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STATISTICAL RELEASE
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Electricity generated and available for distribution (Preliminary)

October 2020

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Electricity generated (produced) in South Africa: results for October 2020

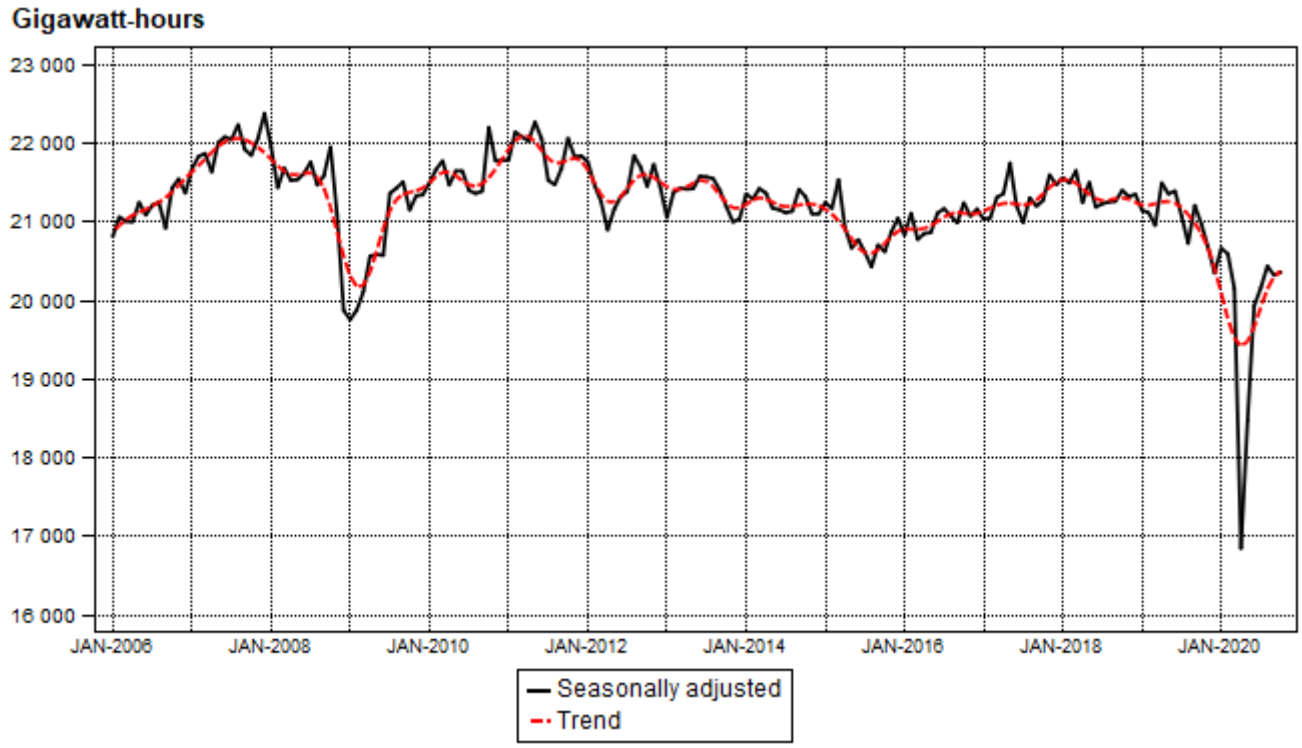
Table A – Key growth rates in the volume of electricity generated

	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20
Year-on-year % change, unadjusted	-13,2	-5,8	-4,5	-2,4	-3,1	-2,8
Month-on-month % change, seasonally adjusted	9,7	7,8	1,2	1,5	-0,6	0,2
3-month % change, seasonally adjusted [1]	-9,9	-10,0	1,7	9,1	10,2	4,4

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

Electricity generation (production) decreased by 2,8% year-on-year in October 2020. Seasonally adjusted electricity generation increased by 0,2% in October 2020 compared with September 2020. This followed month-on-month changes of -0,6% in September 2020 and 1,5% in August 2020. Seasonally adjusted electricity generation increased by 4,4% in the three months ended October 2020 compared with the previous three months.

Figure 1 – Electricity generated in South Africa



Electricity distributed (consumed) in South Africa: results for October 2020

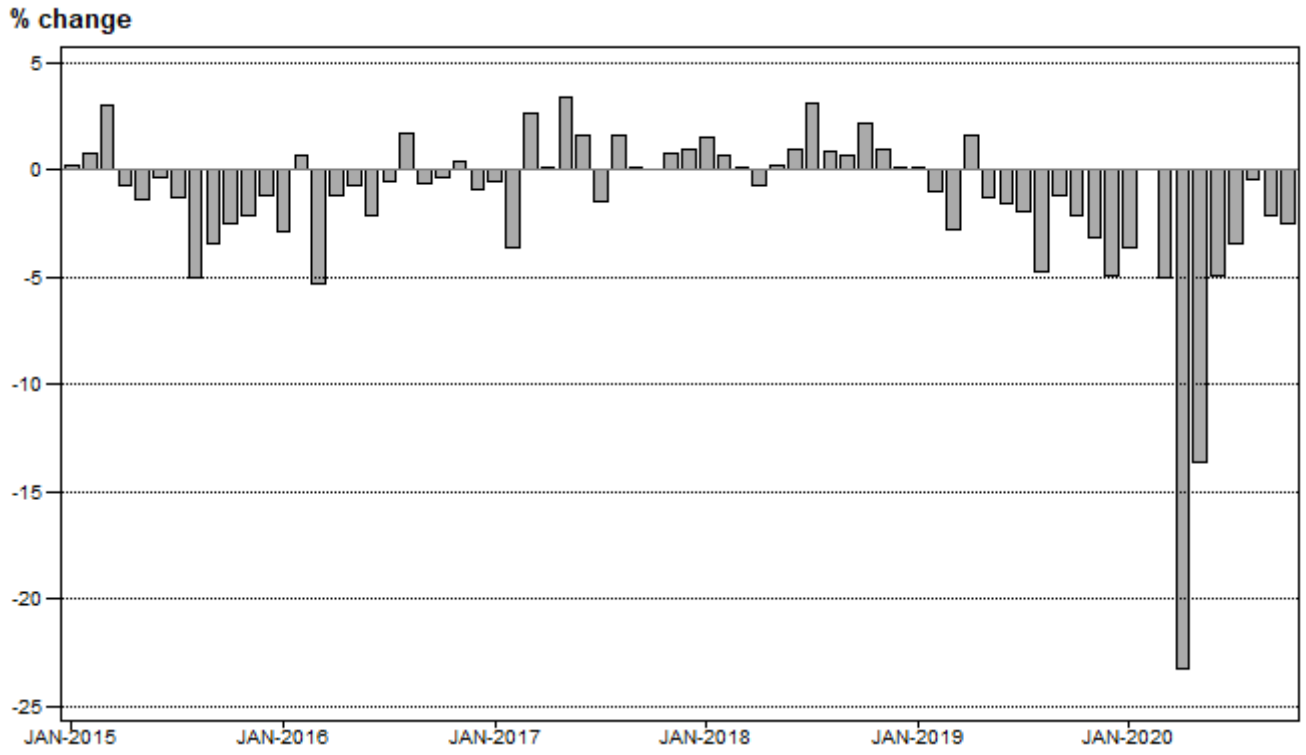
Table B – Key growth rates in the volume of electricity distributed

	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20
Year-on-year % change, unadjusted	-13,6	-4,9	-3,4	-0,4	-2,1	-2,5
Month-on-month % change, seasonally adjusted	10,1	8,3	2,0	1,7	-1,0	0,1
3-month % change, seasonally adjusted [1]	-10,5	-10,0	2,6	10,6	11,7	5,1

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

Electricity distribution (consumption) decreased by 2,5% year-on-year in October 2020. Seasonally adjusted electricity distribution increased by 0,1% month-on-month in October 2020, following month-on-month changes of -1,0% in September 2020 and 1,7% in August 2020. Seasonally adjusted electricity distribution increased by 5,1% in the three months ended October 2020 compared with the previous three months.

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	2014	2015	2016	2017	2018	2019	2020 [1]
Jan	101,3	101,2	99,2	100,1	102,4	100,4	97,9
Feb	93,6	93,0	95,9	92,2	93,9	92,1	93,0
Mar	102,5	103,6	99,6	102,2	103,4	100,4	96,4
Apr	99,6	96,5	97,4	98,1	97,6	99,4	76,7
May	103,8	101,4	102,7	107,4	106,5	105,9	91,9
Jun	103,5	102,7	103,2	104,8	105,1	105,2	99,1
Jul	107,9	105,4	108,4	106,5	108,8	108,1	103,2
Aug	105,9	101,2	105,1	106,0	105,5	103,0	100,5
Sep	102,1	98,6	99,8	100,8	100,0	99,6	96,5
Oct	104,1	101,0	103,2	104,6	105,4	103,4	100,5
Nov	99,2	98,1	100,3	101,9	101,8	99,0	
Dec	97,4	97,3	98,2	99,6	98,0	94,1	
Total	**101,7**	**100,0**	**101,1**	**102,0**	**102,4**	**100,9**	

[1] Latest month is preliminary.

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

Month	2015	2016	2017	2018	2019	2020	*2020 year-to-date*
Jan	-0,1	-2,0	0,9	2,3	-2,0	-2,5	*-2,5*
Feb	-0,6	3,1	-3,9	1,8	-1,9	1,0	*-0,8*
Mar	1,1	-3,9	2,6	1,2	-2,9	-4,0	*-1,9*
Apr	-3,1	0,9	0,7	-0,5	1,8	-22,8	*-7,2*
May	-2,3	1,3	4,6	-0,8	-0,6	-13,2	*-8,5*
Jun	-0,8	0,5	1,6	0,3	0,1	-5,8	*-8,0*
Jul	-2,3	2,8	-1,8	2,2	-0,6	-4,5	*-7,5*
Aug	-4,4	3,9	0,9	-0,5	-2,4	-2,4	*-6,9*
Sep	-3,4	1,2	1,0	-0,8	-0,4	-3,1	*-6,4*
Oct	-3,0	2,2	1,4	0,8	-1,9	-2,8	*-6,1*
Nov	-1,1	2,2	1,6	-0,1	-2,8		
Dec	-0,1	0,9	1,4	-1,6	-4,0		
Total	**-1,7**	**1,1**	**0,9**	**0,4**	**-1,5**		

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

Month	Base: 2015=100				Month-on-month % change			
	2017	2018	2019	2020	2017	2018	2019	2020
Jan	100,7	103,2	101,3	99,0	-0,6	0,4	-0,9	1,6
Feb	100,8	102,9	101,1	98,6	0,1	-0,3	-0,2	-0,4
Mar	102,1	103,7	100,3	96,5	1,3	0,8	-0,8	-2,1
Apr	102,3	101,7	102,9	80,7	0,2	-1,9	2,6	-16,4
May	104,1	103,0	102,3	88,5	1,8	1,3	-0,6	9,7
Jun	101,5	101,5	102,4	95,4	-2,5	-1,5	0,1	7,8
Jul	100,5	101,7	100,9	96,5	-1,0	0,2	-1,5	1,2
Aug	102,0	101,8	99,2	97,9	1,5	0,1	-1,7	1,5
Sep	101,5	101,8	101,6	97,3	-0,5	0,0	2,4	-0,6
Oct	101,9	102,5	100,4	97,5	0,4	0,7	-1,2	0,2
Nov	103,4	102,1	99,0		1,5	-0,4	-1,4	
Dec	102,8	102,2	97,4		-0,6	0,1	-1,6	

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

Month	2015	2016	2017	2018	2019	2020 [1]
Jan	19 491	18 924	18 820	19 106	19 132	18 444
Feb	18 060	18 190	17 539	17 667	17 493	17 491
Mar	19 998	18 935	19 441	19 470	18 930	17 976
Apr	18 769	18 535	18 550	18 421	18 711	14 357
May	19 636	19 502	20 161	20 207	19 943	17 230
Jun	19 824	19 405	19 720	19 926	19 609	18 649
Jul	20 391	20 297	19 997	20 626	20 224	19 533
Aug	19 236	19 570	19 880	20 053	19 105	19 037
Sep	18 788	18 679	18 707	18 839	18 605	18 216
Oct	19 415	19 349	19 352	19 785	19 367	18 883
Nov	18 720	18 790	18 940	19 123	18 539	
Dec	18 529	18 370	18 562	18 582	17 678	
Total	**230 857**	**228 546**	**229 669**	**231 805**	**227 336**	

[1] Latest month is preliminary.

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

Month	2016	2017	2018	2019	2020	*2020 year-to-date*
Jan	-2,9	-0,5	1,5	0,1	-3,6	*-3,6*
Feb	0,7	-3,6	0,7	-1,0	0,0	*-1,9*
Mar	-5,3	2,7	0,1	-2,8	-5,0	*-3,0*
Apr	-1,2	0,1	-0,7	1,6	-23,3	*-8,1*
May	-0,7	3,4	0,2	-1,3	-13,6	*-9,2*
Jun	-2,1	1,6	1,0	-1,6	-4,9	*-8,5*
Jul	-0,5	-1,5	3,1	-1,9	-3,4	*-7,7*
Aug	1,7	1,6	0,9	-4,7	-0,4	*-6,8*
Sep	-0,6	0,1	0,7	-1,2	-2,1	*-6,3*
Oct	-0,3	0,0	2,2	-2,1	-2,5	*-5,9*
Nov	0,4	0,8	1,0	-3,1		
Dec	-0,9	1,0	0,1	-4,9		
Total	**-1,0**	**0,5**	**0,9**	**-1,9**		

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

Month	Gigawatt-hours				Month-on-month % change			
	2017	2018	2019	2020	2017	2018	2019	2020
Jan	18 944	19 266	19 303	18 636	-0,4	0,2	-0,8	1,6
Feb	19 068	19 271	19 091	18 415	0,7	0,0	-1,1	-1,2
Mar	19 406	19 488	18 905	17 972	1,8	1,1	-1,0	-2,4
Apr	19 292	19 153	19 344	15 045	-0,6	-1,7	2,3	-16,3
May	19 534	19 522	19 229	16 563	1,3	1,9	-0,6	10,1
Jun	19 037	19 198	19 078	17 932	-2,5	-1,7	-0,8	8,3
Jul	18 902	19 292	18 898	18 293	-0,7	0,5	-0,9	2,0
Aug	19 184	19 405	18 443	18 608	1,5	0,6	-2,4	1,7
Sep	18 919	19 263	19 044	18 419	-1,4	-0,7	3,3	-1,0
Oct	18 996	19 395	18 949	18 433	0,4	0,7	-0,5	0,1
Nov	19 260	19 208	18 599		1,4	-1,0	-1,8	
Dec	19 236	19 453	18 351		-0,1	1,3	-1,3	

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

	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20 [1]	Oct-20 year-on-year % change
Total - all producers						
Generated	20 682	21 542	20 977	20 143	20 977	-2,8
Inflow into South Africa	786	832	832	731	767	-14,8
Consumed in power stations and auxiliary systems	1 746	1 788	1 725	1 615	1 684	-3,6
Outflow from South Africa	1 073	1 052	1 048	1 043	1 177	-13,3
Distributed in South Africa	18 649	19 533	19 037	18 216	18 883	-2,5
Eskom						
Generated	18 651	19 421	18 821	18 078	18 789	-4,0
Inflow into South Africa	786	832	832	731	767	-14,8
Consumed in power stations and auxiliary systems	1 676	1 686	1 628	1 532	1 611	-3,6
Outflow from South Africa	1 073	1 052	1 048	1 043	1 177	-13,3
Distributed in South Africa	16 689	17 515	16 977	16 234	16 768	-3,8

[1] Preliminary.

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

	Jan – Oct 2019 (GWh)	Jan – Oct 2020 (GWh)	% change between Jan – Oct 2019 and Jan – Oct 2020	Difference between Jan – Oct 2019 and Jan – Oct 2020 (GWh)
Total - all producers				
Generated	212 276	199 470	-6,0	-12 806
Inflow into South Africa	7 948	8 355	5,1	407
Consumed in power stations and auxiliary systems	16 820	16 565	-1,5	-255
Outflow from South Africa	12 283	11 444	-6,8	-839
Distributed in South Africa	191 119	179 816	-5,9	-11 303
Eskom				
Generated	192 216	179 887	-6,4	-12 329
Inflow into South Africa	7 948	8 355	5,1	407
Consumed in power stations and auxiliary systems	16 032	15 860	-1,1	-172
Outflow from South Africa	12 283	11 444	-6,8	-839
Distributed in South Africa	171 848	160 939	-6,3	-10 909

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

Province	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20 [1]	Oct-20 year-on-year % change
Western Cape	1 661	1 732	1 761	1 636	1 679	-9,5
Eastern Cape	721	768	781	733	766	0,4
Northern Cape	504	521	517	497	527	-9,3
Free State	969	1 028	1 018	944	943	-6,2
KwaZulu-Natal	3 378	3 541	3 487	3 324	3 379	-3,3
North West	1 331	1 450	1 393	1 678	1 842	2,4
Gauteng	5 486	5 756	5 373	4 714	4 804	-3,1
Mpumalanga	2 620	2 693	2 638	2 614	2 744	-1,4
Limpopo	1 618	1 678	1 677	1 690	1 785	-0,5
Total	**18 288**	**19 167**	**18 644**	**17 831**	**18 469**	**-3,0**

[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 October 2020 was 96%. The collection rate for September 2020 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

Note: Owing to the impact of the COVID-19 lockdown, a transitory change adjustment was applied to April 2020. Transitory (temporary) change describes a temporary effect on the level of a series after a certain point in time. The methodology will be reviewed as more data points are added to the time series.

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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