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STATISTICAL RELEASE

P4141

Electricity generated and available for distribution (Preliminary)

August 2021

Embargoed until:
7 October 2021
13:00

ENQUIRIES:
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072 310 5351

FORTHCOMING ISSUE:
September 2021

EXPECTED RELEASE DATE:
4 November 2021



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Electricity generated (produced) in South Africa: results for August 2021

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

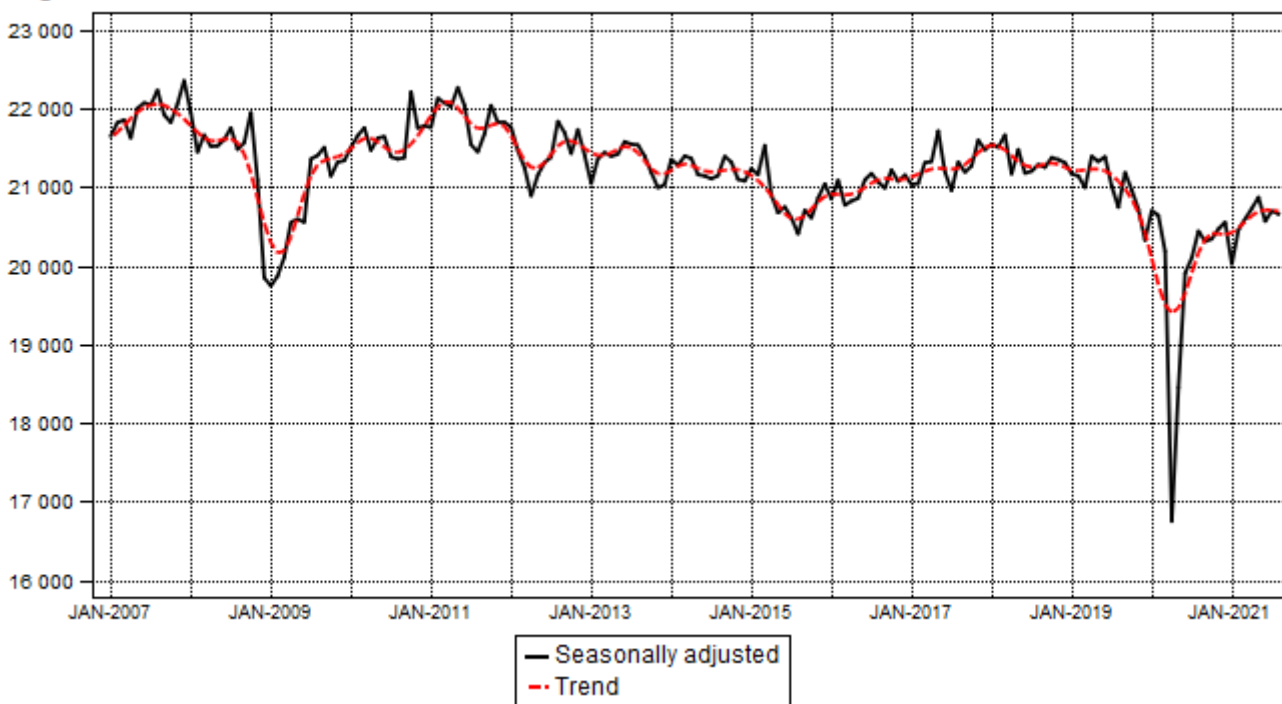
	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21
Year-on-year % change, unadjusted	1,8	25,6	12,2	3,2	3,4	2,0
Month-on-month % change, seasonally adjusted	0,7	0,6	0,7	-1,5	0,7	-0,2
3-month % change, seasonally adjusted ¹	-0,5	1,2	1,9	1,8	0,6	-0,4

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

Electricity generation (production) increased by 2,0% year-on-year in August 2021. Seasonally adjusted electricity generation decreased by 0,2% in August 2021 compared with July 2021. This followed month-on-month changes of 0,7% in July 2021 and -1,5% in June 2021. Seasonally adjusted electricity generation decreased by 0,4% in the three months ended August 2021 compared with the previous three months.

Figure 1 – Electricity generated in South Africa

Gigawatt-hours



Electricity distributed (consumed) in South Africa: results for August 2021

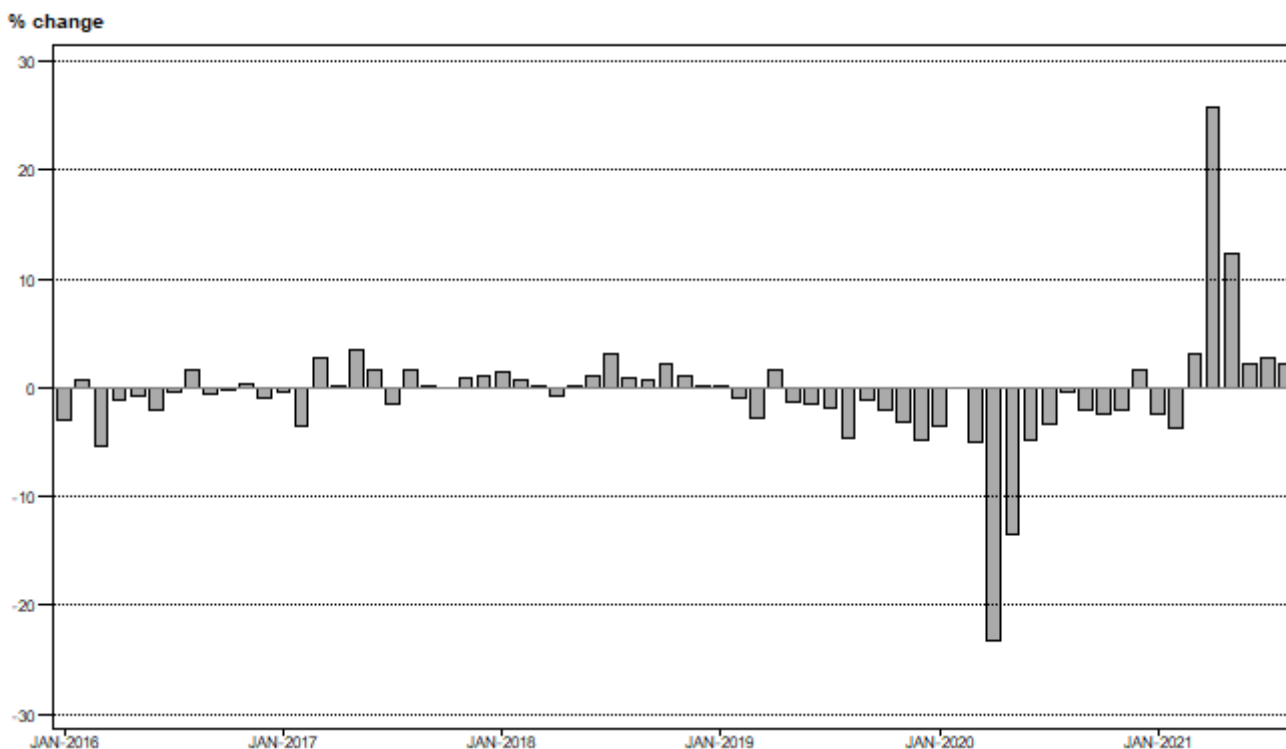
Table B – Key growth rates in the volume of electricity distributed

	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21
Year-on-year % change, unadjusted	3,0	25,7	12,3	2,1	2,8	2,2
Month-on-month % change, seasonally adjusted	0,9	0,0	0,8	-2,2	1,9	0,9
3-month % change, seasonally adjusted ¹	-0,5	0,6	1,3	0,9	0,3	-0,2

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

Electricity distribution (consumption) increased by 2,2% year-on-year in August 2021. Seasonally adjusted electricity distribution increased by 0,9% month-on-month in August 2021, following month-on-month changes of 1,9% in July 2021 and -2,2% in June 2021. Seasonally adjusted electricity distribution decreased by 0,2% in the three months ended August 2021 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	2015	2016	2017	2018	2019	2020	2021 ¹
Jan	101,2	99,2	100,1	102,4	100,4	97,9	94,8
Feb	93,0	95,9	92,2	93,9	92,1	93,0	89,0
Mar	103,6	99,6	102,2	103,4	100,4	96,4	98,1
Apr	96,5	97,4	98,1	97,6	99,4	76,7	96,3
May	101,4	102,7	107,4	106,5	105,9	91,9	103,1
Jun	102,7	103,2	104,8	105,1	105,2	99,1	102,3
Jul	105,4	108,4	106,5	108,8	108,1	103,2	106,7
Aug	101,2	105,1	106,0	105,5	103,0	100,5	102,5
Sep	98,6	99,8	100,8	100,0	99,6	96,5	
Oct	101,0	103,2	104,6	105,4	103,4	100,5	
Nov	98,1	100,3	101,9	101,8	99,0	96,6	
Dec	97,3	98,2	99,6	98,0	94,1	95,1	
Total	100,0	101,1	102,0	102,4	100,9	95,6	

¹ Latest month is preliminary.

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

Month	2016	2017	2018	2019	2020	2021	2021 year-to-date
Jan	-2,0	0,9	2,3	-2,0	-2,5	-3,2	-3,2
Feb	3,1	-3,9	1,8	-1,9	1,0	-4,3	-3,7
Mar	-3,9	2,6	1,2	-2,9	-4,0	1,8	-1,9
Apr	0,9	0,7	-0,5	1,8	-22,8	25,6	3,9
May	1,3	4,6	-0,8	-0,6	-13,2	12,2	5,6
Jun	0,5	1,6	0,3	0,1	-5,8	3,2	5,2
Jul	2,8	-1,8	2,2	-0,6	-4,5	3,4	4,9
Aug	3,9	0,9	-0,5	-2,4	-2,4	2,0	4,5
Sep	1,2	1,0	-0,8	-0,4	-3,1		
Oct	2,2	1,4	0,8	-1,9	-2,8		
Nov	2,2	1,6	-0,1	-2,8	-2,4		
Dec	0,9	1,4	-1,6	-4,0	1,1		
Total	1,1	0,9	0,4	-1,5	-5,3		

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

Month	Base: 2015=100				Month-on-month % change			
	2018	2019	2020	2021	2018	2019	2020	2021
Jan	103,2	101,4	99,2	95,9	0,3	-0,7	1,8	-2,6
Feb	103,0	101,3	98,9	98,0	-0,2	-0,1	-0,3	2,2
Mar	103,8	100,6	96,7	98,7	0,8	-0,7	-2,2	0,7
Apr	101,4	102,5	80,3	99,3	-2,3	1,9	-17,0	0,6
May	102,9	102,2	88,4	100,0	1,5	-0,3	10,1	0,7
Jun	101,5	102,5	95,4	98,5	-1,4	0,3	7,9	-1,5
Jul	101,6	100,7	96,3	99,2	0,1	-1,8	0,9	0,7
Aug	102,0	99,4	97,9	99,0	0,4	-1,3	1,7	-0,2
Sep	101,8	101,5	97,3		-0,2	2,1	-0,6	
Oct	102,4	100,4	97,5		0,6	-1,1	0,2	
Nov	102,3	99,3	98,1		-0,1	-1,1	0,6	
Dec	102,1	97,4	98,5		-0,2	-1,9	0,4	

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

Month	2016	2017	2018	2019	2020	2021 ¹
Jan	18 924	18 820	19 106	19 132	18 444	18 002
Feb	18 190	17 539	17 667	17 493	17 491	16 825
Mar	18 935	19 441	19 470	18 930	17 976	18 522
Apr	18 535	18 550	18 421	18 711	14 379	18 078
May	19 502	20 161	20 207	19 943	17 254	19 371
Jun	19 405	19 720	19 926	19 609	18 664	19 049
Jul	20 297	19 997	20 626	20 224	19 533	20 082
Aug	19 570	19 880	20 053	19 105	19 038	19 459
Sep	18 679	18 707	18 839	18 605	18 216	
Oct	19 349	19 352	19 785	19 367	18 883	
Nov	18 790	18 940	19 123	18 539	18 153	
Dec	18 370	18 562	18 582	17 678	17 979	
Total	228 546	229 669	231 805	227 336	216 010	

¹ Latest month is preliminary.

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

Month	2017	2018	2019	2020	2021	2021 year-to-date
Jan	-0,5	1,5	0,1	-3,6	-2,4	-2,4
Feb	-3,6	0,7	-1,0	0,0	-3,8	-3,1
Mar	2,7	0,1	-2,8	-5,0	3,0	-1,0
Apr	0,1	-0,7	1,6	-23,2	25,7	4,6
May	3,4	0,2	-1,3	-13,5	12,3	6,1
Jun	1,6	1,0	-1,6	-4,8	2,1	5,4
Jul	-1,5	3,1	-1,9	-3,4	2,8	5,0
Aug	1,6	0,9	-4,7	-0,4	2,2	4,6
Sep	0,1	0,7	-1,2	-2,1		
Oct	0,0	2,2	-2,1	-2,5		
Nov	0,8	1,0	-3,1	-2,1		
Dec	1,0	0,1	-4,9	1,7		
Total	0,5	0,9	-1,9	-5,0		

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

Month	Gigawatt-hours				Month-on-month % change			
	2018	2019	2020	2021	2018	2019	2020	2021
Jan	19 256	19 316	18 662	18 207	0,1	-0,5	1,9	-2,3
Feb	19 293	19 131	18 472	18 438	0,2	-1,0	-1,0	1,3
Mar	19 507	18 939	17 996	18 605	1,1	-1,0	-2,6	0,9
Apr	19 099	19 270	15 008	18 612	-2,1	1,7	-16,6	0,0
May	19 501	19 208	16 578	18 770	2,1	-0,3	10,5	0,8
Jun	19 228	19 115	17 959	18 350	-1,4	-0,5	8,3	-2,2
Jul	19 277	18 855	18 265	18 695	0,3	-1,4	1,7	1,9
Aug	19 446	18 473	18 628	18 858	0,9	-2,0	2,0	0,9
Sep	19 252	19 022	18 405		-1,0	3,0	-1,2	
Oct	19 374	18 945	18 422		0,6	-0,4	0,1	
Nov	19 238	18 633	18 491		-0,7	-1,6	0,4	
Dec	19 411	18 318	18 641		0,9	-1,7	0,8	

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

	Apr-21	May-21	Jun-21	Jul-21	Aug-21 ¹	Aug-21 year-on-year % change
Total - all producers						
Generated	20 098	21 505	21 347	22 258	21 397	2,0
Inflow into South Africa	790	711	571	853	1 033	24,2
Consumed in power stations and auxiliary systems	1 647	1 731	1 797	1 868	1 762	2,1
Outflow from South Africa	1 164	1 114	1 073	1 161	1 209	15,5
Distributed in South Africa	18 078	19 371	19 049	20 082	19 459	2,2
Eskom						
Generated	18 173	19 329	19 101	19 848	19 066	1,3
Inflow into South Africa	790	711	571	853	1 033	24,2
Consumed in power stations and auxiliary systems	1 579	1 655	1 696	1 767	1 652	1,5
Outflow from South Africa	1 164	1 114	1 073	1 161	1 209	15,5
Distributed in South Africa	16 220	17 272	16 904	17 773	17 238	1,5

¹ Preliminary.**Table 8 – Year-to-date volume of electricity by category: year-on-year percentage change and difference**

	Jan – Aug 2020 (GWh)	Jan – Aug 2021 (GWh)	% change between Jan – Aug 2020 and Jan – Aug 2021	Difference between Jan – Aug 2020 and Jan – Aug 2021 (GWh)
Total - all producers				
Generated	158 350	165 409	4,5	7 059
Inflow into South Africa	6 857	6 302	-8,1	-555
Consumed in power stations and auxiliary systems	13 266	13 470	1,5	204
Outflow from South Africa	9 161	8 855	-3,3	-306
Distributed in South Africa	142 779	149 388	4,6	6 609
Eskom				
Generated	143 020	148 055	3,5	5 035
Inflow into South Africa	6 857	6 302	-8,1	-555
Consumed in power stations and auxiliary systems	12 717	12 801	0,7	84
Outflow from South Africa	9 161	8 855	-3,3	-306
Distributed in South Africa	128 000	132 703	3,7	4 703

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

Province	Apr-21	May-21	Jun-21	Jul-21	Aug-21 ¹	Aug-21 year-on-year % change
Western Cape	1 652	1 700	1 637	1 782	1 737	-1,4
Eastern Cape	710	766	740	789	810	3,7
Northern Cape	477	485	506	539	513	-0,8
Free State	889	939	962	1 022	988	-2,9
KwaZulu-Natal	3 310	3 435	3 379	3 387	3 464	-0,7
North West	1 847	1 980	1 863	1 924	1 749	25,6
Gauteng	4 501	5 199	5 440	5 810	5 435	1,2
Mpumalanga	2 575	2 719	2 644	2 681	2 632	-0,2
Limpopo	1 737	1 805	1 675	1 749	1 719	2,5
Total	17 698	19 029	18 847	19 683	19 046	2,2

¹ Preliminary.

Survey information

Introduction	<p>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:</p> <ul style="list-style-type: none"> • 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. <p>Both unadjusted and seasonally adjusted figures are published.</p> <p>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.</p> <p>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.</p>
Purpose of the survey	<p>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.</p>
Scope of the survey	<p>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.</p>
Classification	<p>6 The 1993 edition of the <i>Standard Industrial Classification of all Economic Activities</i> (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 <i>International Standard Industrial Classification of all Economic Activities</i> (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.</p>
Collection rate	<p>7 The collection rate for the survey on electricity generated and available for distribution for August 2021 was 96%. The collection rate for July 2021 was 96%.</p>
Statistical unit	<p>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).</p>
Revised figures	<p>9 Normally revised figures are due to:</p> <ul style="list-style-type: none"> • late submission of data to Stats SA; and • revisions or corrections by respondents to previous reported data. <p>Data are edited at enterprise level.</p>
Rounding-off of figures	<p>10 Where figures have been rounded off, discrepancies may occur between sums of the component items and the totals.</p>
Historical data	<p>11 Historical electricity data are available on the Stats SA webpage. Click on the following link (Time series data) to access the data electronically.</p>
Past publications	<p>12 Past electricity releases are available on the Stats SA webpage. Click on the following link (Past publications) to access the releases electronically.</p>

Technical notes

- | | | |
|---|----------|---|
| Survey methodology and design | 1 | All statistical units are stratified by type of economic activity according to the <i>Standard Industrial Classification of all Economic Activities</i> (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 email 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 | <p>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.</p> <p>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).</p> |
| Seasonal adjustment | 5 | <p>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:</p> <p>Click to download Electricity seasonal adjustment September 2017</p> <p>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.</p> |
| 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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