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Electricity generated and available for distribution (Preliminary)

December 2018

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	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Year-on-year % change, unadjusted	2,2	-0,4	-0,8	0,8	-0,2	-1,8
Month-on-month % change, seasonally adjusted	0,2	-0,6	0,4	0,8	-0,5	-0,3
3-month % change, seasonally adjusted [1]	0,1	-0,7	-0,3	-0,4	0,4	0,4

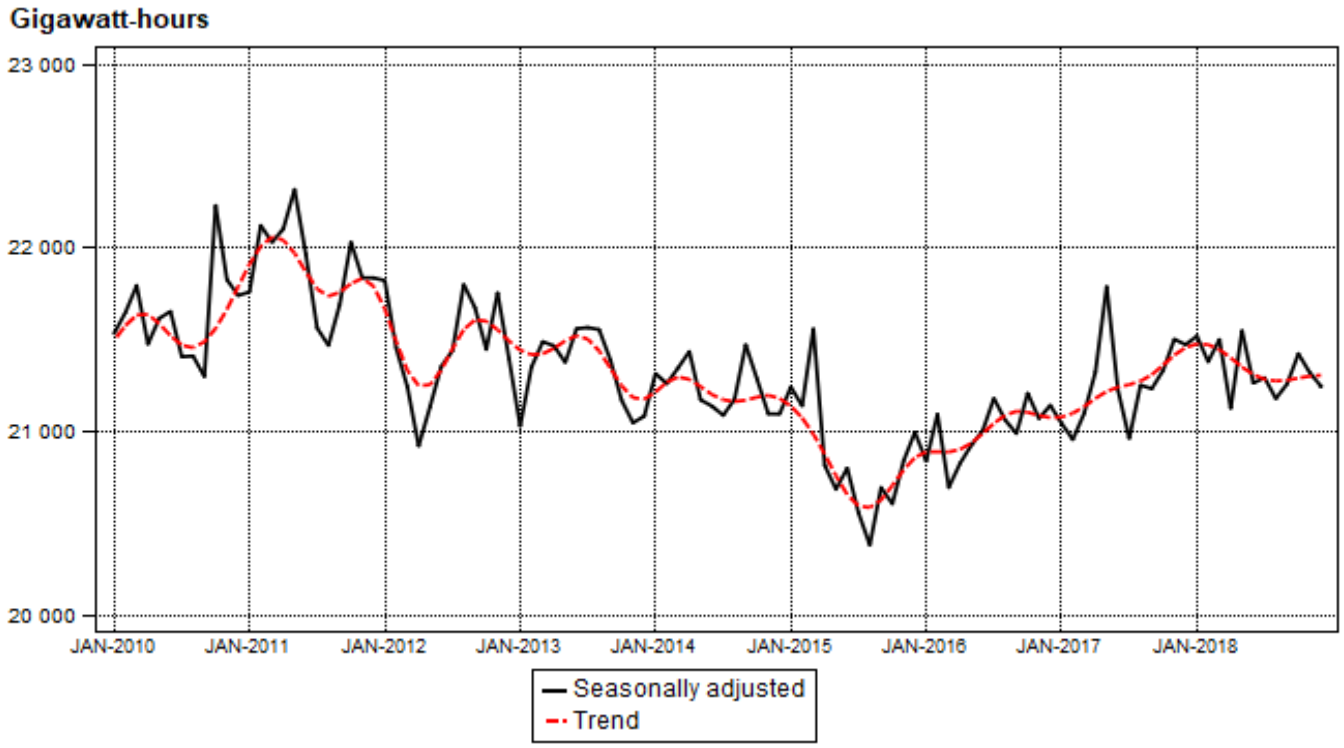
[1] Percentage change between the previous 3 months and the 3 months ending in the month indicated.

Electricity generation (production) decreased by 1,8% year-on-year in December 2018.

Total electricity generation was 0,3% higher in 2018 compared with 2017. The 0,3% increase in annual electricity production followed increases of 1,0% in 2017 and 1,0% in 2016.

Seasonally adjusted electricity generation decreased by 0,3% in December 2018 compared with November 2018. This followed month-on-month changes of -0,5% in November 2018 and 0,8% in October 2018. Seasonally adjusted electricity generation increased by 0,4% in the fourth quarter of 2018 compared with the third quarter of 2018.

Figure 1 – Electricity generated in South Africa



Electricity distributed (consumed) in South Africa: results for December 2018

Table B – Key growth rates in the volume of electricity distributed

	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Year-on-year % change, unadjusted	3,1	0,9	0,7	2,2	0,9	0,0
Month-on-month % change, seasonally adjusted	0,6	-0,1	-0,3	0,8	-1,2	0,8
3-month % change, seasonally adjusted [1]	1,0	0,0	0,3	-0,2	0,0	0,1

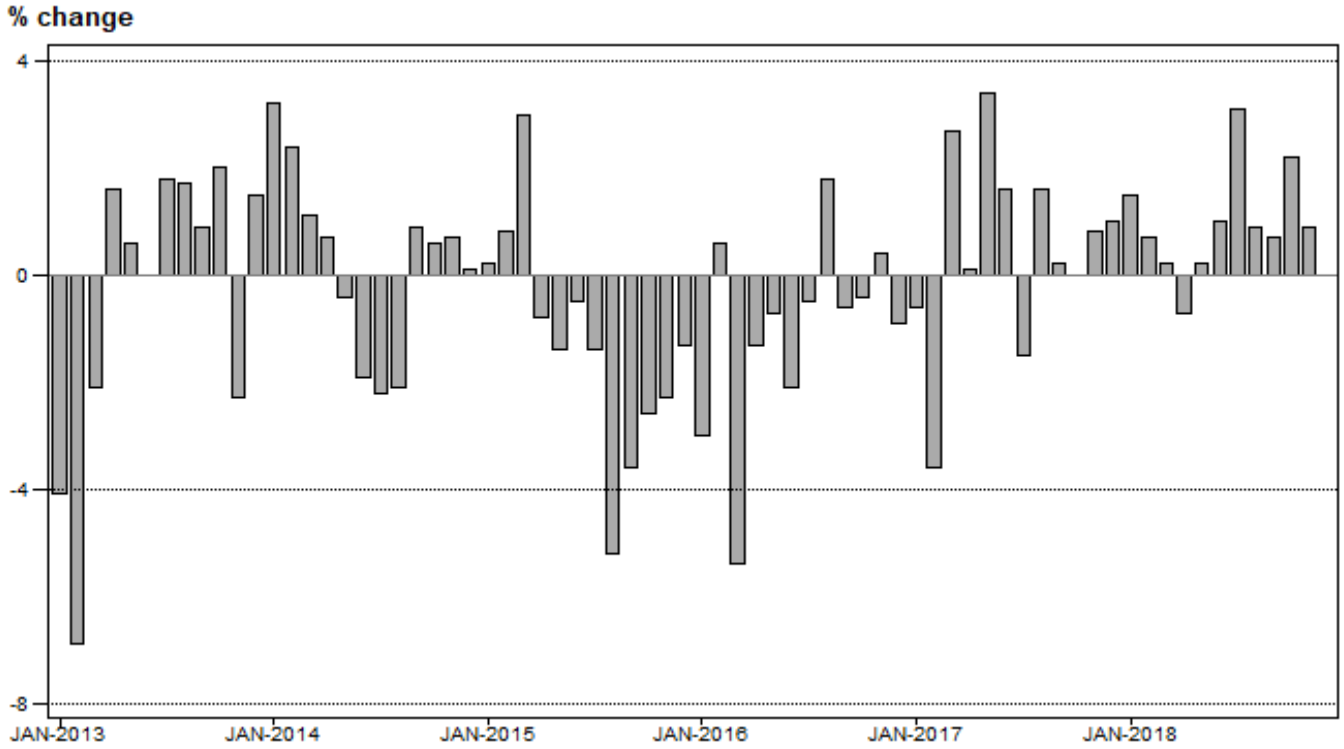
[1] Percentage change between the previous 3 months and the 3 months ending in the month indicated.

Electricity distribution (consumption) was flat year-on-year in December 2018.

Total electricity consumption was 0,9% higher in 2018 compared with 2017. The 0,9% increase in annual electricity consumption followed an increase of 0,5% in 2017 and a decrease of 1,0% in 2016.

Seasonally adjusted electricity distribution increased by 0,8% month-on-month in December 2018, following month-on-month changes of -1,2% in November 2018 and 0,8% in October 2018. Seasonally adjusted electricity distribution increased by 0,1% in the fourth quarter of 2018 compared with the third quarter of 2018.

Figure 2 – Electricity distributed in South Africa: year-on-year percentage change



Risenga Maluleke
Statistician-General

Tables

Table 1 – Index of the volume of electricity generated (Base: 2015=100)

Month	2012	2013	2014	2015	2016	2017	2018 [1]
Jan	103,0	99,9	101,4	101,3	99,2	100,0	102,4
Feb	97,4	93,9	93,7	93,1	95,8	92,1	93,9
Mar	103,0	103,3	102,6	103,7	99,5	102,2	103,4
Apr	96,4	100,4	99,7	96,4	97,3	98,1	97,6
May	104,1	105,0	103,9	101,4	102,7	107,4	106,5
Jun	106,1	106,1	103,6	102,6	103,1	104,8	105,1
Jul	109,7	110,4	108,1	105,4	108,4	106,5	108,8
Aug	109,4	108,2	106,0	101,1	105,1	105,9	105,5
Sep	102,4	101,0	102,2	98,6	99,7	100,8	100,0
Oct	104,9	103,7	104,2	101,0	103,2	104,5	105,3
Nov	103,3	100,0	99,3	98,0	100,2	101,9	101,7
Dec	97,6	96,9	97,5	97,3	98,1	99,6	97,8
Total	**103,1**	**102,4**	**101,9**	**100,0**	**101,0**	**102,0**	**102,3**

[1] Latest month is preliminary.

Table 2 – Year-on-year percentage change in the volume of electricity generated

Month	2013	2014	2015	2016	2017	2018	*2018 year-to-date*
Jan	-3,0	1,5	-0,1	-2,1	0,8	2,4	*2,4*
Feb	-3,6	-0,2	-0,6	2,9	-3,9	2,0	*2,2*
Mar	0,3	-0,7	1,1	-4,1	2,7	1,2	*1,8*
Apr	4,1	-0,7	-3,3	0,9	0,8	-0,5	*1,2*
May	0,9	-1,0	-2,4	1,3	4,6	-0,8	*0,8*
Jun	0,0	-2,4	-1,0	0,5	1,6	0,3	*0,7*
Jul	0,6	-2,1	-2,5	2,8	-1,8	2,2	*0,9*
Aug	-1,1	-2,0	-4,6	4,0	0,8	-0,4	*0,8*
Sep	-1,4	1,2	-3,5	1,1	1,1	-0,8	*0,6*
Oct	-1,1	0,5	-3,1	2,2	1,3	0,8	*0,6*
Nov	-3,2	-0,7	-1,3	2,2	1,7	-0,2	*0,5*
Dec	-0,7	0,6	-0,2	0,8	1,5	-1,8	*0,3*
Total	**-0,7**	**-0,5**	**-1,9**	**1,0**	**1,0**	**0,3**	

Table 3 – Seasonally adjusted index of the volume of electricity generated

Month	Base: 2015=100				Month-on-month % change			
	2015	2016	2017	2018	2015	2016	2017	2018
Jan	101,8	99,9	100,9	103,2	0,7	-0,8	-0,5	0,3
Feb	101,3	101,1	100,5	102,5	-0,5	1,2	-0,4	-0,7
Mar	103,4	99,2	101,1	103,1	2,1	-1,9	0,6	0,6
Apr	99,8	99,8	102,2	101,3	-3,5	0,6	1,1	-1,7
May	99,2	100,3	104,5	103,3	-0,6	0,5	2,3	2,0
Jun	99,7	100,7	101,8	101,9	0,5	0,4	-2,6	-1,4
Jul	98,5	101,5	100,5	102,1	-1,2	0,8	-1,3	0,2
Aug	97,7	101,0	101,9	101,5	-0,8	-0,5	1,4	-0,6
Sep	99,2	100,6	101,8	101,9	1,5	-0,4	-0,1	0,4
Oct	98,8	101,7	102,3	102,7	-0,4	1,1	0,5	0,8
Nov	99,9	101,0	103,1	102,2	1,1	-0,7	0,8	-0,5
Dec	100,7	101,4	102,9	101,9	0,8	0,4	-0,2	-0,3

Table 4 – Volume of electricity distributed in South Africa (gigawatt-hours)

Month	2013	2014	2015	2016	2017	2018 [1]
Jan	18 860	19 457	19 491	18 902	18 786	19 074
Feb	17 493	17 917	18 060	18 167	17 511	17 642
Mar	19 202	19 415	19 998	18 910	19 416	19 449
Apr	18 762	18 895	18 739	18 504	18 522	18 400
May	19 991	19 907	19 620	19 481	20 143	20 183
Jun	20 270	19 891	19 797	19 377	19 696	19 901
Jul	21 119	20 661	20 368	20 266	19 972	20 592
Aug	20 689	20 255	19 209	19 549	19 853	20 030
Sep	19 271	19 450	18 757	18 646	18 675	18 812
Oct	19 795	19 905	19 389	19 318	19 317	19 747
Nov	18 984	19 126	18 684	18 756	18 907	19 079
Dec	18 733	18 752	18 503	18 342	18 532	18 523
Total	**233 169**	**233 631**	**230 615**	**228 218**	**229 330**	**231 432**

[1] Latest month is preliminary.

Table 5 – Year-on-year percentage change in electricity distributed in South Africa

Month	2014	2015	2016	2017	2018	*2018 year-to-date*
Jan	3,2	0,2	-3,0	-0,6	1,5	*1,5*
Feb	2,4	0,8	0,6	-3,6	0,7	*1,2*
Mar	1,1	3,0	-5,4	2,7	0,2	*0,8*
Apr	0,7	-0,8	-1,3	0,1	-0,7	*0,4*
May	-0,4	-1,4	-0,7	3,4	0,2	*0,4*
Jun	-1,9	-0,5	-2,1	1,6	1,0	*0,5*
Jul	-2,2	-1,4	-0,5	-1,5	3,1	*0,9*
Aug	-2,1	-5,2	1,8	1,6	0,9	*0,9*
Sep	0,9	-3,6	-0,6	0,2	0,7	*0,9*
Oct	0,6	-2,6	-0,4	0,0	2,2	*1,0*
Nov	0,7	-2,3	0,4	0,8	0,9	*1,0*
Dec	0,1	-1,3	-0,9	1,0	0,0	*0,9*
Total	**0,2**	**-1,3**	**-1,0**	**0,5**	**0,9**	

Table 6 – Seasonally adjusted volume of electricity distributed in South Africa

Month	Gigawatt-hours				Month-on-month % change			
	2015	2016	2017	2018	2015	2016	2017	2018
Jan	19 591	19 049	18 965	19 234	0,4	-0,8	-0,2	-0,1
Feb	19 511	19 055	18 972	19 154	-0,4	0,0	0,0	-0,4
Mar	19 967	18 865	19 210	19 354	2,3	-1,0	1,3	1,0
Apr	19 300	18 902	19 252	19 025	-3,3	0,2	0,2	-1,7
May	19 190	19 022	19 559	19 548	-0,6	0,6	1,6	2,7
Jun	19 165	18 839	19 042	19 237	-0,1	-1,0	-2,6	-1,6
Jul	19 107	19 008	18 869	19 352	-0,3	0,9	-0,9	0,6
Aug	18 599	18 812	19 127	19 332	-2,7	-1,0	1,4	-0,1
Sep	18 961	18 894	18 965	19 282	1,9	0,4	-0,8	-0,3
Oct	19 117	19 205	19 070	19 435	0,8	1,6	0,6	0,8
Nov	19 072	18 936	19 162	19 206	-0,2	-1,4	0,5	-1,2
Dec	19 194	19 008	19 253	19 363	0,6	0,4	0,5	0,8

Table 7 – Volume of electricity by category (gigawatt-hours)

	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18 [1]	Dec-18 year-on-year % change
Total - all producers						
Generated	21 990	20 844	21 947	21 197	20 386	-1,8
Inflow into South Africa	935	810	847	764	901	22,8
Consumed in power stations and auxiliary systems	1 727	1 639	1 735	1 615	1 554	-1,0
Outflow from South Africa	1 168	1 203	1 313	1 268	1 211	-12,8
Distributed in South Africa	20 030	18 812	19 747	19 079	18 523	0,0
Eskom						
Generated	19 949	19 001	19 883	19 137	18 297	-2,3
Inflow into South Africa	935	810	847	764	901	22,8
Consumed in power stations and auxiliary systems	1 639	1 576	1 669	1 540	1 465	-2,5
Outflow from South Africa	1 168	1 203	1 313	1 268	1 211	-12,8
Distributed in South Africa	18 076	17 032	17 748	17 093	16 522	-0,3

[1] Preliminary.

Table 8 – Year-to-date volume of electricity by category: year-on-year percentage change and difference

	Jan – Dec 2017 (GWh)	Jan – Dec 2018 (GWh)	% change between Jan – Dec 2017 and Jan – Dec 2018	Difference between Jan – Dec 2017 and Jan – Dec 2018 (GWh)
Total - all producers				
Generated	255 093	255 962	0,3	869
Inflow into South Africa	8 568	9 687	13,1	1 119
Consumed in power stations and auxiliary systems	19 128	19 834	3,7	706
Outflow from South Africa	15 201	14 386	-5,4	-815
Distributed in South Africa	229 330	231 432	0,9	2 102
Eskom				
Generated	233 919	232 803	-0,5	-1 116
Inflow into South Africa	8 568	9 687	13,1	1 119
Consumed in power stations and auxiliary systems	18 313	18 989	3,7	676
Outflow from South Africa	15 201	14 386	-5,4	-815
Distributed in South Africa	208 971	209 113	0,1	142

Table 9 – Volume of electricity delivered to provinces (gigawatt-hours)

Province	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18 [1]	Dec-18 year-on-year % change
Western Cape	1 968	1 848	1 794	1 823	1 822	1,6
Eastern Cape	810	752	777	743	695	-1,7
Northern Cape	510	495	552	539	592	8,6
Free State	868	763	828	810	797	-2,4
KwaZulu-Natal	3 757	3 567	3 680	3 535	3 461	0,9
North West	2 460	2 502	2 613	2 517	2 423	7,2
Gauteng	5 228	4 735	4 782	4 572	4 208	-2,5
Mpumalanga	2 831	2 534	2 945	2 890	2 892	-2,0
Limpopo	1 173	1 222	1 305	1 261	1 253	19,7
Total	**19 606**	**18 417**	**19 276**	**18 690**	**18 144**	**1,6**

[1] Preliminary.

Survey information

Introduction

1 Statistics South Africa (Stats SA) conducts a monthly survey covering electricity undertakings and establishments (branches) in the electricity industry. This statistical release contains monthly information regarding the volume of electricity units:

- generated and distributed in South Africa;
- flowing into and out from South Africa as measured by the metering systems at the South African borders; and
- delivered to provinces.

Both unadjusted and seasonally adjusted figures are published.

2 In accordance with international practice, the indices are usually re-based every five years to a new base year. The current base period of the index is 2015.

3 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 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 and/or distribution of electricity (excluding the distribution of purchased electric energy). 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 December 2018 was 96%. The collection rate for November 2018 was 96%.

Statistical unit

8 The 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 (see point 5).

Revised figures

9 Normally revised figures are due to:

- late submission of data to Stats SA; and
- revisions or corrections by respondents to previous reported data.

Data are edited at enterprise level.

Rounding-off of figures

10 Where figures have been rounded off, discrepancies may occur between sums of the component items and the totals.

Historical data

11 Historical electricity data are available on the Stats SA webpage. Click on the following link (Time series data) to access the data electronically.

Past publications

12 Past electricity releases are available on the Stats SA webpage. Click on the following link (Past publications) to access the releases electronically.

Technical notes

Survey methodology and design

1 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 group one) 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 kilowatts is excluded from the sample.

2 The survey is conducted by electronic filing, email, fax and telephone. Information is collected from a sample of 24 electricity undertakings or establishments. As from September 2013, Eskom supplied additional data for independent power producers (IPPs) that were not in the original sample of 24 establishments.

Monthly index of electricity generated

3 The calculation of the monthly index of electricity generated is based on the volume of electricity units produced.

Benchmarking

4 The index of the volume of electricity generated should provide an accurate reflection of the trend of activities of the relevant industry. The level of activities, as measured by the monthly electricity 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.

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

Seasonal adjustment

5 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:
Click to download Electricity seasonal adjustment September 2017

Trend cycle

6 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 to estimate the underlying trend cycle.

Month-on-month percentage change

7 The month-on-month percentage change in a variable for any given month is the change between that month and the previous month, expressed as a percentage of the latter.

Year-on-year percentage change

8 The year-on-year percentage change in a variable for any given period is the change between that period and the corresponding period of the previous year, expressed as a percentage of the latter.

Glossary

Electricity undertaking

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

Index of the volume of electricity generated

A statistical measure of the change in the volume of electricity generated in a given period and the volume of electricity generated in the base period. The base period is 2015. The production in the base period is set at 100.

Industry

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

Inflow into SA

Electricity flowing into South Africa as measured by the metering systems at the South African borders.

Outflow from SA

Electricity flowing from South Africa as measured by the metering systems at the South African borders.

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
GWh	Gigawatt-hour
ISIC	International Standard Industrial Classification
SIC	Standard Industrial Classification of all Economic Activities
SA	South Africa
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.

Stats SA products

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You can visit us on the internet at: www.statssa.gov.za

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