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Electricity generated and available for distribution
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Electricity generated (produced) in South Africa: results for December 2016

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

	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
Year-on-year % change, unadjusted	2,8	3,8	1,1	2,0	2,1	0,8
Month-on-month % change, seasonally adjusted	0,7	-0,6	-0,4	1,4	-0,3	0,4
3-month % change, seasonally adjusted ¹	0,7	0,9	0,4	0,1	0,3	0,9

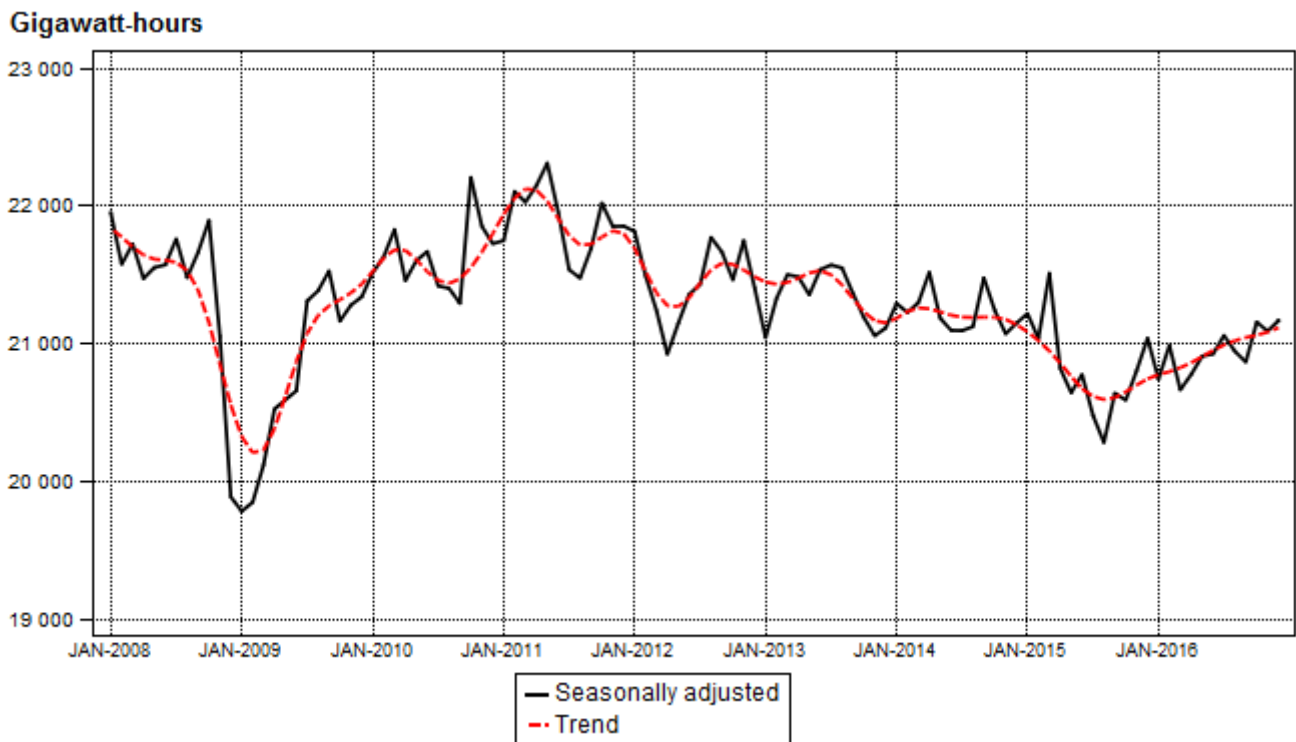
¹ Percentage change between the previous 3 months and the 3 months ending in the month indicated.

Electricity generation (production) increased by 0,8% year-on-year in December 2016.

Total electricity generation was 0,9% higher in 2016 compared with 2015. The 0,9% increase in annual electricity production followed a decrease of 2,0% in 2015 and a decrease of 0,6% in 2014.

Seasonally adjusted electricity generation increased by 0,4% in December 2016 compared with November 2016. This followed month-on-month changes of -0,3% in November 2016 and 1,4% in October 2016. Seasonally adjusted electricity generation increased by 0,9% in the fourth quarter of 2016 compared with the third quarter of 2016.

Figure 1 – Electricity generated in South Africa



Electricity distributed (consumed) in South Africa: results for December 2016

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

	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
Year-on-year % change, unadjusted	-0,6	1,6	-0,7	-0,5	0,3	-1,0
Month-on-month % change, seasonally adjusted	0,4	-0,7	0,6	1,1	-0,4	0,1
3-month % change, seasonally adjusted ¹	-0,2	-0,5	-0,3	0,0	0,8	1,0

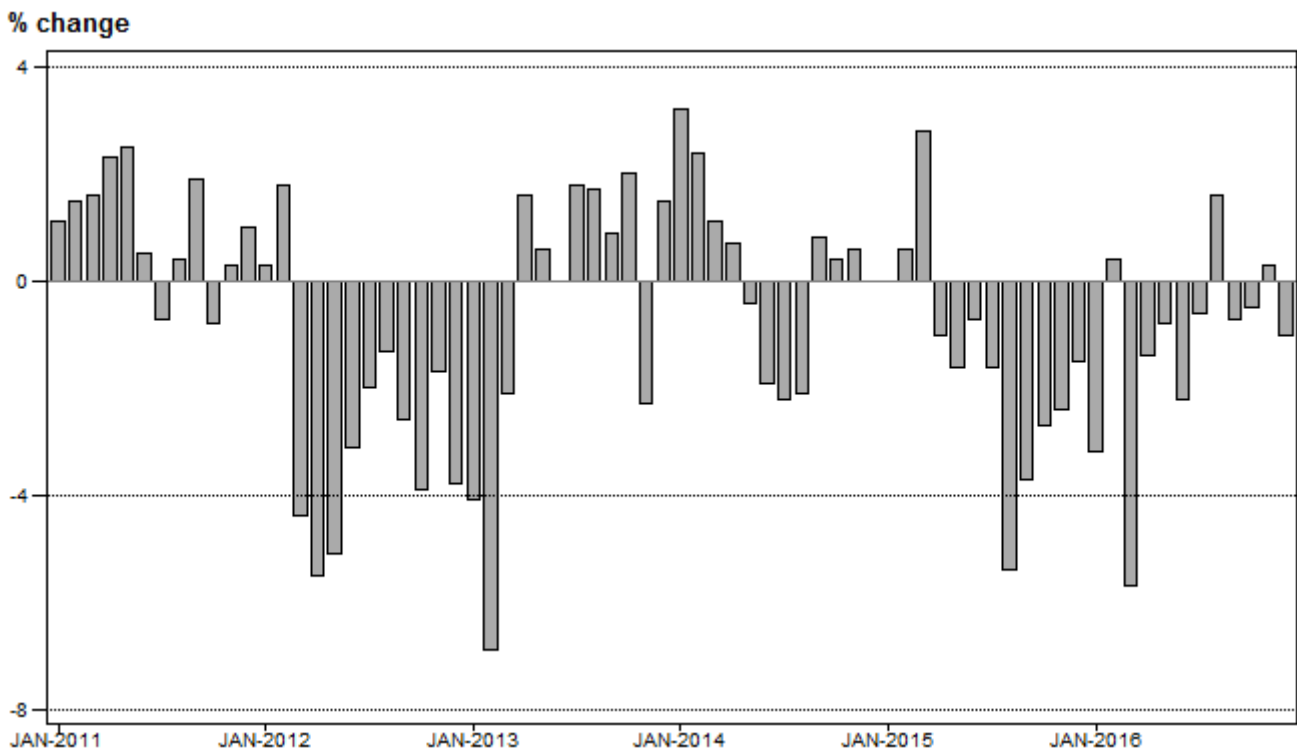
¹ Percentage change between the previous 3 months and the 3 months ending in the month indicated.

Electricity distribution (consumption) decreased by 1,0% year-on-year in December 2016.

Total electricity consumption was 1,2% lower in 2016 compared with 2015. The 1,2% decrease in annual electricity consumption followed a decrease of 1,5% in 2015 and an increase of 0,2% in 2014.

Seasonally adjusted electricity distribution increased by 0,1% month-on-month in December 2016, following month-on-month changes of -0,4% in November 2016 and 1,1% in October 2016. Seasonally adjusted electricity distribution increased by 1,0% in the fourth quarter of 2016 compared with the third quarter of 2016.

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



PJ Lehohla
Statistician-General

Tables

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

Month	2010	2011	2012	2013	2014	2015	2016 ¹
Jan	101,5	102,1	103,2	100,1	101,6	101,3	99,1
Feb	94,7	97,0	97,6	94,1	93,9	93,2	95,7
Mar	105,3	107,1	103,2	103,5	102,8	103,7	99,3
Apr	100,1	102,8	96,6	100,6	99,9	96,5	97,2
May	106,4	110,1	104,3	105,2	104,1	101,5	102,5
Jun	108,0	108,7	106,3	106,3	103,8	102,7	103,0
Jul	110,8	111,1	109,9	110,6	108,3	105,3	108,2
Aug	107,3	107,9	109,6	108,4	106,2	101,1	104,9
Sep	100,8	103,3	102,6	101,2	102,3	98,5	99,6
Oct	108,7	107,2	105,2	103,9	104,3	101,0	103,0
Nov	103,9	104,1	103,5	100,2	99,4	98,0	100,1
Dec	100,2	100,5	97,8	97,1	97,6	97,2	98,0
Total	104,0	105,2	103,3	102,6	102,0	100,0	100,9

¹ Latest month is preliminary.

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

Month	2011	2012	2013	2014	2015	2016	2016 year-to-date
Jan	0,6	1,1	-3,0	1,5	-0,3	-2,2	-2,2
Feb	2,4	0,6	-3,6	-0,2	-0,7	2,7	0,2
Mar	1,7	-3,6	0,3	-0,7	0,9	-4,2	-1,4
Apr	2,7	-6,0	4,1	-0,7	-3,4	0,7	-0,9
May	3,5	-5,3	0,9	-1,0	-2,5	1,0	-0,5
Jun	0,6	-2,2	0,0	-2,4	-1,1	0,3	-0,4
Jul	0,3	-1,1	0,6	-2,1	-2,8	2,8	0,1
Aug	0,6	1,6	-1,1	-2,0	-4,8	3,8	0,6
Sep	2,5	-0,7	-1,4	1,1	-3,7	1,1	0,6
Oct	-1,4	-1,9	-1,2	0,4	-3,2	2,0	0,8
Nov	0,2	-0,6	-3,2	-0,8	-1,4	2,1	0,9
Dec	0,3	-2,7	-0,7	0,5	-0,4	0,8	0,9
Total	1,2	-1,8	-0,7	-0,6	-2,0	0,9	

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

Month	Base: 2015=100				Month-on-month % change			
	2013	2014	2015	2016	2013	2014	2015	2016
Jan	101,1	102,3	101,9	99,6	-1,7	0,9	0,3	-1,5
Feb	102,4	102,0	101,0	100,8	1,3	-0,3	-0,9	1,2
Mar	103,3	102,3	103,3	99,3	0,9	0,3	2,3	-1,5
Apr	103,2	103,4	100,0	99,8	-0,1	1,1	-3,2	0,5
May	102,6	101,8	99,2	100,4	-0,6	-1,5	-0,8	0,6
Jun	103,4	101,3	99,8	100,5	0,8	-0,5	0,6	0,1
Jul	103,6	101,3	98,4	101,2	0,2	0,0	-1,4	0,7
Aug	103,5	101,5	97,4	100,6	-0,1	0,2	-1,0	-0,6
Sep	102,6	103,2	99,1	100,2	-0,9	1,7	1,7	-0,4
Oct	101,8	102,0	98,9	101,6	-0,8	-1,2	-0,2	1,4
Nov	101,1	101,2	99,9	101,3	-0,7	-0,8	1,0	-0,3
Dec	101,4	101,6	101,1	101,7	0,3	0,4	1,2	0,4

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

Month	2011	2012	2013	2014	2015	2016 ¹
Jan	19 616	19 676	18 860	19 457	19 463	18 846
Feb	18 455	18 783	17 493	17 917	18 028	18 104
Mar	20 518	19 623	19 202	19 415	19 961	18 827
Apr	19 539	18 466	18 762	18 895	18 706	18 441
May	20 938	19 869	19 991	19 907	19 581	19 415
Jun	20 914	20 274	20 270	19 891	19 759	19 315
Jul	21 162	20 743	21 119	20 661	20 324	20 192
Aug	20 617	20 345	20 689	20 253	19 160	19 472
Sep	19 619	19 100	19 271	19 428	18 707	18 574
Oct	20 198	19 413	19 795	19 876	19 343	19 245
Nov	19 763	19 426	18 984	19 103	18 637	18 684
Dec	19 189	18 456	18 733	18 728	18 453	18 271
Total	240 528	234 174	233 169	233 531	230 122	227 386

¹ Latest month is preliminary.

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

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

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

Month	Gigawatt-hours				Month-on-month % change			
	2013	2014	2015	2016	2013	2014	2015	2016
Jan	18 974	19 529	19 543	18 937	-2,2	-0,1	0,2	-1,3
Feb	19 040	19 435	19 518	18 994	0,3	-0,5	-0,1	0,3
Mar	19 256	19 385	19 949	18 874	1,1	-0,3	2,2	-0,6
Apr	19 245	19 554	19 313	18 869	-0,1	0,9	-3,2	0,0
May	19 438	19 392	19 085	18 946	1,0	-0,8	-1,2	0,4
Jun	19 626	19 332	19 169	18 788	1,0	-0,3	0,4	-0,8
Jul	19 766	19 319	18 988	18 863	0,7	-0,1	-0,9	0,4
Aug	19 774	19 390	18 499	18 733	0,0	0,4	-2,6	-0,7
Sep	19 675	19 750	18 988	18 838	-0,5	1,9	2,6	0,6
Oct	19 552	19 563	19 031	19 036	-0,6	-0,9	0,2	1,1
Nov	19 235	19 485	19 026	18 961	-1,6	-0,4	0,0	-0,4
Dec	19 555	19 498	19 182	18 979	1,7	0,1	0,8	0,1

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

	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16 ¹	Dec-16 year-on-year % change
Total - all producers						
Generated	21 830	20 712	21 436	20 822	20 388	0,8
Inflow into South Africa	770	908	802	819	711	-35,0
Consumed in power stations and auxiliary systems	1 750	1 662	1 686	1 538	1 520	2,0
Outflow from South Africa	1 378	1 385	1 307	1 419	1 308	-5,4
Distributed in South Africa	19 472	18 574	19 245	18 684	18 271	-1,0
Eskom						
Generated	20 215	19 053	19 772	19 122	18 595	-1,2
Inflow into South Africa	770	908	802	819	711	-35,0
Consumed in power stations and auxiliary systems	1 679	1 591	1 628	1 471	1 449	2,2
Outflow from South Africa	1 378	1 385	1 307	1 419	1 308	-5,4
Distributed in South Africa	17 929	16 985	17 639	17 052	16 549	-3,3

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

	Jan – Dec 2015 (GWh)	Jan – Dec 2016 (GWh)	% change between Jan – Dec 2015 and Jan – Dec 2016	Difference between Jan – Dec 2015 and Jan – Dec 2016 (GWh)
Total - all producers				
Generated	249 655	251 915	0,9	2 260
Inflow into South Africa	13 059	10 555	-19,2	-2 504
Consumed in power stations and auxiliary systems	17 984	18 534	3,1	550
Outflow from South Africa	14 609	16 549	13,3	1 940
Distributed in South Africa	230 122	227 386	-1,2	-2 736
Eskom				
Generated	233 391	233 673	0,1	282
Inflow into South Africa	13 059	10 555	-19,2	-2 504
Consumed in power stations and auxiliary systems	17 100	17 686	3,4	586
Outflow from South Africa	14 609	16 549	13,3	1 940
Distributed in South Africa	214 742	209 992	-2,2	-4 750

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

Province	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16 ¹	Dec-16 year-on-year % change
Western Cape	1 820	1 778	1 824	1 861	1 874	-0,1
Eastern Cape	773	755	779	814	785	15,1
Northern Cape	390	412	421	465	496	-2,0
Free State	903	826	831	801	845	0,1
KwaZulu-Natal	3 551	3 445	3 459	3 397	3 443	1,7
North West	2 391	2 409	2 505	2 485	2 461	3,6
Gauteng	5 218	4 691	4 686	4 501	4 216	-0,5
Mpumalanga	2 787	2 713	2 943	2 840	2 878	0,1
Limpopo	1 110	1 118	1 150	1 050	1 058	-10,1
Total	18 944	18 146	18 597	18 213	18 055	0,5

¹ Preliminary.

Survey information

Introduction	1	<p>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>
	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 <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.
Collection rate	7	The collection rate for the survey on electricity generated and available for distribution for December 2016 was 100%. The collection rate for November 2016 was 100%.
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	<p>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	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 <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 November 2016.pdf</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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