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Statistical release
P4141

Electricity generated and available for distribution (Preliminary)

July 2012

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13:00

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

Forthcoming issue:	Expected release date:
August 2012	4 October 2012

Contents

Results for July 2012

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

Actual estimates	July 2012 1/	% change between July 2011 and July 2012	% change between May to July 2011 and May to July 2012	% change between January to July 2011 and January to July 2012
Electricity available for distribution (Gigawatt-hours)	20 743	-2,0	-3,4	-2,6
Index of the physical volume of electricity production (2005=100)	112,0	-1,1	-2,9	-2,4

1/ Preliminary.

Seasonally adjusted estimates	July 2012	% change between June and July 2012	% change between February to April 2012 and May to July 2012
Electricity available for distribution (Gigawatt-hours)	19 348	-0,6	-0,7
Index of the physical volume of electricity production (2005=100)	104,5	-0,1	-0,3

Consumption of electricity

Seasonally adjusted electricity consumption decreased by 0,7% in the three months ended July 2012 compared with the previous three months. A month-on-month decrease of 0,6% was recorded for July 2012, following month-on-month increases of 1,2% in June 2012 and 0,2% in May 2012.

A year-on-year decrease of 2,0% in the actual volume of electricity consumption was recorded for July 2012.

Production of electricity

Seasonally adjusted electricity production decreased by 0,3% in the three months ended July 2012 compared with the previous three months. A month-on-month decrease of 0,1% was recorded for July 2012, following month-on-month increases of 1,5% in June 2012 and 0,5% in May 2012.

The actual estimated electricity production decreased by 1,1% year-on-year in July 2012.

Electricity delivered by Eskom to the provinces

The total volume of electricity delivered by Eskom to the provinces decreased by 1,5% in July 2012 compared with July 2011. Decreases were reported in six of the nine provinces, with the largest volume decrease recorded for Gauteng (-240 Gigawatt-hours), followed by KwaZulu-Natal (-198 Gigawatt-hours). North West recorded the largest increase (187 Gigawatt-hours) over this period.

Table B – Comparison of the seasonally adjusted volume of electricity generated and available for distribution between the three months ended July 2012 and the previous three months

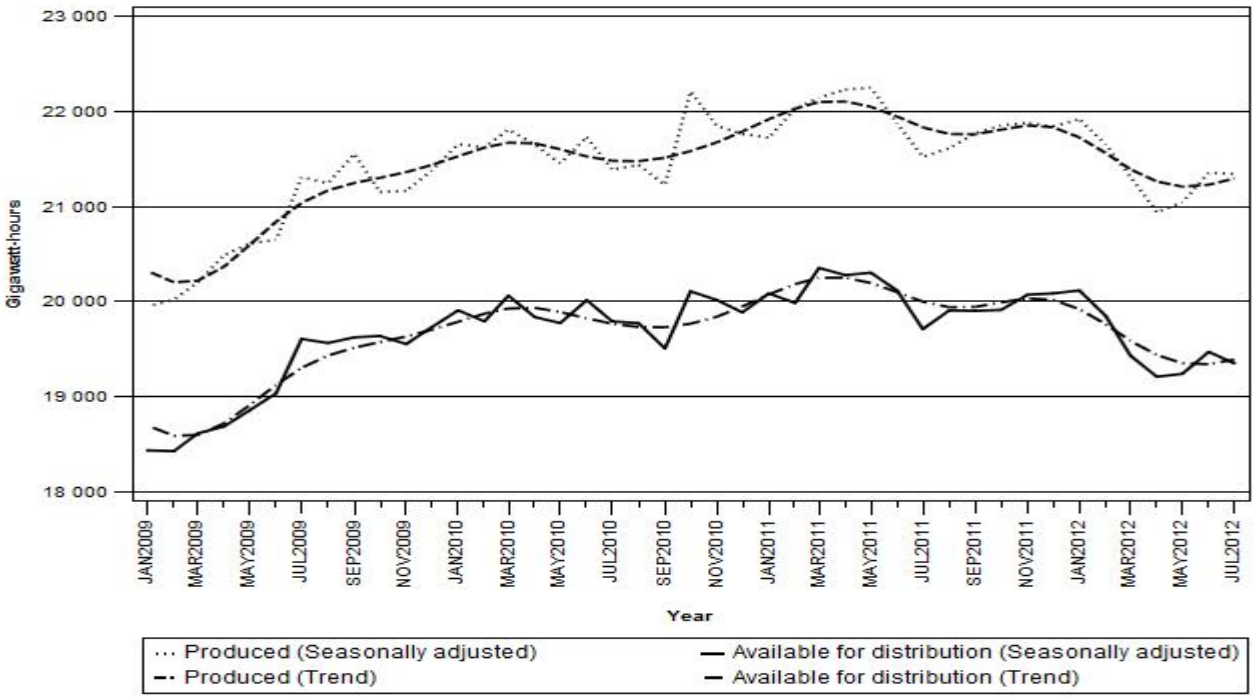
Gigawatt-hours	Seasonally adjusted quantity February to April 2012	Seasonally adjusted quantity May to July 2012	% change between February to April 2012 and May to July 2012	Quantity difference between February to April 2012 and May to July 2012
Electricity produced	63 901	63 735	-0,3	-166
Electricity available for distribution in South Africa	58 482	58 055	-0,7	-427

Table C – Comparison of actual estimates between the three months ended July 2012 and the three months ended July 2011

Gigawatt-hours	Actual volume May to July 2011	Actual volume May to July 2012	% change between May to July 2011 and May to July 2012	Quantity difference between May to July 2011 and May to July 2012
Electricity produced	68 641	66 672	-2,9	-1 969
Purchased outside South Africa (import) 1/	2 895	3 013	4,1	118
Consumed in power stations and auxiliary systems	4 860	4 791	-1,4	-69
Sold outside South Africa (export) 2/	3 662	4 007	9,4	345
Electricity available for distribution in South Africa	63 014	60 886	-3,4	-2 128

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: 2007–2012

Month	Gigawatt-hours					
	2007	2008	2009	2010	2011	2012
January	19 561	19 256	17 919	19 396	19 616	19 676
February	18 301	18 668	16 757	18 181	18 455	18 783
March	20 160	19 603	18 694	20 186	20 518	19 623
April	18 982	19 127	17 934	19 102	19 539	18 466
May	20 901	20 365	19 548	20 435	20 938	19 869
June	21 020	20 515	19 819	20 800	20 914	20 274
July	21 780	21 610	21 151	21 307	21 162	1/ 20 743
August	21 353	20 736	20 398	20 540	20 617	
September	19 732	19 725	19 382	19 256	19 619	
October	20 435	20 138	19 899	20 371	20 198	
November	19 785	18 640	19 248	19 702	19 763	
December	19 160	17 541	18 850	18 996	19 189	
Year	**241 170**	**235 924**	**229 599**	**238 272**	**240 528**	

1/ Preliminary.

Table 2 – Annual percentage change in electricity available for distribution in South Africa: 2007–2012

Month	Percentage change 2/					
	2007	2008	2009	2010	2011	2012
January	5,1	-1,6	-6,9	8,2	1,1	0,3
February	5,2	2,0	-10,2	8,5	1,5	1,8
March	6,2	-2,8	-4,6	8,0	1,6	-4,4
April	4,7	0,8	-6,2	6,5	2,3	-5,5
May	2,9	-2,6	-4,0	4,5	2,5	-5,1
June	4,2	-2,4	-3,4	4,9	0,5	-3,1
July	5,6	-0,8	-2,1	0,7	-0,7	-2,0
August	5,2	-2,9	-1,6	0,7	0,4	
September	3,9	-0,0	-1,7	-0,7	1,9	
October	3,9	-1,5	-1,2	2,4	-0,8	
November	2,8	-5,8	3,3	2,4	0,3	
December	1,3	-8,4	7,5	0,8	1,0	
Year	**4,3**	**-2,2**	**-2,7**	**3,8**	**0,9**	

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: 2007–2012

Month	Gigawatt-hours						
	2007	2008	2009	2010	2011	2012	% change between current and previous month
January	20 048	19 771	18 433	19 906	20 084	20 115	0,2
February	19 944	19 953	18 424	19 790	19 983	19 846	-1,3
March	20 133	19 552	18 611	20 060	20 352	19 429	-2,1
April	19 792	19 902	18 685	19 835	20 276	19 207	-1,1
May	20 149	19 626	18 855	19 772	20 302	19 238	0,2
June	20 263	19 752	19 033	20 013	20 112	19 469	1,2
July	20 295	20 076	19 605	19 790	19 708	19 348	-0,6
August	20 462	19 852	19 562	19 771	19 905		
September	19 961	19 960	19 622	19 505	19 901		
October	20 146	19 875	19 636	20 106	19 910		
November	20 082	18 945	19 551	20 014	20 070		
December	19 993	18 394	19 729	19 884	20 084		

Table 4 – Indices of the physical volume of electricity production: 2007–2012

Month	Base: 2005=100					
	2007	2008	2009	2010	2011	2012
January	103,9	105,3	95,0	103,4	104,0	105,2
February	97,2	99,7	88,5	96,5	98,9	99,4
March	107,8	105,6	99,3	107,4	109,2	105,2
April	100,9	102,0	96,1	102,0	104,8	98,5
May	111,9	109,6	104,5	108,5	112,2	106,3
June	112,5	108,8	104,8	110,1	110,8	108,3
July	116,6	115,1	112,8	113,0	113,2	1/ 112,0
August	114,1	110,3	108,8	109,4	110,0	
September	105,5	104,8	104,4	102,8	105,3	
October	109,1	109,4	105,6	110,8	109,2	
November	106,9	101,4	102,6	105,9	106,1	
December	104,6	93,6	100,3	102,1	102,4	
Year	**107,6**	**105,5**	**101,9**	**106,0**	**107,2**	

1/ Preliminary.

Table 5 – Annual percentage change in indices of the physical volume of electricity production: 2007–2012

Month	Percentage change 2/					
	2007	2008	2009	2010	2011	2012
January	4,1	1,3	-9,8	8,8	0,6	1,2
February	3,4	2,6	-11,2	9,0	2,5	0,5
March	4,4	-2,0	-6,0	8,2	1,7	-3,7
April	3,0	1,1	-5,8	6,1	2,7	-6,0
May	3,5	-2,1	-4,7	3,8	3,4	-5,3
June	4,8	-3,3	-3,7	5,1	0,6	-2,3
July	5,2	-1,3	-2,0	0,2	0,2	-1,1
August	4,6	-3,3	-1,4	0,6	0,5	
September	3,6	-0,7	-0,4	-1,5	2,4	
October	1,8	0,3	-3,5	4,9	-1,4	
November	3,5	-5,1	1,2	3,2	0,2	
December	3,7	-10,5	7,2	1,8	0,3	
Year	**3,8**	**-2,0**	**-3,4**	**4,0**	**1,1**	

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: 2007–2012

Month	Base: 2005=100						
	2007	2008	2009	2010	2011	2012	% change between current and previous month
January	106,5	108,0	97,7	106,1	106,4	107,3	0,3
February	106,6	107,2	98,1	105,9	107,9	106,0	-1,2
March	107,6	105,3	98,9	106,8	108,5	104,4	-1,5
April	105,4	106,3	100,3	106,0	108,9	102,6	-1,7
May	108,2	105,8	101,0	105,1	109,0	103,1	0,5
June	108,9	105,2	101,1	106,4	107,1	104,6	1,5
July	108,3	106,7	104,4	104,8	105,4	104,5	-0,1
August	109,0	105,2	104,1	105,0	105,9		
September	106,6	105,9	105,6	104,0	106,6		
October	107,1	107,4	103,6	108,8	107,0		
November	108,2	102,6	103,7	107,0	107,2		
December	108,7	97,9	104,7	106,6	107,0		

Table 7 – Total volume of electricity imported: 2007–2012 1/

Month	Gigawatt-hours					
	2007	2008	2009	2010	2011	2012
January	1 088	638	1 102	1 122	1 088	1 085
February	942	885	999	995	730	1 063
March	973	802	1 064	1 040	1 112	945
April	1 055	844	906	931	912	1 068
May	900	761	937	1 074	907	1 066
June	880	1 002	1 088	1 019	1 009	1 044
July	984	1 089	1 040	1 117	979	2/ 903
August	1 045	1 076	1 072	1 109	1 108	
September	1 026	1 044	920	1 068	974	
October	1 040	645	1 115	770	911	
November	796	711	940	1 018	1 073	
December	619	1 075	1 112	930	1 087	
Year	**11 348**	**10 572**	**12 295**	**12 193**	**11 890**	

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: 2007–2012 1/

Month	Gigawatt-hours					
	2007	2008	2009	2010	2011	2012
January	1 134	1 280	1 096	1 217	1 133	1 247
February	1 060	1 101	979	1 128	1 069	1 212
March	1 231	1 136	1 100	1 252	1 279	1 242
April	1 132	998	1 086	1 170	1 190	1 174
May	1 203	1 120	1 109	1 177	1 241	1 322
June	1 256	1 162	1 175	1 132	1 174	1 335
July	1 301	1 249	1 223	1 206	1 247	2/ 1 350
August	1 252	1 220	1 235	1 275	1 298	
September	1 186	1 203	1 285	1 248	1 288	
October	1 252	1 258	1 288	1 338	1 378	
November	1 256	1 252	1 213	1 316	1 381	
December	1 233	1 189	1 263	1 209	1 286	
Year	**14 496**	**14 168**	**14 052**	**14 668**	**14 964**	

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

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

		Gigawatt-hours				
		July 2011	June 2012	July 2012 1/	% change between July 2011 and July 2012	Difference between July 2011 and July 2012
Total - All producers	**Electricity produced**	23 111	22 107	22 863	-1,1	-248
	Purchased outside South Africa (import) 2/	979	1 044	903	-7,8	-76
	Consumed in power stations and auxiliary systems	1 681	1 542	1 673	-0,5	-8
	Sold outside South Africa (export) 3/	1 247	1 335	1 350	8,3	103
	Electricity available for distribution in South Africa	**21 162**	**20 274**	**20 743**	**-2,0**	**-419**
ESKOM	**Electricity produced**	22 094	21 203	21 970	-0,6	-124
	Purchased outside South Africa (import) 2/	979	1 044	903	-7,8	-76
	Consumed in power stations and auxiliary systems	1 607	1 469	1 590	-1,1	-17
	Sold outside South Africa (export) 3/	1 247	1 335	1 350	8,3	103
	Electricity available for distribution in South Africa	**20 219**	**19 443**	**19 933**	**-1,4**	**-286**

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

		Gigawatt-hours			
		January to July 2011	January to July 2012 1/	% change between January to July 2011 and January to July 2012	Difference between January to July 2011 and January to July 2012
Total - All producers	**Electricity produced**	153 734	150 008	-2,4	-3 726
	Purchased outside South Africa (import) 2/	6 737	7 174	6,5	437
	Consumed in power stations and auxiliary systems	10 996	10 864	-1,2	-132
	Sold outside South Africa (export) 3/	8 333	8 882	6,6	549
	Electricity available for distribution in South Africa	**141 142**	**137 434**	**-2,6**	**-3 708**
ESKOM	**Electricity produced**	147 523	143 883	-2,5	-3 640
	Purchased outside South Africa (import) 2/	6 737	7 174	6,5	437
	Consumed in power stations and auxiliary systems	10 526	10 343	-1,7	-183
	Sold outside South Africa (export) 3/	8 333	8 882	6,6	549
	Electricity available for distribution in South Africa	**135 402**	**131 833**	**-2,6**	**-3 569**

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 2011 and 2012

Period		Gigawatt-hours 1/									
		Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpuma-langa	Limpopo	Total South Africa
2011	January	1 962	777	408	721	3 417	2 187	4 738	3 052	1 021	**18 283**
	February	1 881	734	372	665	3 256	2 044	4 394	2 808	937	**17 091**
	March	2 031	773	417	774	3 631	2 292	4 955	3 017	1 063	**18 953**
	April	1 877	726	389	753	3 432	2 159	5 016	2 946	992	**18 290**
	May	1 980	811	406	772	3 624	2 283	5 435	3 106	1 000	**19 417**
	June	1 966	826	417	812	3 527	2 097	5 804	2 945	1 020	**19 414**
	July	2 014	876	428	814	3 639	2 086	5 971	2 852	972	**19 652**
	August	1 985	884	414	783	3 574	2 029	5 727	2 830	960	**19 186**
	September	1 752	840	418	688	3 381	2 172	4 985	2 788	1 028	**18 052**
	October	1 801	840	447	709	3 547	2 268	4 991	2 997	1 051	**18 651**
	November	1 767	840	428	666	3 429	2 248	4 814	2 916	1 035	**18 143**
	December	1 763	783	441	647	3 466	2 107	4 426	2 895	1 050	**17 578**
	Year	22 779	9 710	4 985	8 804	41 923	25 972	61 256	35 152	12 129	**222 710**
	Year to date	**13 711**	**5 523**	**2 837**	**5 311**	**24 526**	**15 148**	**36 313**	**20 726**	**7 005**	**131 100**
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 2/	1 978	837	432	793	3 441	2 273	5 731	2 922	952	**19 359**
	Year to date	**13 538**	**5 760**	**2 933**	**4 994**	**23 308**	**15 084**	**35 146**	**20 011**	**6 880**	**127 654**

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 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.

Collection rate

7 The collection rate for the survey on electricity generated and available for distribution for July 2012 was 99%. The improved collection rate for June 2012 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_2011.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 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 information

Stats SA publishes approximately 300 different statistical releases each year. It is not economically viable to produce them in more than one of South Africa's eleven official languages. Since the releases are used extensively, not only locally but also by international economic and social-scientific communities, Stats SA releases are published in English only.

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Stats SA products

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Central Reference Library, Nelspruit
Central Reference Collection, Kimberley
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