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Electricity generated and available for distribution
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Electricity generated (produced) in South Africa: results for December 2017

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

	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
Year-on-year % change, unadjusted	-1,8	0,8	1,1	1,3	1,7	1,4
Month-on-month % change, seasonally adjusted	-1,3	1,3	-0,1	0,9	0,8	-0,6
3-month % change, seasonally adjusted ¹	1,1	-1,5	-1,7	-0,4	1,2	1,6

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

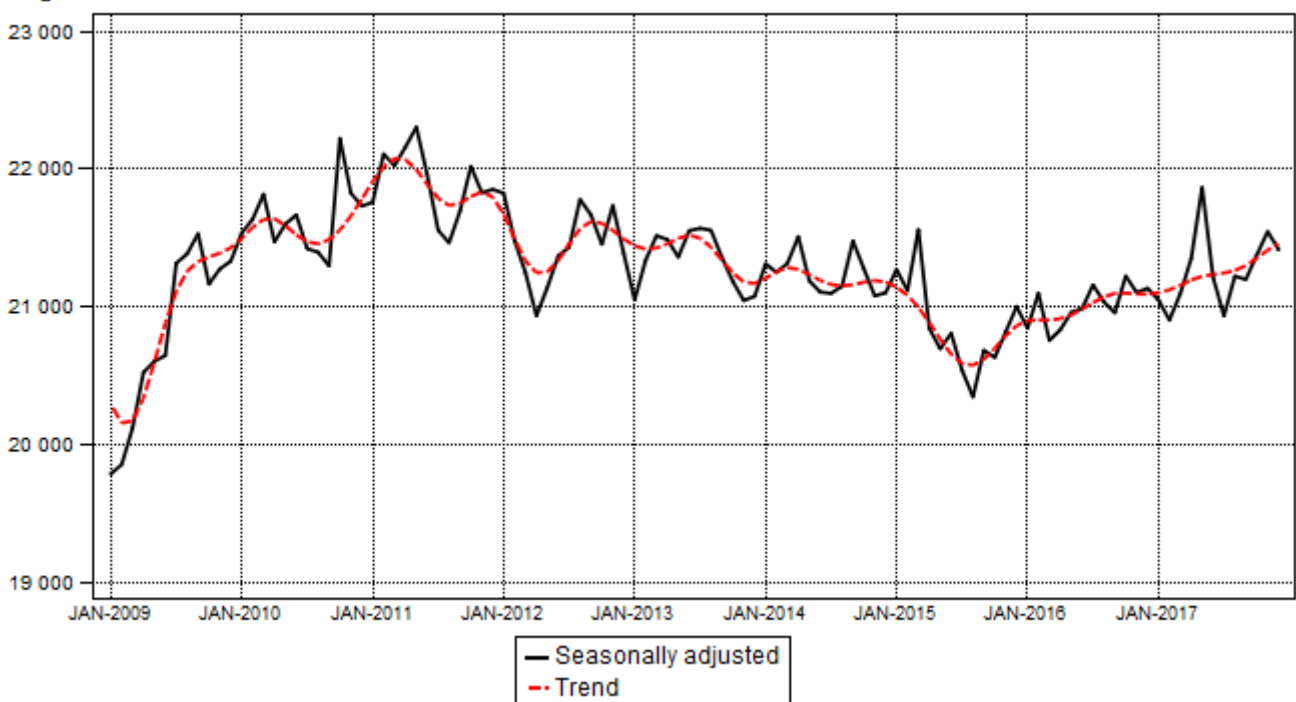
Electricity generation (production) increased by 1,4% year-on-year in December 2017.

Total electricity generation was 1,0% higher in 2017 compared with 2016. The 1,0% increase in annual electricity production followed an increase of 1,0% in 2016 and a decrease of 1,9% in 2015.

Seasonally adjusted electricity generation decreased by 0,6% in December 2017 compared with November 2017. This followed month-on-month changes of 0,8% in November 2017 and 0,9% in October 2017. Seasonally adjusted electricity generation increased by 1,6% in the fourth quarter of 2017 compared with the third quarter of 2017.

Figure 1 – Electricity generated in South Africa

Gigawatt-hours



Electricity distributed (consumed) in South Africa: results for December 2017

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

	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
Year-on-year % change, unadjusted	-1,5	1,6	0,2	0,0	0,9	1,0
Month-on-month % change, seasonally adjusted	-1,0	1,3	-0,8	0,8	0,5	0,2
3-month % change, seasonally adjusted ¹	0,2	-2,0	-1,9	-0,7	0,4	1,0

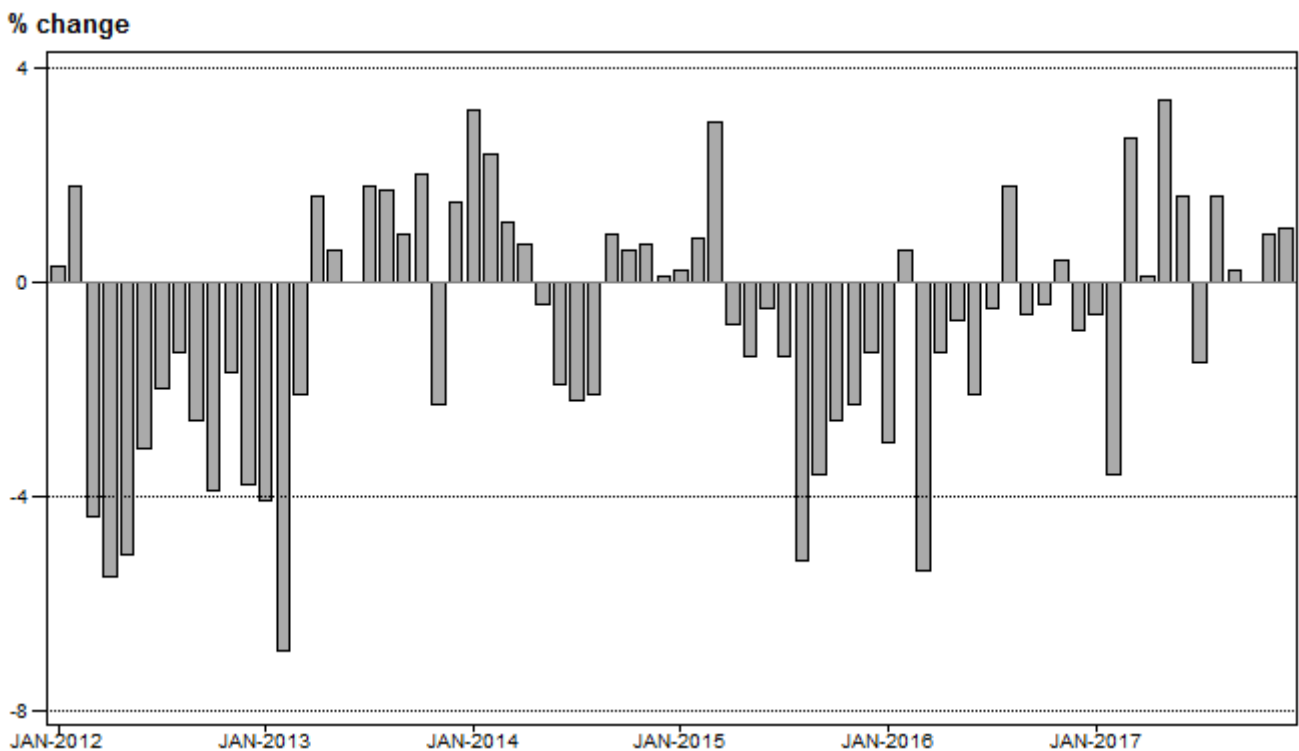
¹ Percentage change between the previous 3 months and the 3 months ending in the month indicated.

Electricity distribution (consumption) increased by 1,0% year-on-year in December 2017.

Total electricity consumption was 0,5% higher in 2017 compared with 2016. The 0,5% increase in annual electricity consumption followed a decrease of 1,0% in 2016 and a decrease of 1,3% in 2015.

Seasonally adjusted electricity distribution increased by 0,2% month-on-month in December 2017, following month-on-month changes of 0,5% in November 2017 and 0,8% in October 2017. Seasonally adjusted electricity distribution increased by 1,0% in the fourth quarter of 2017 compared with the third quarter of 2017.

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	2011	2012	2013	2014	2015	2016	2017 ¹
Jan	101,9	103,0	99,9	101,4	101,3	99,2	100,0
Feb	96,8	97,4	93,9	93,7	93,1	95,8	92,1
Mar	106,9	103,0	103,3	102,6	103,7	99,5	102,2
Apr	102,6	96,4	100,4	99,7	96,4	97,3	98,1
May	109,9	104,1	105,0	103,9	101,4	102,7	107,4
Jun	108,5	106,1	106,1	103,6	102,6	103,1	104,8
Jul	110,9	109,7	110,4	108,1	105,4	108,4	106,5
Aug	107,7	109,4	108,2	106,0	101,1	105,1	105,9
Sep	103,1	102,4	101,0	102,2	98,6	99,7	100,8
Oct	106,9	104,9	103,7	104,2	101,0	103,2	104,5
Nov	103,9	103,3	100,0	99,3	98,0	100,2	101,9
Dec	100,3	97,6	96,9	97,5	97,3	98,1	99,5
Total	105,0	103,1	102,4	101,9	100,0	101,0	102,0

¹ Latest month is preliminary.

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

Month	2012	2013	2014	2015	2016	2017	2017 year-to-date
Jan	1,1	-3,0	1,5	-0,1	-2,1	0,8	0,8
Feb	0,6	-3,6	-0,2	-0,6	2,9	-3,9	-1,5
Mar	-3,6	0,3	-0,7	1,1	-4,1	2,7	-0,1
Apr	-6,0	4,1	-0,7	-3,3	0,9	0,8	0,2
May	-5,3	0,9	-1,0	-2,4	1,3	4,6	1,1
Jun	-2,2	0,0	-2,4	-1,0	0,5	1,6	1,2
Jul	-1,1	0,6	-2,1	-2,5	2,8	-1,8	0,7
Aug	1,6	-1,1	-2,0	-4,6	4,0	0,8	0,7
Sep	-0,7	-1,4	1,2	-3,5	1,1	1,1	0,8
Oct	-1,9	-1,1	0,5	-3,1	2,2	1,3	0,8
Nov	-0,6	-3,2	-0,7	-1,3	2,2	1,7	0,9
Dec	-2,7	-0,7	0,6	-0,2	0,8	1,4	1,0
Total	-1,8	-0,7	-0,5	-1,9	1,0	1,0	

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

Month	Base: 2015=100				Month-on-month % change			
	2014	2015	2016	2017	2014	2015	2016	2017
Jan	102,2	102,0	99,9	100,9	1,2	0,8	-0,8	-0,4
Feb	101,9	101,2	101,1	100,2	-0,3	-0,8	1,2	-0,7
Mar	102,2	103,4	99,5	101,1	0,3	2,2	-1,6	0,9
Apr	103,1	99,9	99,9	102,4	0,9	-3,4	0,4	1,3
May	101,6	99,2	100,5	104,8	-1,5	-0,7	0,6	2,3
Jun	101,2	99,8	100,6	101,7	-0,4	0,6	0,1	-3,0
Jul	101,1	98,5	101,4	100,4	-0,1	-1,3	0,8	-1,3
Aug	101,4	97,5	100,8	101,7	0,3	-1,0	-0,6	1,3
Sep	103,0	99,2	100,5	101,6	1,6	1,7	-0,3	-0,1
Oct	102,0	98,9	101,7	102,5	-1,0	-0,3	1,2	0,9
Nov	101,1	99,8	101,2	103,3	-0,9	0,9	-0,5	0,8
Dec	101,2	100,7	101,3	102,7	0,1	0,9	0,1	-0,6

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

Month	2012	2013	2014	2015	2016	2017 ¹
Jan	19 676	18 860	19 457	19 491	18 902	18 786
Feb	18 783	17 493	17 917	18 060	18 167	17 511
Mar	19 623	19 202	19 415	19 998	18 910	19 416
Apr	18 466	18 762	18 895	18 739	18 504	18 522
May	19 869	19 991	19 907	19 620	19 481	20 143
Jun	20 274	20 270	19 891	19 797	19 377	19 696
Jul	20 743	21 119	20 661	20 368	20 266	19 972
Aug	20 345	20 689	20 255	19 209	19 549	19 853
Sep	19 100	19 271	19 450	18 757	18 646	18 675
Oct	19 413	19 795	19 905	19 389	19 318	19 317
Nov	19 426	18 984	19 126	18 684	18 756	18 919
Dec	18 456	18 733	18 752	18 503	18 342	18 525
Total	234 174	233 169	233 631	230 615	228 218	229 335

¹ Latest month is preliminary.

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

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

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

Month	Gigawatt-hours				Month-on-month % change			
	2014	2015	2016	2017	2014	2015	2016	2017
Jan	19 587	19 615	19 052	18 966	0,1	0,5	-0,8	-0,2
Feb	19 365	19 489	19 055	18 919	-1,1	-0,6	0,0	-0,2
Mar	19 382	19 973	18 929	19 214	0,1	2,5	-0,7	1,6
Apr	19 518	19 329	18 916	19 293	0,7	-3,2	-0,1	0,4
May	19 450	19 197	19 055	19 635	-0,3	-0,7	0,7	1,8
Jun	19 359	19 178	18 828	19 038	-0,5	-0,1	-1,2	-3,0
Jul	19 382	19 096	18 999	18 852	0,1	-0,4	0,9	-1,0
Aug	19 411	18 564	18 782	19 095	0,1	-2,8	-1,1	1,3
Sep	19 658	18 954	18 864	18 933	1,3	2,1	0,4	-0,8
Oct	19 610	19 127	19 201	19 092	-0,2	0,9	1,8	0,8
Nov	19 497	19 042	18 952	19 178	-0,6	-0,4	-1,3	0,5
Dec	19 510	19 201	19 007	19 207	0,1	0,8	0,3	0,2

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

	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17 ¹	Dec-17 year-on-year % change
Total - all producers						
Generated	22 083	21 011	21 786	21 243	20 749	1,4
Inflow into South Africa	786	648	686	572	734	3,2
Consumed in power stations and auxiliary systems	1 689	1 644	1 708	1 576	1 569	3,2
Outflow from South Africa	1 326	1 340	1 448	1 321	1 389	6,2
Distributed in South Africa	19 853	18 675	19 317	18 919	18 525	1,0
Eskom						
Generated	20 154	19 240	19 952	19 357	18 729	0,7
Inflow into South Africa	786	648	686	572	734	3,2
Consumed in power stations and auxiliary systems	1 611	1 575	1 643	1 509	1 503	3,7
Outflow from South Africa	1 326	1 340	1 448	1 321	1 389	6,2
Distributed in South Africa	18 002	16 972	17 548	17 100	16 572	0,1

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

	Jan – Dec 2016 (GWh)	Jan – Dec 2017 (GWh)	% change between Jan – Dec 2016 and Jan – Dec 2017	Difference between Jan – Dec 2016 and Jan – Dec 2017 (GWh)
Total - all producers				
Generated	252 747	255 096	0,9	2 349
Inflow into South Africa	10 555	8 568	-18,8	-1 987
Consumed in power stations and auxiliary systems	18 534	19 128	3,2	594
Outflow from South Africa	16 549	15 201	-8,1	-1 348
Distributed in South Africa	228 218	229 335	0,5	1 117
Eskom				
Generated	233 673	233 919	0,1	246
Inflow into South Africa	10 555	8 568	-18,8	-1 987
Consumed in power stations and auxiliary systems	17 686	18 313	3,5	627
Outflow from South Africa	16 549	15 201	-8,1	-1 348
Distributed in South Africa	209 992	208 971	-0,5	-1 021

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

Province	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17 ¹	Dec-17 year-on-year % change
Western Cape	1 976	1 828	1 874	1 834	1 793	-4,3
Eastern Cape	787	747	764	744	707	-13,4
Northern Cape	524	480	530	534	545	1,7
Free State	888	821	841	819	817	-3,3
KwaZulu-Natal	3 741	3 543	3 610	3 495	3 422	-0,6
North West	2 375	2 475	2 524	2 490	2 261	-8,1
Gauteng	5 363	4 638	4 808	4 651	4 318	2,4
Mpumalanga	2 735	2 727	2 921	2 897	2 950	2,5
Limpopo	1 114	1 090	1 175	1 163	1 047	-1,0
Total	19 503	18 350	19 046	18 628	17 859	-1,5

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 December 2017 was 96%. The collection rate for November 2017 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 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 | <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 at Click to download Electricity seasonal adjustment September 2017</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 <i>Standard Industrial Classification of all Economic Activities</i> (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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