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Statistical release
P4141

Electricity generated and available for distribution (Preliminary)

January 2013

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Enquiries:
User Information Services
Tel: (012) 310 8600 / 4892 /8390

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February 2013	4 April 2013

Contents

Results for January 2013

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

Actual estimates	January 2013 1/	% change between January 2012 and January 2013	% change between November 2011 to January 2012 and November 2012 to January 2013
Electricity available for distribution (Gigawatt-hours)	18 860	-4,1	-3,2
Index of the physical volume of electricity production (2010=100)	96,2	-3,0	-2,1

1/ Preliminary.

Seasonally adjusted estimates	January 2013	% change between December 2012 and January 2013	% change between August to October 2012 and November 2012 to January 2013
Electricity available for distribution (Gigawatt-hours)	19 261	-0,6	0,3
Index of the physical volume of electricity production (2010=100)	98,3	-0,1	-1,1

Consumption of electricity

The actual volume of electricity consumption decreased by 4,1% year-on-year in January 2013. Seasonally adjusted electricity consumption decreased by 0,6% month-on-month in January 2013, following a month-on-month decrease of 1,2% in December 2012. However, seasonally adjusted electricity consumption increased by 0,3% in the three months ended January 2013 compared with the previous three months.

Production of electricity

The actual estimated electricity production decreased by 3,0% year-on-year in January 2013. Seasonally adjusted electricity production decreased by 0,1% in January 2013 compared with December 2012. Seasonally adjusted electricity production decreased by 1,1% in the three months ended January 2013 compared with the previous three months.

Electricity delivered by Eskom to the provinces

The total volume of electricity delivered by Eskom to the provinces decreased by 3,7% in January 2013 compared with January 2012. Decreases were reported in six of the nine provinces, with the largest volume decrease recorded for North West (-215 Gigawatt-hours), followed by Gauteng (-199 Gigawatt-hours), Limpopo (-128 Gigawatt-hours) and KwaZulu-Natal (-118 Gigawatt-hours).

Table B – Comparison of the seasonally adjusted volume of electricity generated and available for distribution between the three months ended January 2013 and the previous three months

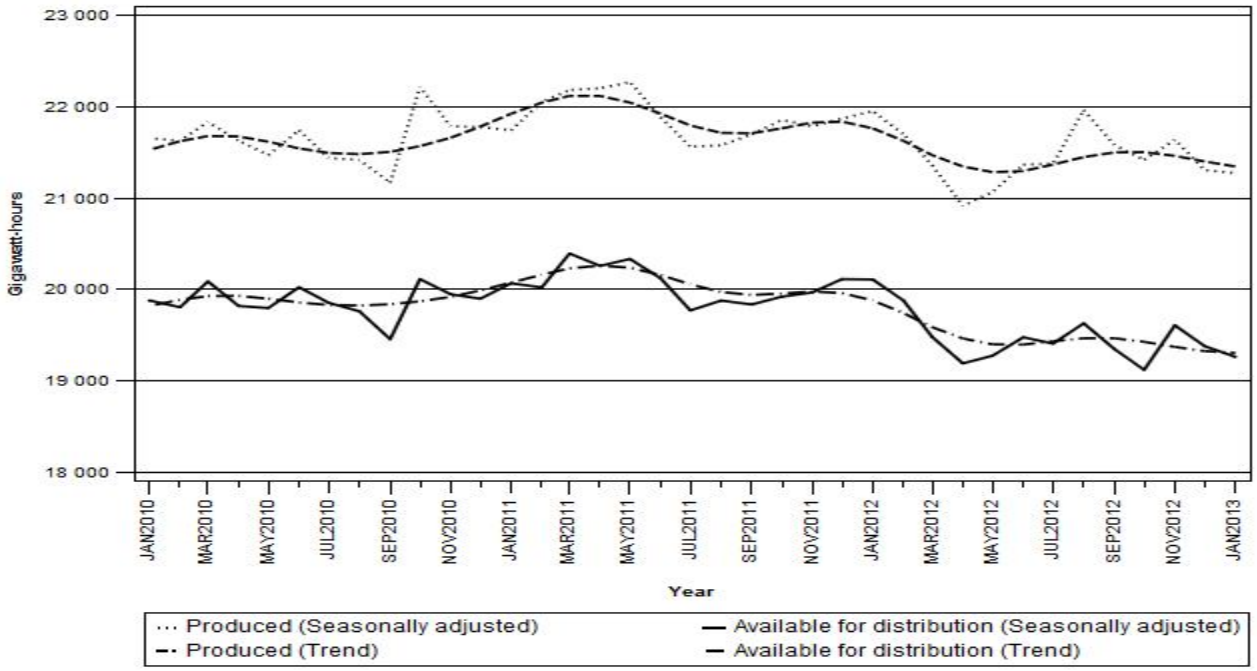
Gigawatt-hours	Seasonally adjusted quantity August to October 2012	Seasonally adjusted quantity November 2012 to January 2013	% change between August to October 2012 and November 2012 to January 2013	Quantity difference between August to October 2012 and November 2012 to January 2013
Electricity produced	64 959	64 217	-1,1	-742
Electricity available for distribution in South Africa	58 092	58 245	0,3	153

Table C – Comparison of actual estimates between the three months ended January 2013 and three months ended January 2012

Gigawatt-hours	Actual volume November 2011 to January 2012	Actual volume November 2012 to January 2013	% change between November 2011 to January 2012 and November 2012 to January 2013	Quantity difference between November 2011 to January 2012 and November 2012 to January 2013
Electricity produced	64 036	62 700	-2,1	-1 336
Purchased outside South Africa (import) 1/	3 245	2 118	-34,7	-1 127
Consumed in power stations and auxiliary systems	4 739	4 570	-3,6	-169
Sold outside South Africa (export) 2/	3 914	3 508	-10,4	-406
Electricity available for distribution in South Africa	58 628	56 742	-3,2	-1 886

1/ Physical energy flowing into South Africa as measured by the metering systems at the South African borders.
2/ Physical energy flowing out of South Africa as measured by the metering systems at the South African borders.

Figure 1 – Electricity produced and available for distribution in South Africa, seasonally adjusted and trend



PJ Lehohla
Statistician-General

Tables

Table 1 – Total volume of electricity available for distribution in South Africa: 2008–2013

Month	Gigawatt-hours					
	2008	2009	2010	2011	2012	2013
January	19 256	17 919	19 396	19 616	19 676	1/ 18 860
February	18 668	16 757	18 181	18 455	18 783	
March	19 603	18 694	20 186	20 518	19 623	
April	19 127	17 934	19 102	19 539	18 466	
May	20 365	19 548	20 435	20 938	19 869	
June	20 515	19 819	20 800	20 914	20 274	
July	21 610	21 151	21 307	21 162	20 743	
August	20 736	20 398	20 540	20 617	20 345	
September	19 725	19 382	19 256	19 619	19 100	
October	20 138	19 899	20 371	20 198	19 413	
November	18 640	19 248	19 702	19 763	19 426	
December	17 541	18 850	18 996	19 189	18 456	
Year	**235 924**	**229 599**	**238 272**	**240 528**	**234 174**	

1/ Preliminary.

Table 2 – Annual percentage change in electricity available for distribution in South Africa: 2008–2013

Month	Percentage change 2/					
	2008	2009	2010	2011	2012	2013
January	-1,6	-6,9	8,2	1,1	0,3	-4,1
February	2,0	-10,2	8,5	1,5	1,8	
March	-2,8	-4,6	8,0	1,6	-4,4	
April	0,8	-6,2	6,5	2,3	-5,5	
May	-2,6	-4,0	4,5	2,5	-5,1	
June	-2,4	-3,4	4,9	0,5	-3,1	
July	-0,8	-2,1	0,7	-0,7	-2,0	
August	-2,9	-1,6	0,7	0,4	-1,3	
September	0,0	-1,7	-0,7	1,9	-2,6	
October	-1,5	-1,2	2,4	-0,8	-3,9	
November	-5,8	3,3	2,4	0,3	-1,7	
December	-8,4	7,5	0,8	1,0	-3,8	
Year	**-2,2**	**-2,7**	**3,8**	**0,9**	**-2,6**	

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

Table 3 – Seasonally adjusted total volume of electricity available for distribution in South Africa: 2008–2013

Month	Gigawatt-hours						
	2008	2009	2010	2011	2012	2013	% change between current and previous month
January	19 751	18 404	19 878	20 066	20 108	19 261	-0,6
February	19 922	18 423	19 804	20 021	19 878		
March	19 564	18 629	20 087	20 392	19 479		
April	19 890	18 670	19 818	20 256	19 189		
May	19 632	18 869	19 795	20 333	19 273		
June	19 761	19 043	20 023	20 120	19 475		
July	20 113	19 657	19 852	19 769	19 406		
August	19 866	19 567	19 759	19 877	19 628		
September	19 944	19 588	19 454	19 834	19 346		
October	19 873	19 643	20 112	19 919	19 118		
November	18 934	19 511	19 946	19 966	19 606		
December	18 387	19 731	19 897	20 112	19 378		

Table 4 – Indices of the physical volume of electricity production: 2008–2013

Month	Base: 2010=100					
	2008	2009	2010	2011	2012	2013
January	99,3	89,7	97,6	98,1	99,2	1/ 96,2
February	94,1	83,5	91,1	93,3	93,8	
March	99,6	93,7	101,3	103,0	99,3	
April	96,2	90,7	96,2	98,9	92,9	
May	103,4	98,6	102,3	105,9	100,3	
June	102,6	98,8	103,8	104,6	102,2	
July	108,6	106,4	106,6	106,8	105,7	
August	104,0	102,7	103,2	103,7	105,4	
September	98,8	98,5	97,0	99,4	98,7	
October	103,2	99,6	104,6	103,1	101,1	
November	95,7	96,8	100,0	100,1	99,5	
December	88,3	94,6	96,3	96,7	94,0	
Year	**99,5**	**96,1**	**100,0**	**101,1**	**99,3**	

1/ Preliminary.

Table 5 – Annual percentage change in indices of the physical volume of electricity production: 2008–2013

Month	Percentage change 2/					
	2008	2009	2010	2011	2011	2013
January	1,2	-9,7	8,8	0,5	1,1	-3,0
February	2,6	-11,3	9,1	2,4	0,5	
March	-2,1	-5,9	8,1	1,7	-3,6	
April	1,1	-5,7	6,1	2,8	-6,1	
May	-2,1	-4,6	3,8	3,5	-5,3	
June	-3,3	-3,7	5,1	0,8	-2,3	
July	-1,3	-2,0	0,2	0,2	-1,0	
August	-3,3	-1,3	0,5	0,5	1,6	
September	-0,7	-0,3	-1,5	2,5	-0,7	
October	0,2	-3,5	5,0	-1,4	-1,9	
November	-5,1	1,1	3,3	0,1	-0,6	
December	-10,5	7,1	1,8	0,4	-2,8	
Year	**-2,0**	**-3,4**	**4,0**	**1,1**	**-1,8**	

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

Table 6 – Seasonally adjusted indices of the physical volume of electricity production: 2008–2013

Month	Base: 2010=100						
	2008	2009	2010	2011	2012	2013	% change between current and previous month
January	101,8	92,1	100,0	100,4	101,4	98,3	-0,1
February	101,1	92,4	99,9	101,9	100,2		
March	99,4	93,4	100,9	102,5	98,7		
April	100,2	94,6	99,9	102,6	96,6		
May	99,9	95,3	99,2	102,9	97,3		
June	99,3	95,5	100,4	101,1	98,7		
July	100,8	98,6	99,0	99,6	98,7		
August	99,3	98,1	98,9	99,7	101,5		
September	99,8	99,4	97,8	100,2	99,7		
October	101,3	97,7	102,6	101,0	98,9		
November	96,7	97,6	100,6	100,6	100,0		
December	92,3	98,8	100,6	101,0	98,4		

Table 7 – Total volume of electricity imported: 2008–2013 1/

Month	Gigawatt-hours					
	2008	2009	2010	2011	2012	2013
January	638	1 102	1 122	1 088	1 085	2/ 676
February	885	999	995	730	1 063	
March	802	1 064	1 040	1 112	945	
April	844	906	931	912	1 068	
May	761	937	1 074	907	1 066	
June	1 002	1 088	1 019	1 009	1 044	
July	1 089	1 040	1 117	979	903	
August	1 076	1 072	1 109	1 108	465	
September	1 044	920	1 068	974	474	
October	645	1 115	770	911	451	
November	711	940	1 018	1 073	654	
December	1 075	1 112	930	1 087	788	
Year	**10 572**	**12 295**	**12 193**	**11 890**	**10 006**	

1/ Physical energy flowing into South Africa as measured by the metering systems at the South African borders.
2/ Preliminary.

Table 8 – Total volume of electricity exported: 2008–2013 1/

Month	Gigawatt-hours					
	2008	2009	2010	2011	2012	2013
January	1 280	1 096	1 217	1 133	1 247	2/ 1 115
February	1 101	979	1 128	1 069	1 212	
March	1 136	1 100	1 252	1 279	1 242	
April	998	1 086	1 170	1 190	1 174	
May	1 120	1 109	1 177	1 241	1 322	
June	1 162	1 175	1 132	1 174	1 335	
July	1 249	1 223	1 206	1 247	1 350	
August	1 220	1 235	1 275	1 298	1 295	
September	1 203	1 285	1 248	1 288	1 165	
October	1 258	1 288	1 338	1 378	1 300	
November	1 252	1 213	1 316	1 381	1 233	
December	1 189	1 263	1 209	1 286	1 160	
Year	**14 168**	**14 052**	**14 668**	**14 964**	**15 035**	

1/ Physical energy flowing out of South Africa as measured by the metering systems at the South African borders.
2/ Preliminary.

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

		Gigawatt-hours				
		January 2012	December 2012	January 2013 1/	% change between January 2012 and January 2013	Difference between January 2012 and January 2013
Total - All producers	Electricity produced	21 462	20 345	20 819	-3,0	-643
	Purchased outside South Africa (import) 2/	1 085	788	676	-37,7	-409
	Consumed in power stations and auxiliary systems	1 624	1 516	1 521	-6,3	-103
	Sold outside South Africa (export) 3/	1 247	1 160	1 115	-10,6	-132
	Electricity available for distribution in South Africa	**19 676**	**18 456**	**18 860**	**-4,1**	**-816**
ESKOM	Electricity produced	20 612	19 505	20 076	-2,6	-536
	Purchased outside South Africa (import) 2/	1 085	788	676	-37,7	-409
	Consumed in power stations and auxiliary systems	1 540	1 453	1 459	-5,3	-81
	Sold outside South Africa (export) 3/	1 247	1 160	1 115	-10,6	-132
	Electricity available for distribution in South Africa	**18 910**	**17 680**	**18 178**	**-3,9**	**-732**

1/ Preliminary.
2/ Physical energy flowing into South Africa as measured by the metering systems at the South African borders.
3/ Physical energy flowing out of South Africa as measured by the metering systems at the South African borders.

Table 10 – Total volume of electricity delivered by Eskom to provinces for 2012 and 2013 1/

Period		Gigawatt-hours									
		Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpuma-langa	Limpopo	Total South Africa
2012	**January**	1 889	844	464	706	3 527	2 237	4 631	2 910	1 038	**18 246**
	February	1 922	816	403	668	3 271	2 034	4 509	2 779	988	**17 390**
	March	2 027	859	436	688	3 282	2 161	4 849	2 900	1 000	**18 202**
	April	1 846	763	391	655	3 154	1 993	4 624	2 800	937	**17 163**
	May	1 943	839	401	709	3 318	2 181	5 159	2 884	991	**18 425**
	June	1 933	802	406	775	3 315	2 205	5 643	2 816	974	**18 869**
	July	1 978	837	432	793	3 441	2 273	5 731	2 922	952	**19 359**
	August	1 993	838	420	776	3 436	2 186	5 540	2 767	937	**18 893**
	September	1 852	788	414	664	3 316	2 097	4 981	2 678	950	**17 740**
	October	1 885	795	418	703	3 458	2 085	4 856	2 884	988	**18 072**
	November	1 840	784	451	717	3 422	2 170	4 701	2 944	975	**18 004**
	December	1 867	751	433	633	3 355	2 039	4 213	2 805	959	**17 055**
	Year	**22 975**	**9 716**	**5 069**	**8 487**	**40 295**	**25 661**	**59 437**	**34 089**	**11 689**	**217 418**
2013	**January 2/**	1 932	796	490	667	3 409	2 022	4 432	2 911	910	**17 569**

1/ Wholesale energy (Gigawatt-hours) 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 2010=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.

Collection rate

7 The collection rate for the survey on electricity generated and available for distribution for January 2013 was 100%.

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 *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.

10 The survey is conducted by mail, email and telephone. Information is collected from a sample of 25 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-12-ARIMA 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. The X12-ARIMA procedure for electricity generated and available for distribution is described in more detail on the Stats SA website at http://www.statssa.gov.za/publications/P4141/electricity_seasonal_adjustment_note_2012.pdf

Trend cycle

15 The trend is the long-term pattern or movement of a time series. The X-12-ARIMA 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;* and
- *SA Statistics.*

Rounding-off of figures

17 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.

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 2010. 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

Technical enquiries

Onica Mapimele
Telephone number: (012) 310 4897
Email: onicama@statssa.gov.za

Nicolai Claassen
Telephone number: (012) 336 0142
Email: nicolaic@statssa.gov.za

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General enquiries

User information services Telephone number: (012) 310 8600
Email: info@statssa.gov.za

Orders/subscription services Telephone number: (012) 310 8358
Email: magdaj@statssa.gov.za

Postal address: Private Bag X44, Pretoria, 0001

Produced by Stats SA