

Dipalopalo tsa Aforika Borwa • Statistieke Suid-Afrika • Tistatistiki ta Afrika-Dzonga • Ukuqokelelwa kwamanani eNingizimu Afrika

# Electricity generated and available for distribution December 2004

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Statistics South Africa 1 P4141

 $\begin{tabular}{ll} Table A-Selected key figures regarding electricity generated and available for distribution for December 2004 \\ \end{tabular}$ 

Actual estimates	December 2004	% change between December 2003 and December 2004	% change between October to December 2003 and October to December 2004	% change between January to December 2003 and January to December 2004
Electricity available for distribution (Gigawatt-hours)	17 756	+1,7	+2,0	+4,0
Electricity imported (Gigawatt-hours)	679	-5,7	+24,5	+19,1
Electricity exported (Gigawatt-hours)	1 029	-2,5	+0,8	+22,9
Index of the physical volume of electricity production (2000=100)	111,6	+2,1	+1,4	+4,4

Seasonally adjusted estimates	December 2004	% change between November and December 2004	% change between July to September 2004 and October to December 2004	
Electricity available for distribution (Gigawatt-hours)  Index of the physical	18 724	+0,2	+0,6	
volume of electricity production (2000=100)	118,0	+1,3	+0,5	

# Key findings regarding electricity generated and available for distribution for December 2004

### Electricity available for distribution higher in 2004

The volume of electricity available for distribution for 2004, increased by 4,0% (+8 481 Gigawatt-hours) compared with 2003. Furthermore, the electricity available for distribution for the fourth quarter of 2004, after seasonal adjustment, increased by 0,6% compared with the third quarter of 2004. Electricity available for distribution for the fourth quarter of 2004 was 2,0% (+1 059 Gigawatt-hours) higher than for the corresponding quarter of 2003.

# Production of electricity stabilises in 2004

The production of electricity in South Africa for 2004 increased by 4,4% (+10 378 Gigawatt-hours) compared with 2003. The production of electricity for the fourth quarter of 2004, after seasonal adjustment, increased slightly by 0,5% compared with the preceding quarter. Furthermore, the production of electricity for December 2004 was 2,1% (+411 Gigawatt-hours) higher than for December 2003. The production of electricity for the fourth quarter of 2004 was 1,4% higher (+823 Gigawatt-hours) than for the corresponding quarter of 2003.

# Import of electricity increases compared with a year ago

The volume of electricity imported into South Africa for 2004 increased by 19,1% (+1 287 Gigawatthours) compared with 2003. The volume of electricity imported for December 2004 decreased by 5,7% (-41 Gigawatthours) compared with December 2003.

# Export of electricity higher in 2004 than 2003

The volume of electricity exported for 2004 increased by 22,9% (+2 317 Gigawatt-hours) compared with 2003. Furthermore, the volume exported during the fourth quarter showed a slight increase of 0,8% (+27 Gigawatt-hours) compared with the corresponding quarter of 2003.

# **Export compared to import**

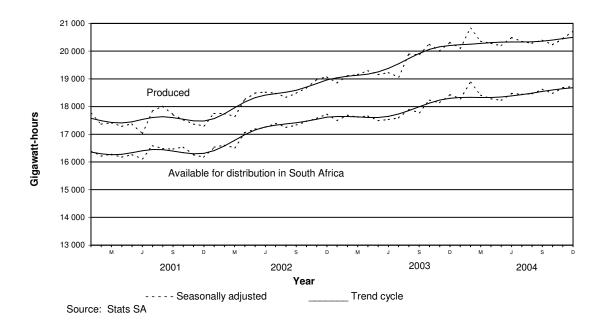
The export of electricity exceeded the import of electricity by 55,2% (+4 427 Gigawatt-hours) in 2004. In comparison, during 2003, 50,4% (+3 397 Gigawatt-hours) more electricity was exported than imported.

# **Electricity distributed during 2004 by Eskom by province**

During 2004, Gauteng received the largest proportion (26,9% or 54 970 Gigawatt-hours) of electricity distributed by Eskom, followed by KwaZulu-Natal (20,7% or 42 264 Gigawatt-hours) and North West (13,8% or 28 186 Gigawatt-hours). Only 4 502 Gigawatt-hours (2,2%) of electricity were distributed to Northern Cape and 7 510 Gigawatt-hours (3,7%) to Eastern Cape.

Figure 1 below shows the seasonally adjusted and trend patterns for electricity produced and available for distribution in South Africa between January 2001 and December 2004. There was a gradual upward movement in the trend cycles until the end of 2003. Since January 2004, the trend of electricity produced leveled out, but shows a slight increase towards the end of 2004. The trend cycle of electricity available for distribution in South Africa has shown a slight upward movement since the middle of 2004 due to increased import of electricity.

Figure 1 – Electricity produced and available for distribution in South Africa from 2001 to 2004



pp P J Lehohla Statistician-General

# **Contents**

		Page
Notes		5
Tables		
Table 1	Total volume of electricity available for distribution in South Africa: 1999 to 2004	6
Table 2	Seasonally adjusted total volume of electricity available for distribution in South Africa: 1999 to 2004	6
Table 3	Indices of the physical volume of electricity production: 1999 to 2004	7
Table 4	Seasonally adjusted indices of the physical volume of electricity production: 1999 to 2004	7
Table 5	Total volume of electricity imported: 1999 to 2004	8
Table 6	Total volume of electricity exported: 1999 to 2004	8
Table 7	Electricity produced and consumed in power stations, purchased and sold outside South Africa and available for distribution in South Africa	9
Table 8	Electricity distributed by Eskom by province for 2004	10
Explana	tory notes	11
Glossary	y	13
General	information	14

# Notes

Forthcoming issues	Issue	Expected release date			
	January 2005	3 March 2005			
Purpose of the survey	used to compile estimates of the	etricity generated and available for distribution survey are Gross Domestic Product (GDP) and its components, which of the economy and formulation of economic policy.			
Response rate	The response rate for the survey on electricity generated and available for distribution fo December 2004 was 95%.				
Name change of statistical release	, i	ation the name of the monthly Statistical Release P4141: electricity, changed to Electricity generated and available			

Table 1 - Total volume of electricity available for distribution in South Africa: 1999 to 2004

Month	1999	2000	2001	2002	2003	2004
January	15 153	15 512	16 064	16 191	17 095	17 850
February	14 360	15 224	14 871	15 215	16 168	17 278
March	15 791	16 225	16 320	16 551	17 655	18 477
April	15 063	15 399	15 515	16 362	16 905	17 524
May	16 327	17 064	16 929	17 852	18 159	18 909
June	16 393	16 818	16 788	18 016	18 331	19 336
July	17 051	17 759	18 021	18 956	19 183	20 156
August	16 708	17 214	17 300	18 064	18 713	19 265
September	15 937	16 180	16 277	17 125	17 526	18 362
October	16 322	16 709	16 794	17 741	18 479	18 714
November	15 831	16 161	15 960	17 234	17 790	18 314
December	15 184	15 395	15 224	16 713	17 456	1/ 17 756
Year	190 120	195 660	196 063	206 020	213 460	221 941

1/ Preliminary.

Table 2 – Seasonally adjusted total volume of electricity available for distribution in South Africa: 1999 to 2004

**Gigawatt-hours** 

Gigawatt-nours								
Month	1999	2000	2001	2002	2003	2004		
January	15 468	15 834	16 398	16 528	17 486	18 280		
February	15 674	16 623	16 212	16 606	17 692	18 872		
March	15 793	16 244	16 277	16 503	17 617	18 414		
April	15 774	16 167	16 184	17 072	17 664	18 279		
May	15 685	16 385	16 265	17 186	17 492	18 225		
June	15 744	16 146	16 126	17 266	17 533	18 475		
July	15 746	16 389	16 595	17 412	17 590	18 440		
August	15 866	16 372	16 480	17 255	17 899	18 454		
September	16 067	16 312	16 454	17 318	17 780	18 625		
October	16 042	16 438	16 543	17 468	18 237	18 472		
November	16 156	16 481	16 267	17 546	18 137	18 682		
December	16 178	16 401	16 160	17 674	18 433	18 724		

Table 3 - Indices of the physical volume of electricity production: 1999 to 2004

Base: 2000=100

Month	1999	2000	2001	2002	2003	2004
January	94,7	92,5	98,6	98,5	104,2	111,0
February	89,0	91,2	90,1	91,8	98,5	107,2
March	97,0	100,9	98,5	99,7	108,0	114,7
April	90,1	95,9	93,6	99,0	104,7	110,1
May	98,0	106,3	103,0	109,4	113,0	119,1
June	98,9	104,9	101,1	110,2	114,5	122,0
July	104,0	107,8	111,1	115,5	119,2	127,3
August	101,8	105,5	108,0	109,9	119,1	121,3
September	96,9	99,1	100,5	104,9	112,8	115,7
October	99,1	103,1	102,7	109,6	118,9	118,7
November	96,0	99,1	97,4	106,3	112,0	114,5
December	90,8	93,8	92,1	101,7	109,3	1/ 111,6
Year	96,4	100,0	99,7	104,7	111,2	116,1

<sup>1/</sup> Preliminary.

 $Table\ 4-Seasonally\ adjusted\ indices\ of\ the\ physical\ volume\ of\ electricity\ production:\ 1999\ to\ 2004$ 

Base: 2000=100

2400 200 100						
Month	1999	2000	2001	2002	2003	2004
January	96,8	94,5	101,0	101,1	107,3	114,4
February	97,2	99,9	98,9	101,0	108,6	118,3
March	97,3	101,2	98,9	100,3	108,9	115,7
April	95,0	101,1	98,5	104,0	110,0	115,6
May	94,2	102,2	99,1	105,4	109,1	115,1
June	94,8	100,7	96,9	105,6	109,5	116,7
July	95,4	98,8	101,8	105,6	108,9	116,3
August	96,5	100,1	102,6	104,4	113,3	115,5
September	97,3	99,5	100,9	105,3	113,3	116,2
October	96,7	100,4	99,9	106,4	115,4	115,2
November	98,0	101,0	99,1	108,1	114,0	116,5
December	97,4	100,6	98,4	108,1	115,8	118,0

Table 5 - Total volume of electricity imported: 1999 to 2004

Month	1999	2000	2001	2002	2003	2004
January	185	683	569	670	705	828
February	201	529	488	643	637	811
March	302	6	665	783	706	863
April	682	24	774	733	547	641
May	719	20	629	658	569	547
June	654	2	797	704	518	560
July	515	599	479	702	792	607
August	613	476	282	721	424	618
September	679	495	507	637	266	590
October	688	506	713	454	272	536
November	644	601	636	477	583	746
December	791	778	708	691	720	1/ 679
Year	6 673	4 719	7 247	7 873	6 739	8 026

1/ Preliminary.

Table 6 - Total volume of electricity exported: 1999 to 2004

# **Gigawatt-hours**

			Olganiate nours			
Month	1999	2000	2001	2002	2003	2004
January	346	197	616	558	578	1 037
February	267	169	470	478	508	977
March	248	196	498	529	607	1 027
April	217	155	463	525	619	951
May	318	213	508	578	805	944
June	347	193	496	601	798	1 057
July	381	363	543	614	944	1 140
August	465	389	569	605	1 030	1 049
September	480	458	581	628	1 051	1 048
October	440	540	630	626	1 116	1 112
November	432	525	598	600	1 025	1 082
December	325	609	547	608	1 055	1/ 1 029
Year	4 266	4 007	6 519	6 950	10 136	12 453

1/ Preliminary.

Table 7 - Electricity produced and consumed in power stations, purchased and sold outside South Africa and available for distribution in South Africa

Description	December 2003	November 2004	December 2004 1/	% change between December 2003 and December 2004
Total - All producers				
Electricity produced	19 181	20 105	19 592	+ 2,1
Purchased outside South Africa (import)	720	746	679	- 5,7
Consumed in power stations and				
auxiliary systems	1 389	1 455	1 486	+ 7,0
Sold outside South Africa (export)	1 055	1 082	1 029	- 2,5
Electricity available for distribution in South Africa	17 456	18 314	17 756	+ 1,7
Eskom				
Electricity produced	18 248	19 122	18 585	+ 1,8
Purchased outside South Africa (import)	720	746	679	- 5,7
Consumed in power stations and				
auxiliary systems	1 303	1 348	1 386	+ 6,4
Sold outside South Africa (export)	1 055	1 082	1 029	- 2,5
Electricity available for distribution in South Africa	16 609	17 438	16 849	+ 1,4

<sup>1/</sup> Preliminary.

Table 7 - Electricity produced and consumed in power stations, purchased and sold outside South Africa and available for distribution in South Africa (concluded)

### Gigawatt-hours

Description	January to December 2003	January to December 2004	% change between January to December 2003 and January to December 2004	Difference between January to December 2003 and January to December 2004
Total - All producers				
Electricity produced	234 229	244 607	+ 4,4	10 378
Purchased outside South Africa (import)	6 739	8 026	+ 19,1	1 287
Consumed in power stations and				
auxiliary systems	17 373	18 240	+ 5,0	867
Sold outside South Africa (export)	10 136	12 453	+ 22,9	2 317
Electricity available for distribution in South Africa	213 460	221 941	+ 4,0	8 481
Eskom				
Electricity produced	222 678	233 153	+ 4,7	10 475
Purchased outside South Africa (import)	6 739	8 026	+ 19,1	1 287
Consumed in power stations and				
auxiliary systems	16 244	17 185	+ 5,8	941
Sold outside South Africa (export)	10 136	12 453	+ 22,9	2 317
Electricity available for distribution in South Africa	203 037	211 543	+ 4,2	8 506

Table 8 - Electricity distributed by Eskom by province for 2004 1/

Month	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal
January	1 782	516	384	839	3 416
February	1 741	599	369	772	3 373
March	1 826	643	385	791	3 496
April	1 693	567	317	740	3 293
May	1 792	656	354	822	3 570
June	1 734	648	353	837	3 971
July	1 905	693	383	892	3 642
August	1 904	676	371	841	3 559
September	1 771	647	378	772	3 455
October	1 786	646	400	801	3 583
November	1 784	646	411	768	3 450
December 2/	1 774	573	397	749	3 456
Year	21 492	7 510	4 502	9 624	42 264

**Gigawatt-hours** 

Month	North West	Gauteng	Mpumalanga	Limpopo	<b>Total South Africa</b>
January	2 389	4 335	2 087	788	16 537
February	2 230	4 144	2 097	727	16 052
March	2 443	4 454	2 161	798	16 997
April	2 218	4 296	2 065	761	15 950
May	2 418	4 749	2 308	839	17 508
June	2 303	4 940	2 104	816	17 706
July	2 504	5 488	2 206	859	18 572
August	2 430	4 898	2 178	878	17 735
September	2 397	4 575	2 029	833	16 857
October	2 411	4 576	2 213	817	17 233
November	2 326	4 375	2 222	828	16 811
December 2/	2 117	4 140	2 255	847	16 309
Year	28 186	54 970	25 925	9 791	204 267

<sup>1/</sup> Wholesale energy as delivered by Eskom to the various provinces.

<sup>2/</sup> Preliminary.

# **Explanatory notes**

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### Introduction

- 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 number of electricity units generated and consumed in South Africa, the number of units purchased and sold outside South Africa and the number of units distributed by Eskom by province on a monthly basis. Both actual and seasonally adjusted figures are published.
- This statistical release reflects indices of the physical volume of electricity production on the basis of 2000=100. In accordance with international practice, the indices have to be rebased every five years to a new base year.
- 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.

### Scope of the survey

This survey covers electricity undertakings and establishments conducting activities 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.

#### Classification

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.

### **Statistical unit**

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

- All statistical units are stratified by type of economic activity according to the *Standard Industrial Classification of all Economic Activities (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.
- 8 The survey is conducted by mail each month collecting information from a sample of 22 electricity undertakings or establishments.

# Monthly production indices

The calculation of the monthly production indices is based on the number of electricity units produced.

#### **Benchmarking**

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, which are weighted according to the original sample, designed in order 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.

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11 The results of the 1995 Census of electricity, gas and steam served as benchmarks 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 December 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 July 1995 as reference point).

### Seasonal adjustment

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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 recognised. 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 behavior.

### Trend cycle

13 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**

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

- Bulletin of Statistics.
- SA Statistics.

# **Unpublished** statistics

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### **Rounding-off figures**

The figures in the tables have, where necessary, 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

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

# 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

# Glossary

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.

Establishment (branch) An establishment (branch) is defined as the smallest economic unit, which operates as

a separate entity for which comprehensive financial records are kept.

Index of physical volume of electricity production

The index of physical volume of electricity production or a production index is a statistical measure of the change in the volume of production. The production index of electricity is the ratio between 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

2000. 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 unit of electricity is equal to 1 kilowatt-hour (kWh). One gigawatt-hour (gWh) of

electricity is equal to one million kilowatt-hours.

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