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Electricity generated and available for distribution (Preliminary)

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email: info@statssa.gov.za
www.statssa.gov.za

170 Andries Street • Private Bag X44, 0001 Pretoria, South Africa
Tel: +27(12) 310 8911, Fax: +27(12) 321 7381

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SUMMARY OF FINDINGS: ELECTRICITY GENERATED AND AVAILABLE FOR DISTRIBUTION (JANUARY 2010)

Key figures

Table A – Selected key figures regarding electricity generated and available for distribution for January 2010

Actual estimates	January 2010 1/	% change between January 2009 and January 2010	% change between November 2008 to January 2009 and November 2009 to January 2010
Electricity available for distribution (Gigawatt-hours)	19 399	8,3	6,3
Index of the physical volume of electricity production (2005=100)	103,4	8,9	5,6

1/ Preliminary.

Seasonally adjusted estimates	January 2010	% change between December 2009 and January 2010	% change between August to October 2009 and November 2009 to January 2010
Electricity available for distribution (Gigawatt-hours)	19 802	0,5	1,1
Index of the physical volume of electricity production (2005=100)	105,9	1,2	0,7

Key findings

Consumption of electricity

The actual estimated volume of electricity consumed in January 2010 increased by 8,3% (1 480 Gigawatt-hours) compared with January 2009 (see Tables A, 2 and 9). Electricity consumption for the three months ended January 2010 increased by 6,3% (3 398 Gigawatt-hours) compared with the three months ended January 2009 (see Tables A and C). Electricity consumption, after seasonal adjustment, for the three months ended January 2010 increased by 1,1% compared with the three months ended October 2009 (see Tables A and B).

Production of electricity

The actual estimated production of electricity in January 2010 increased by 8,9% (1 718 Gigawatt-hours) compared with January 2009 (see Tables A, 5 and 9). The estimated production of electricity for the three months ended January 2010 increased by 5,6% (3 318 Gigawatt-hours) compared with the three months ended January 2009 (see Tables A and C). Electricity production, after seasonal adjustment, for the three months ended January 2010 increased by 0,7% compared with the three months ended October 2009 (see Tables A and B).

Electricity delivered by Eskom to the provinces

Electricity delivered to the provinces for January 2010 increased by 9,9% (1 639 Gigawatt-hours) compared with January 2009. Increases were reported for eight provinces in January 2010 ranging from 0,4% for Free State to 25,6% for Mpumalanga. Northern Cape was the only province with a decrease (-1,0% or -4 Gigawatt-hours) in January 2010 (see Table 10).

International trade in electricity

The volume of electricity purchased from outside South African borders increased from 1 102 Gigawatt-hours in January 2009 to 1 122 Gigawatt-hours in January 2010, representing an increase of 1,8% (20 Gigawatt-hours). The volume of electricity sold to neighbouring countries in January 2010 increased by 11,0% (121 Gigawatt-hours) compared with January 2009 (see Table 9).

Table B – Comparison of the seasonally adjusted volume of electricity generated and available for distribution between the quarter ended January 2010 and the previous quarter

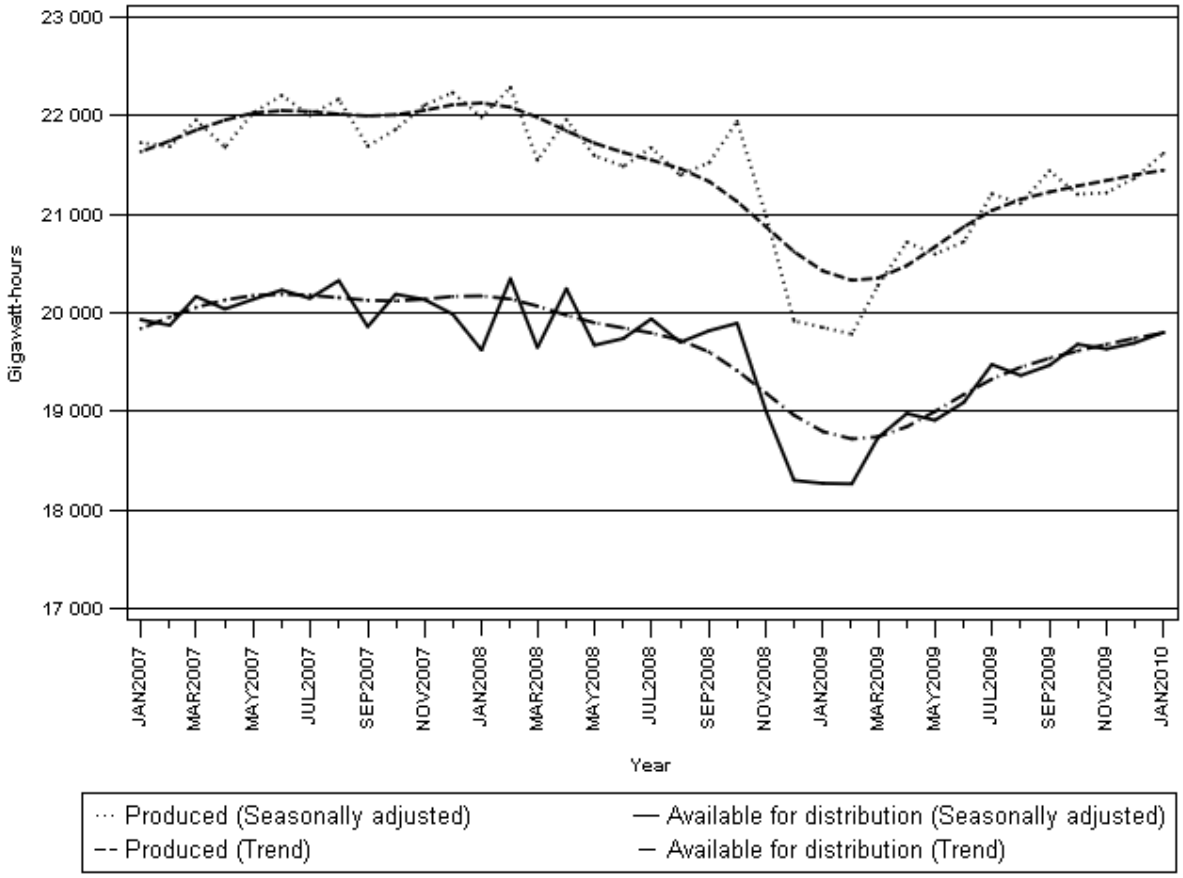
Gigawatt-hours	Seasonally adjusted quantity August to October 2009	Seasonally adjusted quantity November 2009 to January 2010	% change between August to October 2009 and November 2009 to January 2010	Quantity difference between August to October 2009 and November 2009 to January 2010
Electricity produced	63 754	64 204	0,7	450
Electricity available for distribution in South Africa	58 512	59 129	1,1	617

Table C – Comparison of actual estimates between the quarter ended January 2010 and the quarter ended January 2009

Gigawatt-hours	Actual quantity November 2008 to January 2009	Actual quantity November 2009 to January 2010	% change between November 2008 to January 2009 and November 2009 to January 2010	Quantity difference between November 2008 to January 2009 and November 2009 to January 2010
Electricity produced	59 199	62 517	5,6	3 318
Purchased outside South Africa (import)	2 888	3 174	9,9	286
Consumed in power stations and auxiliary systems	4 451	4 500	1,1	49
Sold outside South Africa (export)	3 537	3 693	4,4	156
Electricity available for distribution in South Africa	**54 100**	**57 498**	**6,3**	**3 398**

Figure 1 below shows the seasonally adjusted and trend patterns for electricity produced and available for distribution in South Africa from January 2007 to January 2010.

Figure 1 – Electricity produced and available for distribution in South Africa from 2007 to 2010



P J Lehohla
Statistician-General

Detailed results: Tables

Table 1 – Total volume of electricity available for distribution in South Africa: 2005 – 2010

Month	Gigawatt-hours					
	2005	2006	2007	2008	2009	2010
January	18 149	18 603	19 561	19 256	17 919	1/ 19 399
February	17 169	17 396	18 301	18 668	16 757	
March	18 487	18 982	20 160	19 603	18 694	
April	18 132	18 122	18 982	19 127	17 934	
May	19 224	20 312	20 901	20 365	19 548	
June	18 983	20 166	21 020	20 515	19 819	
July	19 657	20 632	21 780	21 610	21 152	
August	19 191	20 307	21 353	20 736	20 398	
September	18 383	18 987	19 732	19 725	19 382	
October	19 127	19 663	20 435	20 138	19 898	
November	18 523	19 244	19 785	18 640	19 249	
December	18 230	18 909	19 160	17 541	18 850	
Year	**223 255**	**231 323**	**241 170**	**235 924**	**229 600**	

1/ Preliminary.

Table 2 – Annual percentage change in electricity available for distribution in South Africa: 2005 – 2010

Month	Percentage change 2/					
	2005	2006	2007	2008	2009	2010
January	1,7	2,5	5,1	-1,6	-6,9	8,3
February	-0,6	1,3	5,2	2,0	-10,2	
March	0,1	2,7	6,2	-2,8	-4,6	
April	3,5	-0,1	4,7	0,8	-6,2	
May	1,7	5,7	2,9	-2,6	-4,0	
June	-1,8	6,2	4,2	-2,4	-3,4	
July	-2,5	5,0	5,6	-0,8	-2,1	
August	-0,4	5,8	5,2	-2,9	-1,6	
September	0,1	3,3	3,9	-0,0	-1,7	
October	2,2	2,8	3,9	-1,5	-1,2	
November	1,1	3,9	2,8	-5,8	3,3	
December	2,7	3,7	1,3	-8,4	7,5	
Year	**0,6**	**3,6**	**4,3**	**-2,2**	**-2,7**	

2/ The annual percentage change is the change in the volume of electricity available for distribution of the relevant year compared with the previous year expressed as a percentage.

Table 3 – Seasonally adjusted total volume of electricity available for distribution in South Africa: 2005 – 2010

Month	Gigawatt-hours						
	2005	2006	2007	2008	2009	2010	% change between current and previous month
January	18 494	18 942	19 929	19 622	18 269	19 802	0,5
February	18 639	18 894	19 874	20 348	18 264		
March	18 465	18 965	20 166	19 646	18 733		
April	19 085	19 122	20 038	20 244	18 978		
May	18 472	19 547	20 136	19 671	18 909		
June	18 258	19 418	20 231	19 739	19 091		
July	18 281	19 161	20 147	19 938	19 475		
August	18 356	19 382	20 327	19 701	19 364		
September	18 597	19 163	19 859	19 818	19 468		
October	18 868	19 414	20 189	19 894	19 680		
November	18 818	19 570	20 134	19 002	19 633		
December	18 996	19 698	19 987	18 299	19 694		

Table 4 – Indices of the physical volume of electricity production: 2005 – 2010

Month	Base : 2005=100					
	2005	2006	2007	2008	2009	2010
January	97,6	99,8	103,9	105,3	95,0	1/ 103,4
February	91,7	94,0	97,2	99,7	88,5	
March	100,2	103,3	107,8	105,6	99,3	
April	98,1	98,0	100,9	102,0	96,1	
May	102,9	108,1	111,9	109,6	104,5	
June	101,6	107,3	112,5	108,8	104,8	
July	105,5	110,8	116,6	115,1	112,8	
August	103,0	109,1	114,1	110,3	108,8	
September	99,1	101,8	105,5	104,8	104,4	
October	102,5	107,2	109,1	109,4	105,6	
November	99,4	103,3	106,9	101,4	102,6	
December	98,2	100,9	104,6	93,6	100,3	
Year	**100,0**	**103,6**	**107,6**	**105,5**	**101,9**	

1/ Preliminary.

Table 5 – Annual percentage change in indices of the physical volume of electricity production: 2005 – 2010

Month	Percentage change 2/					
	2005	2006	2007	2008	2008	2010
January	2,2	2,3	4,1	1,3	-9,8	8,9
February	-0,5	2,5	3,4	2,6	-11,2	
March	1,5	3,1	4,4	-2,0	-6,0	
April	3,6	-0,1	3,0	1,1	-5,8	
May	0,5	5,1	3,5	-2,1	-4,7	
June	-3,2	5,6	4,8	-3,3	-3,7	
July	-3,7	5,0	5,2	-1,3	-2,0	
August	-1,2	5,9	4,6	-3,3	-1,4	
September	-0,4	2,7	3,6	-0,7	-0,4	
October	0,4	4,6	1,8	0,3	-3,5	
November	0,9	3,9	3,5	-5,1	1,2	
December	2,3	2,7	3,7	-10,5	7,2	
Year	**0,1**	**3,7**	**3,8**	**-2,0**	**-3,4**	

2/ The annual percentage change is the change in the index of the physical volume of electricity production of the relevant year compared with the previous year expressed as a percentage.

Table 6 – Seasonally adjusted indices of the physical volume of electricity production: 2005 – 2010

Month	Base : 2005=100						
	2005	2006	2007	2008	2009	2010	% change between current and previous month
January	100,1	102,2	106,4	107,7	97,2	105,9	1,2
February	100,3	102,7	106,2	109,1	96,9		
March	100,1	103,0	107,5	105,5	99,3		
April	103,0	102,9	106,2	107,5	101,4		
May	99,1	104,2	107,9	105,8	100,9		
June	97,9	103,6	108,7	105,2	101,5		
July	97,8	102,7	107,8	106,1	103,9		
August	98,3	104,0	108,6	104,8	103,4		
September	100,1	102,7	106,2	105,4	105,0		
October	100,1	105,0	107,1	107,4	103,8		
November	100,9	104,7	108,3	102,7	103,9		
December	102,3	105,1	108,9	97,5	104,6		

Table 7 – Total volume of electricity imported: 2005 – 2010

Month	Gigawatt-hours					
	2005	2006	2007	2008	2009	2010
January	729	872	1 088	638	1 102	1/ 1 122
February	714	646	942	885	999	
March	533	581	973	802	1 064	
April	598	587	1 055	844	906	
May	849	879	900	761	937	
June	813	881	880	1 002	1 088	
July	856	926	984	1 089	1 040	
August	883	930	1 045	1 076	1 072	
September	686	971	1 026	1 044	920	
October	836	682	1 040	645	1 115	
November	865	862	796	711	940	
December	837	965	619	1 075	1 112	
Year	**9 199**	**9 782**	**11 348**	**10 572**	**12 295**	

1/ Preliminary.

Table 8 – Total volume of electricity exported: 2005 – 2010

Month	Gigawatt-hours					
	2005	2006	2007	2008	2009	2010
January	1 030	1 056	1 134	1 280	1 096	1/ 1 217
February	901	1 050	1 060	1 101	979	
March	968	1 129	1 231	1 136	1 100	
April	991	1 017	1 132	998	1 086	
May	1 083	1 046	1 203	1 120	1 109	
June	1 096	1 102	1 256	1 162	1 175	
July	1 102	1 239	1 301	1 249	1 223	
August	1 144	1 262	1 252	1 220	1 235	
September	1 134	1 239	1 186	1 203	1 285	
October	1 161	1 311	1 252	1 258	1 288	
November	1 119	1 186	1 256	1 252	1 213	
December	1 155	1 129	1 233	1 189	1 263	
Year	**12 884**	**13 766**	**14 496**	**14 168**	**14 052**	

1/ Preliminary.

Table 9 – Electricity produced and consumed in power stations, purchased and sold outside South Africa and available for distribution in South Africa

		Gigawatt-hours				
		January 2009	December 2009	January 2010 1/	% change between January 2009 and January 2010	Difference between January 2009 and January 2010
Total - All producers	Electricity produced	19 395	20 469	21 113	8,9	1 718
	Purchased outside South Africa (import)	1 102	1 112	1 122	1,8	20
	Consumed in power stations and auxiliary systems	1 483	1 467	1 619	9,2	136
	Sold outside South Africa (export)	1 096	1 263	1 217	11,0	121
	Electricity available for distribution in South Africa	17 919	18 850	19 399	8,3	1 480
ESKOM	Electricity produced	18 643	19 875	20 541	10,2	1 898
	Purchased outside South Africa (import)	1 102	1 112	1 122	1,8	20
	Consumed in power stations and auxiliary systems	1 412	1 424	1 567	11,0	155
	Sold outside South Africa (export)	1 096	1 263	1 217	11,0	121
	Electricity available for distribution in South Africa	17 237	18 300	18 880	9,5	1 643

1/ Preliminary.

Table 10 – Total volume of electricity delivered by Eskom to provinces for 2009 and 2010 1/

Period		Gigawatt-hours									
		Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpuma-langa	Limpopo	Total South Africa
2009	January	1 886	733	408	748	3 368	1 833	4 502	2 265	849	16 592
	February	1 779	625	367	661	3 196	1 721	4 272	2 154	752	15 527
	March	1 995	691	404	739	3 553	1 936	4 716	2 442	875	17 351
	April	1 812	713	350	673	3 410	1 852	4 499	2 476	860	16 645
	May	1 852	799	361	735	3 583	2 009	5 270	2 736	935	18 280
	June	1 891	744	368	763	3 529	2 033	5 552	2 711	924	18 515
	July	1 942	789	398	825	3 689	2 188	6 059	2 841	975	19 706
	August	1 982	761	370	776	3 620	2 095	5 600	2 810	993	19 007
	September	1 889	769	383	658	3 515	2 055	4 923	2 762	1 045	17 999
	October	1 878	752	398	704	3 629	2 276	5 005	2 885	1 000	18 527
	November	1 837	761	402	739	3 490	2 221	4 916	2 717	942	18 025
	December	1 840	736	420	719	3 499	2 170	4 651	2 725	947	17 707
	Year	**22 583**	**8 873**	**4 629**	**8 740**	**42 081**	**24 389**	**59 965**	**31 524**	**11 097**	**213 881**
2010	January 2/	1 932	780	404	751	3 540	2 182	4 806	2 845	991	18 231

1/ Wholesale energy as delivered by Eskom to the various provinces.
2/ Preliminary.

Explanatory Notes

Introduction **1** Statistics South Africa (Stats SA) conducts a monthly sample survey of the electricity industry covering electricity undertakings and establishments (branches). This statistical release contains information regarding the volume of electricity units generated and available for distribution in South Africa, the volume of units purchased and sold outside South Africa and the volume of units distributed by Eskom by province on a monthly basis. Both actual and seasonally adjusted figures are published.

2 This statistical release reflects indices of the physical volume of electricity production on the basis of 2005=100. In accordance with international practice, the indices have to be rebased every five years to a new base year.

3 In order to improve timeliness of the publication, some information for the current month may have been estimated due to late submission by respondents. These estimates will be revised in the next statistical release(s) as soon as actual information is available.

Purpose of the survey **4** The results of the monthly electricity generated and available for distribution survey are used to compile estimates of the Gross Domestic Product (GDP) and its components, which are used in monitoring the state of the economy and formulation of economic policy.

Scope of the survey **5** This survey covers electricity undertakings and establishments conducting activities concerned with the generation or transmission and distribution of electricity. It includes electrical power installations, which, as subsidiary divisions of undertakings, produce electricity for regular use by these undertakings.

Classification **6** The 1993 edition of the *Standard Industrial Classification of all Economic Activities (SIC)*, Fifth Edition, Report No. 09-90-02, was used to classify the statistical units in the survey. The SIC is based on the 1990 *International Standard Industrial Classification of all Economic Activities (ISIC)* with suitable adaptations for local conditions. Each statistical unit is classified to an industry, which reflects the predominant activity of the electricity undertaking or establishment.

Response rate **7** The response rate for the survey on electricity generated and available for distribution for January 2010 was 99%.

Statistical unit **8** The basic statistical unit for the collection of information is the electricity undertaking or establishment. The electricity undertaking or establishment is the smallest economic unit that functions as a separate entity. Each statistical unit is classified to an industry (see paragraph 5).

Survey methodology and design **9** All statistical units are stratified by type of economic activity according to the *(SIC)* and measure of size, where measure of size is the volume of electricity generated by the electricity undertaking or establishment. All large undertakings or establishments (size category one cases) are completely enumerated. A sample is drawn from medium and small size undertakings and establishments by systematically selecting undertakings or establishments within each size category. An electricity undertaking or establishment with a total generating capacity of less than 500 kilowatt is excluded from the sample.

10 The survey is conducted by mail, email and telephone. Information is collected monthly from a sample of 22 electricity undertakings or establishments.

Monthly production indices **11** The calculation of the monthly production indices is based on the volume of electricity units produced.

Benchmarking

12 The index of physical volume of electricity production should provide an accurate reflection of the trend of activities of the relevant industry. The level of activities, as measured by the monthly electricity generated and available for distribution survey, is based on information received from a sample of electricity undertakings and establishments. These levels are weighted according to the original sample and designed to represent the population of electricity undertakings and establishments. It is necessary to adjust the level of activities as measured by the monthly sample survey to the level of activities as measured periodically by the Census of electricity, gas and steam. This procedure, whereby the latest results of an economic census are used to compile more accurate level estimates for a certain year, is known as benchmarking.

13 The results of the 1995 Census of electricity, gas and steam served as a benchmark to verify or adjust the level of the monthly physical volume of electricity production indices collected through the monthly sample survey. The level adjustments were done on the volume indices for August of the relevant census year (the 1995 census year covered the period 1 January 1995 to 31 December 1995 and therefore, the benchmarking was done using the index of August 1995 as reference point).

Seasonal adjustment

14 Seasonally adjusted estimates of all items are generated each month, using the X-11 Seasonal Adjustment Program developed by US Bureau of the Census Economic Research and Analyses Division, 1968. Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences on the series can be more clearly recognized. Seasonal adjustment does not aim to remove irregular or non-seasonal influences, which may be present in any particular month. Influences that are volatile or unsystematic can still make it difficult to interpret the movement of the series even after adjustment for seasonal variations. This means the month-to-month movements of seasonally adjusted estimates may not be reliable indicators of trend behaviour.

Trend cycle

15 The trend is the long-term pattern or movement of a time series. The X-11 Seasonal Adjustment Program is used for smoothing seasonally adjusted estimates.

Related publications

16 Users may also wish to refer to the following publications which are available from Stats SA -

- *Bulletin of Statistics.*
- *SA Statistics.*

Unpublished statistics

17 In some cases Stats SA can also make available statistics, which are not published. The statistics can be made available as computer printouts or on CD. Generally a charge is made for providing unpublished statistics.

Rounding-off of figures

18 Where necessary, the figures in the tables have been rounded off to the nearest digit shown. There may, therefore, be slight discrepancies between the sums of the constituent items and the totals shown.

Pre-release policy

19 Stats SA pre-release policy may be inspected at its website, www.statssa.gov.za.

Glossary

Consumption of electricity

For purposes of this release the term 'consumption of electricity' is used interchangeably with the term 'electricity available for distribution'.

Electricity undertaking

An electricity undertaking is an undertaking concerned with the generation or transmission and distribution of electricity, including electrical power installations, which as subsidiary divisions of undertakings produce electricity for regular use by these undertakings.

Index of physical volume of electricity production

A statistical measure of the change in the volume of production of electricity in a given period and the volume of production of electricity in the base period. The base period is 2005. The production in the base period is set at 100.

Industry

An industry consists of a group of undertakings or establishments engaged in the same or similar kinds of economic activity. Industries are defined in the 1993 *System of National Accounts (1993 SNA)* in the same way as in the *Standard Industrial Classification of all Economic Activities (SIC)*, Fifth Edition, Report No. 09-90-02.

Unit of electricity

One gigawatt-hour of electricity is equal to one million kilowatt-hours. A kilowatt-hour is the basic unit of electrical energy equal to one kilowatt of power supplied to or taken from an electric circuit steadily for one hour. One kilowatt-hour equals one thousand watt-hours.

Symbols and abbreviations

GDP	Gross domestic product
ISIC	International Standard Industrial Classification
SIC	Standard Industrial Classification of all Economic Activities
Stats SA	Statistics South Africa
*	Revised figures

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General enquiries

Telephone number:	(012) 310 8443 / 336 0142 (technical enquiries) (012) 310 8358 (orders) (012) 310 4883/ 4885/ 8018 (library)
Fax number:	(012) 310 8664 (technical enquiries)
Email:	thembisilem@statssa.gov.za (technical enquiries) nicolaic@statssa.gov.za (technical enquiries) info@statssa.gov.za (user information services) magdaj@statssa.gov.za (orders)
Postal address:	Private Bag X44, Pretoria, 0001

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