		TOTALS	
No. of Sub- Stations. 12	No. of Sets. 22	Rating Kilowatts. 44,000	No. of Sub- Stations. 5	No. of Sets.	Rating Kilowatts. 20,000	No. of Sub- Stations. 17	No. of Sets.	Rating Kilowatts. 64,000

Note.—Two rotary converters removed from Three Anchor Bay Sub-station, following the closing down of the Sea Point Line, are stored and are not included in this figure.

STAFF QUARTERS.

Married Staff Quarters	 	Brick Buildings. 81	Wood and Iron Buildings. 16	Total.
Single Staff Quarters	 	9	1	10
Total	 	90	17	107

STATEMENT No. 2.

Summary of principal plant and equipment in course of installation or on order as at 31st December, 1930:—

GENERATING PLANT.

No. of Sets.	Capacity each, Kilowatts.	Total Capacity, Kilowatts.
1	 12,000	 12,000

BOILER PLANT.

	Capacity	(normal		nour
No. of Boilers.	Each.	(HOLIHAL	raumg).	Total.
2	 120,000		2	240,000

TRANSMISSION LINE AND CABLES.

			33,000 volts. Route Miles.	380/220 volts. Route Miles.		Total Route Miles.
Overhead 1	Lines		 31	 1	•••	32
Cables	•••	•••	 _	 _	•••	_
Total			 31	 1	•••	32

TRANSFORMERS

(Step-up and Step-down).

Kilovolt Amperes.

Total capacity in course of installation or on order

900

STATEMENT SHOWING THE PRICE OR RENT OF ANY LAND OR RIGHTS OR INTERESTS IN OR OVER LAND OR ANY OTHER PROPERTY ACQUIRED OR HIRED BY THE COMMISSION AT 31st DECEMBER, 1930.

	Area. ioda. Pe	rches.	Farm or Lot.	District.	Title.	Purchase Price or Regial,	Acquired From.	Purpose for Which Regained.
		. 1		NATAL B	Water Rights (Tugela River)	ING.		í.
231	4		Town Lands. Colonor Tagela Drift, No. 102 Laboushager's Kraal, No. 229, Lot K. 9, Colonos M.G.K. 1 of Econom. No. 201 Portion St Economic, No. 28, 201 No. 28, 201 Town Lards Ladramith	Weenen	Water Rights (Tignia River)	£1,465 13 T	Government of the	Power Station and Site, Coleano.
1	-	,	Let E. T. Colense M.G.E. 1 of Ecococu.	Klip River	Freehold	W 10 4	Government of the Union of South Africa.	
-	_	19	Portion Ed Ecserses, No. 3212 N.O.B. 1 Kleinfontein,	Klip River	Freebold Freebold	25 0 0 10 11 10	H. F. W. Schroeder	Sub-station Sites, Glencoe. Sub-station Site, Wessels Nek.
1	1	20	N.O.B. J Kneisbontein. Town 160. Dispressible Frere Township of Piesen Lalger. N.O.B. 5 and 6. Town Langer, Retwort Langership, No. 177 Editorial Control of Cont	Klip Eiver Weenen	Prechold Prechold	100 g g		Sub-station Site, Daimana, Sub-station Site, Prevs.
1	1	15	No. 1301 N.G.E. 5 and 6. Town Lands, Estrouri	Weenen	Freehold			Sub-mation-filts, Estoport.
1	1	H	Welterreden, No. 1961 Langewarlst, No. 2168 Grantleigh, No. 2177	Weenen Weenen	Freehold Freehold	17 17 5 49 6 10		Sub-station Site, Willbrook. Sub-station Site, New Leigh.
3	1	37 38	Gowyie, No. 1901 Bietwallet, No. 1206 Driefostein No. 202	Pletermaritaburg Pletermaritaburg Pietermaritaburg	Freshold Freshold	27 7 5 200 0 0 10 18 9	Government of Union of South Africa	Sub-station Site, Notificial Road. Sub-station Site, Litzetton.
1	1	5	Ordonoce Land.	Pietermaritabung	Freehold Lease in Persetuity Freehold	10.16.4		Hob-station Site, Pietermariteburg.
-	1	16	S.A.B.I Ordranes Land No. 586	Pietermaritaburg	Freshold Lease of Rights-of-Way in Perpetaity	m 0 0		Sub-station Attendant's Honse. Electric Power Lines, including \$6,00
				Fietermaritaburg	Servinds of Night of Way in		Ratton & King	Electric Power Lines, including 800 rolt Overhead Transmission Line between Glenooe and Pistermarit burg. Power Conductors.
			Gowris. 1938 Esmaioder I. Driefentein. No. 822 Schodivision J.F. II. Driefentein. No. 822 Schodivision J. St. Driefentein. No. 822 Schodivision. J. St. Driefentein. No. 822 Schodivision. J. G. II. Walter II. Schodivision. J. G. II. Walter III. J. More II. J. More III. J. More II. J. More	Pietermaritaburg	Bertilade of Richted-Way is foresting of Belleville Way in foresting of Belleville Way in foresting of Belleville Way in foresting with the Belleville Way in foresting by the Belleville Way in foresting of Belleville Way in foresting way in the Belleville	17 6 6	F. W. Knapp	Power Conductors.
			Sub-division J.P. I Driefontess, No. 952 Subdivision J.	Pietermaritaburg Pietermaritaburg	Servitude of Right-of-Way in Perpetuity Servitude of Right-of-Way in		J. F. Franklin K. R. North	Power Conductors.
		- 1	Bubdivision A of B Waterfall	Pietermariteburg Pietermariteburg	Servitude of Hight-of-Way in Perpetuity Servitude of Hight-of-Way in		T. S. Mason B. A. Lindsay	Power Conductors. Power Conductors.
			Waterfall Benainder A Waterfall	Pietermaritaburg	Perpetuity Servitude of Hight-of-Way in Perpetuity		D. W. Geckie	Power Conductors.
			Lot 1, Block D Merrivale Bemainder Town	Pietermaritaburg Pietermaritaburg	Servitude of Right-of-Way in Perpetuity Servitude of Right-of-Way in		W. H. Squires Howick Local Board	Power Conductors. Power Conductors.
			Lands of Hawick Subdivision 3 of H Marrivale	Pietermaritaburg Klip River	Servitude of Right-of-Way in Perpetuity Servitude of Birbt-of-Way in	7.8.6	J. P. Irvine H. F. W. Schroeder	Power Conductors. Power Conductors.
				Klip River	Berviumle of Right-of-Way in Fermetarity Barvitade of Right-of-Way in Servitade of Right-of-Way in Fermetarity Bervitade of Right-of-Way in Fermetarity Berviumle of Right-of-Way in Fermetarity Bervitade of Right-of-Way in Fermetarity Bervitade of Right-of-Way in Fermetarity Bervitade of Right-of-Way in Fermetarity		De Beers Consolidated Mines, Limited H. F. W. Frehling	Power Conductors.
			Subdivision A. Henning	Klip River Klip River	Servitude of Right-of-Way in Perpetuity Servitude of Right-of-Way in	25 5 0 12 15 0	F. W. C. Dammann	Power Conductors. Power Conductors.
		- 1	Semainder Spiesdale, Na. 2011 Spiesdale, Na. 2011 Spiesdale, Na. 2018 Spiesdale, Na. 2018 Spiesdale, April B Cornwall Booky Spiesdale Spiesdale, Spiesdale Sp	Klip River	Perpetuity Servitude of Right-of-Way in Perpetuity	18 18 · 6 · 1	B. J. Marshall G. F. Davel	Power Conductors.
		- 1	Subdivision A Cardwell, No. 4343 Subdivision A and B	Klip River	Bervitude of Right-of-Way in		The Durian Navigation Colliertes, Limited F. A. Fouris	Power Confisctors.
			Booky Dale, Davel's Spruit	Klip River Klip River	Servitude of Right-of-Way in Perpetuity	34 15 e	F. A. Fourie	Power Conductors. Power Conductors.
		- 1	Keoje Alleen Sabdivision A	Klip River	Perpetuity Servitude of Right-of-Way in	28 29 - 6	E. Oldacre	Power Conductors
		- 1	Lot 5, Gardens	Klip River	Servitude of Right-of-Way in Perpetuity Servitude of Right-of-Way in	3 5 0 24 20 0	J. Radebe The Melrose Trust,	Power Confectors.
			Leicester, No. 2012 Remainder Eitharchan, No. 2002	Klip River	Bervissde of Richted Way in Servissde Syrachy of Way in Servissde Syrachy of Way in Servissde Syrachy of Way in Servissde of Richted Way in Servissde Syrachy of Way in Servissde Syrachy Way in Servissde Syrachy Way in Servissde of Richted Way in Servissde Servissd	20 1 1	The Melrose Trust, Limited 2. G. Bester	Power Conductors.
			Subdivision A Kilbarchan, No. Bes Tiger Kloof	Klip River	Perpetuity	57 * *	W. P. J. Advanderif J. J. Marita	Power Conductors.
			Remainder Tiger Kloof Subdivisions A and B	Klip River Klip River	Enrylade of Right of War in Perpetuity berritade of Right of War in Perpetuity Bereitade of Right of War in Perpetuity	***	F. J. Marita	Power Conductors. Power Conductors.
			Leicenter, No. 200 Leicenter, No	Weenen	Bereitade of Right-of-Way in Perpetalty	30 0 0	Moci River Township Board	Rosdway and Underground Cable.
			447077760		enotional C		Hilldrop Estates (Proprietary), Limited Meel Eiver Township Board V. E. Lawrence W. F. Henderson Geovernment of the Union of South Africa	1
	Sq.	Sq. Feel,			WITBANK UNDERTAKING	3.	, case of sector arrive	
er er es	Hoods. H		Province, E. Withharh. Portines, S. & and T.	TRANSVAAL	Quitreet, excluding all Rights	#11 15 B		Power Station Site, Withank.
	226	1	Portion A Withank No. 41 Joshertsrust, No. 16.		12-C 1817 722	Territoria.	Withank Colliery, Ltd.	Sub-station and Office Sites.
11.	290		Withank No. 61 Urtspan No. 23 Bleshoklaagte No. 29	Withenk	Servitedes and Rights of Way in Perpetuity		J	Railway Sidings and Loops, Or Drains, Power Conductors, Ber voir and Access.
48.7	-90		Portion 83 and 83 Decempoort No. 58 Portion 8.1	Withank	Servitudes in Perpetuity Servitude of Storage in Perpetuity	1.00	Transveni and Delagoa. Bay livestment Co., Ltd.	Dum, Gauging Weir and Works. Submerged Ground.
			Description No. 28 Blastoklaugte No. 29	Withauk	Servitudes of Bight-of-Way in)	Co. Ltd.	Power Conductors.
7	505	-	Portion 8.1 of Portion A	Withank	Servitudes of Storage in Perpetuity	100 0 0	J. P. Revnike	Submerged Ground.
			Portion A Zeckowater No. 14	Withank		300 0 0	I. P. Beyneke	2000 100 200 200 200 200 200 200 200 200
			Zeckorwater No. 14 Portion B Zeckorwater No. 14	Withouk	Servitades of Right-of-Way in Perpetitly. Servitade of Eight-of-Way in Servitade of Eight-of-Way in Perpetitly. Servitades of Right-of-Way in Perpetitly.	600 11 1	P. J. D. Steenkamp	Power Conductors and Pipeline.
		- 1	Klipfontein No. 68 Elesbeklangte No. 29	Withank	Servicede of Eight-of-Way in Persentity Servicedes of Right-of-Way in		B.A. Coal Estates (Withank), Ltd. M. C. Pretorius	Railway Siding and Loop. Underground Cables.
		- 1	Biesboklangte No. 29 Bianwkraza No. 62	Without	Reservitates, of "Reserve Way in Secretarians, and "Reserve Way in Secretarians, and "Reserve Way in Secretarians, and "Reservitates, and "Reserve Way in Secretarians, and "Res	367.0.0	Withank Municipality P. J. de Wet	Underground Cable. Power Conductors.
		- 1	Portion B of Portion D	Withank	Perpetuity Servitude of Hight-of-Way in Persentity	29 0 0	M. A. Brecht	Power Conductors.
			Pertion B of Portion B Nontheelasht No. 12 Perison C of Perison B Nontheelasht No. 12 Portion A Nontheelasht No. 12 Bartebessingroit No. 9	Without	Servitude of Eight of Way in Perpecuity Servitude of Eight of Way in	25.0.0	F. F. Rous J. C. O. Ferestoan	Power Conductors.
			Noestgedacht No. 12 Hartsbessisproit No. 9	Withmak	Servitude of Right-of-Way in Perpetuity	0.1.1	M. Scher Douglas Colliery, Ltd.	Power Conductors.
		- 1	Lecurpoort No. II Greenfunisin No. II	Withouk	Servitude of Eight-of-Way in Perpetuity Servitude of Eight-of-Way in	12 5 0	I. P. du Presa	Power Conductors.
			Visklangte No. 71	Withank Withank	Berritude of Bight of Way in Perpetuity	97 30 0 33 W 0	J. T. du Press J. C. Joubert	Power Conductors. Power Conductors.
			Portion D Elumbarrait No. 107 Schoongesicht No. 13	Witbank	Servitude of Right-of-Way in		Schoongezicht Collieries (Withank), Ltd. U. H. M. Joubert	Power Conductors.
			Portion A Handsprait No. 100	Middelburg Middelburg	Bervitade of Richied Way in Personally Bervitade of Richied Way in Perpetuity	38 8 8	C. E. M. Joubert H. S. J. Prinsten	Power Conductors. Power Conductors.
			Elandarruit No. 507 Remainder Portion B Elandsprait No. 507	Middelburg	Perpetuity Servicede of Right-of-Way in Perpetuity		M. M. Roos G. P. Jacobe	Power Conductors.
			Schemenschik No. 13 Persink A. 50 Handspreiß No. 51 Handspreiß No. 51 Handspreiß No. 51 Handspreiß No. 51 Handspreiß No. 50 Handspreiß No.	Withank	Hervitude of Richied Way in Percetainy Berritade of Highlod-Way in Percetainy Servitude of Rightod-Way in Percetainy Servitude of Righted-Way in Percetainy Servitude of Righted-Way in Percetainy Servitude of Righted-Way	75 0 0	B. C. Uyu	Power Conductors.
			Portion C Grossfontein No. 13	Withonk	Servitude of Right of Way in Perpetuity	50 0 4 500 0 0	J. S. de Wet. B. J. Prinsiso	Power Conductors.
			Ongiesfontein No. 15 Esmainter Portion F	Withank	For 10 years Servitede of Right-of-Way	556 0 0	A. H. B. Prinslee	Power Conflactors.
			Remainder Bunkfortein No. 66	Withork	Ferritads of Hight of Way for 10 years	25 0 0	P. P. Roets P. C. van Wijk	Power Conductors. Power Conductors.
			Elipfonters No. 17 Porties B	Middelburg	Bervitude VI over in Servitude VI over in Servitude of Right-of Way for 10 very for 10 ver		J. J. Scheepers T. C. Scheepers C. J. C. Prinsless	Power Conductors.
			Perties A Elanderruit No. 507	Middelbarg	Rerritude of Right-of-Way in Perpetality			Power Conductors. Power Conductors.
			Portion A Signature of the Control o	Withank	Permetalty Servitude of Right-of-Way for 13 years	110 8 8	T. W. Beckett & Ch., Ltd. R. Inserow J. Inserow P. M. Jacobs	Power Conductors.
			Bankfortein No. 66	Withork	Servitude of Eight-of-Way for 10 years Servitude of Eight-of-Way	25 0 0 90 0 0	W. F. Bezoidenhout	Power Conductors.
			Portion F Klipfordein No. If Portion F Gogiesfootsin No. 85	Withank	Herricole of Right-d-Way in Perpulsity Bervice of Right-d-Way in Service of Right-d-Way for 10 wars Bervice of Right-d-Way Bervice of Right-d-Way for 10 wars Bervice of Right-d-Way For 10 wars Bervice of Right-d-Way in Puryscanty		North Cogies (Withink Collissies, Limited	Power Conductors.
			1 2022	CAPE Paarden Island Sala River Month	CAPETOWN UNDERTAKEN		Corporation	Ř
1	310 383 477 274	105 52 37	Lot P.12 Lot Super Power Station Lot A	Salt River Morth Hugueoot Diep Biver	Freshold Government Grant Freshold Freshold	A15.567 2 2 100 0 0 250 0 0 250 0 0	Corporation Gevernment of Union of South Africa P. Godberg C. D. B. Stiles E. C. Edwards J. L. Barkeley	Power Station Site, Cape Town. Sub-station Site. Sub-station Site.
	477 274 76 8 361 90 136	120 120 120 140 163 25	Let 3B Let C	Bugueteq Due: Elver Eclaville Bonds Visi Eclaville Glencaien Maisenberg	Freehold Freehold Freehold Government Grant	258 0 0 258 0 0 390 0 0 60 0 0 75 0 0 25 0 0	J. L. Barkeley	
			RB of Lot Railway B	II.	Government Grant Government Grant Government Grant			Sub-station Site. Nub-station Site.
Ξ	8	133	Lot MC. Part of BY Lot ESC. Bromwell Estate	Woodsteek	Freebold	200 1 1	Government of the Union of South Africa.	Bull-station Site.
70	135	7	Let S.A.B. & H. Let ESC, Errste Errer	Stellenbosch Stellenbosch	Freehold Freehold Servitude of Right-of-Way in	165 0 0 50 0 0		Inspector's Residence. Power Conductors.
-	88	41	Contergo LOT ELEC. Part of	Wellington	Freshold Servitude of Eighbod-Way in Preshold	20 1 1	H. & J. Roup Jayce & McGregor	Sub-station Site.
	34	334	Lot to Goodwood Estate	Goodwood Parow	Freehold Freehold	230 8 8 200 8 8		
1111	26 20 20 204	115 53 111	Lot ESS, Calcfale Lot TH Lot EC. Portion	Parow Bellville Kuile River Paari	Freehold Freehold Freehold Freehold	200 0 0 95 0 0 50 0 0 15 0 0	W. H. Smith A. Cosurnad J. B. Norden J. A. Ward	Sub-station Site. Sub-station Site. Sub-station Site. Lineuman's Cottage.
	48	90	Greenfontein Let II and 14 of Lot A Boodebloem Estate	Weodstock	Freehold Freehold	275 9 0 500 0 8	T. N. Hoberts P. A. Molteno	Inspector's Besidence. Inspector's Basidence.
~	77	313	Let II. Clarement Estate Let G.M.L. Rusten-	Paarl	Servitode of Right-of-Way in Persentile	#1 per annum	O. J. Hogo	Power Conductors.
			Bit of Leg Bit of Leg Lot SEC, Part of SY Lot SEC, Lot SEC, Lot SEC, Lot SEC, Lot SEC, Lot SEC, Lot SEC, Lot SEC, Challes Lot SEC, Lot SEC, Lot SEC, Lot SEC,	Pauri Pauri	Berwitade of Hight-of-Wag in Percentually Servitude of Fernander of Percentual Percentual of Hight-of-Wag in Percentual of Hight-of-Wag in Percentual of High-of-Wag in Percentual of High-of-Wag in	Al per amoun	J. D. Huge B. W. Boyen	Power Confluctors. Power Conductors.
			Lot E. Zandgat	Paul.	Perpetuity Servitude of Eight-of-Way in Perpetuity	At per annum	Village Management Board of Gien Lily, Fairfield and Parow D. J. van Niekerk	Power Confinitors,
			Portion B of Lot C. Josephenberg's Viakte New Lovenstein	Paari	Servicude of Right-of-Way in Perpetuity	Al per annum	Pairfield and Parow D. J. van Niekerk J. A. Duminy	Power Confluctors.
			Keelambof	Ballville Stellenboech	Servitude of Bight of Way in Perpetuny Servitude of Eight of Way in Perpetuny Servitude of Eight of Way in Perpetuny Servitude of Eight of Way in	83 per annum	J. A. Duminy Koeleshof Brick and Tile Co., Ltd. P. P. H. Kannemerer	
			Lot 11. Exvenue orth Eptate Let B. Esnagerind	Claremont	Servitude of Right-of-War in Perpetuity	20 4 5	P. P. H. Kannemerer J. Tohin	Power Conductors. Power Conductors.
				Kliphravel Riellesionsh	Servicede of Eight-of-Way in Perpetuity Servicede of Eight-of-Way in	1 9 4 #1 per annum	J. Tohin Brackenfell Small Farms. Lot. A. J. van Niekerk	Power Conductors.
			"Het Kruispad" Let H Brackenfell Mossibank	Bellville	Servitode of Eight-of-Way in Perpetuity	B + +	A. J. van Niekerk M. B. Urtel	Power Conductors. Power Conductors.
			Let A Koelenhof "De Hoop," Koelenhof	Stellenboech Stellenboech	Perpetuity Servitude of Bight of Way in	22 0 0	M. C. Urtel	Power Conductors.
			Describers Resembers	Malmesbury	Servitude of Eight-of-Way in Servitude Service of Way in Servitude of Eight-of-Way in	20 0 0 20 0 0	P. E. de Keck P. J. van der Westhuir	Power Conductors.
			Klipheurel	Malmebury	Perpetuity Servitude of Eight-of-Way in Perpetuity	20 15 0	Wireless Telegraph Company of	Power Conductors.
			Vryheid De Klipheavel Kletavallei	Malmebury	Servitude of Right-of-Way in Perpetuity	25.00	8. Miller 2. Ahrahamete	Power Conflactors.
			Kietavallet Kieloplaate	Stellenbosch Koeberg	Berviteds of Eight-d-Way in Percentally Serviteds of Eight-d-Way in Berviteds of Eight-d-Way in Berviteds of Eight-d-Way in Percentally Serviteds of Eight-d-Way in Percental	25 0 0 30 0 0	Wireless Telegraph Company of Booth Africa, Limites 5. Miller J. Abrahamson Van Barr Brothers W. E. Gabrieles L. F. van der Spill	Power Conductors. Power Conductors.
			Kieleplaats Econgestind Lote 1, 2 and 5 Torff Hall Estate	Charement		38 0 0	F. F. W. Saunders	Power Conductors
	Arya		1	1	DURBAN UNDERTAKI	NG.	Ÿ.	î.
nee.	Roods.	Perches	Lot C.I. Crown Lands, Bay Fuseshors, No. Mb Lot Power Station, Purple Station, Purple Station, Purple Station, Purple Sealing Pile. Sealing Pile. Sealing Pile. Sealing Pile. Sealing Pile. Ad and B.I. Bay Foreshore, No. 3256 Let His Work Statia and Buildings thereon	Durban	Frechold	#27,841 N G	200000000000000000000000000000000000000	Power Station site, Congella.
-		11	Pumb Site of Durhan Bay	Darten	Freshold	1,000 6 6 36 6 6	Operament of the Union of South Africa.	Fump House Site.
-	-	29	Sealing Pit of Durban Bay Remainder Lot A.I. A.2.	Durban Durban	Precioid Servitudes of Right-of-Way in Perpetuity	Al lie, per annus		Pipe Lines and Power Conducte
-	_	п	Foreshore, No. 5356 Lee 131 Block Stella.	Dorban	Perpetuity Prechold	2,200 0 0	E. Meyer	Power Station Superintendent's House.
			and mondings thereon	A	SABIE UNDERTAKING	<u>.</u>	,	18
ergun.	Rooks.	Sq. Feet.	Bergyliet No. 37	THANSVAAL.	Water Rights (Sabie River)		Government of the	Hydro-electric Power Station Sable.
			Bergyliet No. 33 Trecormath No. 332 Grootfontein No. 29 Electiontein No. 44 Sheba No. 335 Bergyliet No. 381	Pilgrims Rest.	Surface Right Permits	1	Government of the Union of South Africa.	Power Conductors, Hubstatios and Roadwaya, Dam, Water Race, Pipeline, Station and Auxiliary Works
			Bergylist, No. 201	Pilgrime Beet	Servitedes of Abutment, Aqueduct, Storage, and Rights-of-Way	A500 0 0	S. H. Cortane	Statten and Auxiliary Works

ANNEXURE "D."

EMBODYING-

Statistics relating to the production and supply of electricity in the Union of South Africa.

STATISTICS RELATING TO THE PRODUCTION AND SUPPLY OF ELECTRICITY IN THE UNION OF SOUTH AFRICA.

Extracted from the 1928/29 Industrial Census and Published by courtesy of the Department of Census and Statistics.

UNITS GENERATED.

Provin	ice.		Local Authorities.	Other Producers.	Total.
Cape		•••	 109,599,720	59,728,543	169,328,263
Transvaal		•••	 121,417,735	1,698,885,378	1,820,303,113
O.F.S.		•••	 16,117,776	22,484,678	38,602,454
Natal		•••	 89,712,098	182,463,709	272,175,807
Totals			 336,847,329	1,963,562,308	2,300,409,637

CONSUMERS AND SALES.

	Province.							
	Cape.	Transvaal.	O.F.S.	Natal.	Total.			
Total No. of Consumers	65,036	68,018	9,661	27,800	170,515			
Total Units consumed	142,091,070	1,583,552,177	36,210,572	228,366,667	1,990,220,486			
Domestic Consumers	60,608	60,646	8,712	26,091	156,057			
Units sold to Domestic Consumers	31,421,668	47,679,726	4,870,104	35,275,107	119,246,605			
Average Units sold per Domestic Consumer	518	786	559	1,352	764			

INSTALLED CAPACITY OF PLANTS.

		(Japaci	ty.					No. of Power Stations.	Total Installed Capacity. Kilowatts.
50,000	kw.	and	over		•••	•••			 4	232,700
20,000	kw.	and	over	and	below	50,000	kw.		 9	259,600
10,000	kw.	and	over	and	below	20,000	kw.		 3	40,000
5,000	kw.	and	over	and	below	10,000	kw.	• • •	 4	27,050
1,000	kw.	and	over	and	below	5,000	kw.		 27	48,380
Below	1,00	0 kw			•••	•••			 157	33,663
		To	tal	• • • •		•••		•••	 204	641,393

SIZE AND TYPE OF GENERATING UNITS.

of

Size of Sets.		Steam Turbines.	Steam Reciprocating Engines.	Oil Engines.	Gas Engines.	Water Wheels and Turbines.	Total No. Sets.
(1) AC Plants:							
Below 250 kw			68	9	23	16	116
250 kw. and over.	but					105	
below 1,000 kw.		13	50		_	8	71
1,000 kw. and over,	but						
below 10,000 kw.	•••	53	4		_	1. —	57
10,000 kw. and over	***	45			<u></u>	_	45
(2) DC Plants:							
Below 250 kw		2	103	83	57	11	250
250 kw. and over,	but						
below 1,000 kw.	•••	3	29	-	-	1	33
1,000 kw. and over		_	. 2				2
		FU	EL CONST			2221 10	
Type of Fuel.				ntity ,000 lbs.)		\mathcal{L}	
Coal				43,780		1,184,6	48
Other Fuel		1222		2,063		68,7	
Average Coal Con Under 2 lb 2 lbs. and 3 lbs. and 4 lbs. and	os. over, l over,	 but unde but unde	r 3 lbs	*** *		of Undertakin 9 18 12 22	gs.
6 lbs. and	over,	but unde	r 8 lbs			14	
8 lbs. and	over	•••				63	
TRA	ANSM	ISSION	AND DIS	TRIBU	TION L	INES.	
Creatorn			0	b 3 T :		te Miles.	m-4-1
System. D.C.—All vol:	tages			verhead Li 908		Sables. 673	Total. 1,581
A.C.—Below				2,107		,156	3,263
		11,000 7		375	-,	849	1,224
		volts		1,253		110	1,363
				1	9	150 moti	145123
				4,643		,788	7,431
			DANGHODA	(T) C			
Total installed	l capa		RANSFORM	MERS.	1	1,592,006 K	C.V.A.
Total number industry Total salaries	(gener	ration an	d distributi	on)		8,597 1,250,851	

MEMBERS OF THE

Electricity Supply Commission.

DR. HENDRIK JOHANNES VAN DER BIJL (Chairman).

ALBERT MICHAEL JACOBS.

KARL GUNDELFINGER.

GEORGE GOODBAN ELLIOTT.

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Annexure "B"-Tariffs.

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