

STATISTICAL RELEASE
P4141

Electricity generated and available for distribution
(Preliminary)

September 2016

Embargoed until:
3 November 2016
13:00

ENQUIRIES:
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FORTHCOMING ISSUE:
October 2016

EXPECTED RELEASE DATE:
1 December 2016

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Contents

Electricity generated (produced) in South Africa: results for September 2016	2
Table A – Key growth rates in the volume of electricity generated	2
Figure 1 – Electricity generated in South Africa	2
Electricity distributed (consumed) in South Africa: results for September 2016	3
Table B – Key growth rates in the volume of electricity distributed	3
Figure 2 – Electricity distributed in South Africa: year-on-year percentage change	3
Table 1 – Index of the volume of electricity generated (Base: 2015=100)	4
Table 2 – Year-on-year percentage change in the volume of electricity generated	4
Table 3 – Seasonally adjusted index of the volume of electricity generated	4
Table 4 – Volume of electricity distributed in South Africa (gigawatt-hours)	5
Table 5 – Year-on-year percentage change in electricity distributed in South Africa	5
Table 6 – Seasonally adjusted volume of electricity distributed in South Africa	5
Table 7 – Volume of electricity by category (gigawatt-hours)	6
Table 8 – Year-to-date volume of electricity by category: year-on-year percentage change and difference	6
Table 9 – Volume of electricity delivered to provinces (gigawatt-hours)	6
Survey information	7
Technical notes	8
Glossary	9
Technical enquiries	9
General information	10

Electricity generated (produced) in South Africa: results for September 2016

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

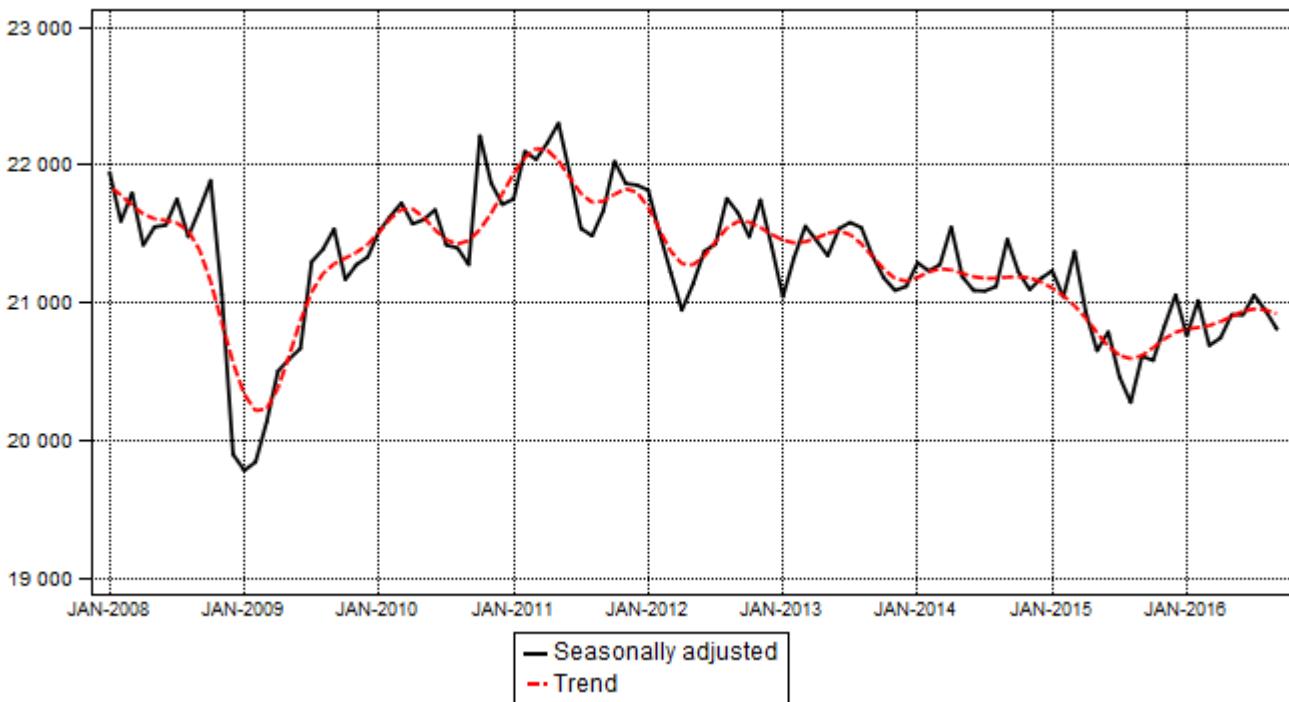
	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16
Year-on-year % change, unadjusted	0,7	1,0	0,3	2,8	3,8	1,1
Month-on-month % change, seasonally adjusted	0,2	0,9	-0,1	0,7	-0,5	-0,6
3-month % change, seasonally adjusted ¹	-0,3	-0,7	0,2	0,7	0,9	0,4

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

Electricity generation (production) increased by 1,1% year-on-year in September 2016. Seasonally adjusted electricity generation decreased by 0,6% in September 2016 compared with August 2016. This followed month-on-month changes of -0,5% in August 2016 and 0,7% in July 2016. Seasonally adjusted electricity generation increased by 0,4% in the third quarter of 2016 compared with the second quarter of 2016.

Figure 1 – Electricity generated in South Africa

Gigawatt-hours



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

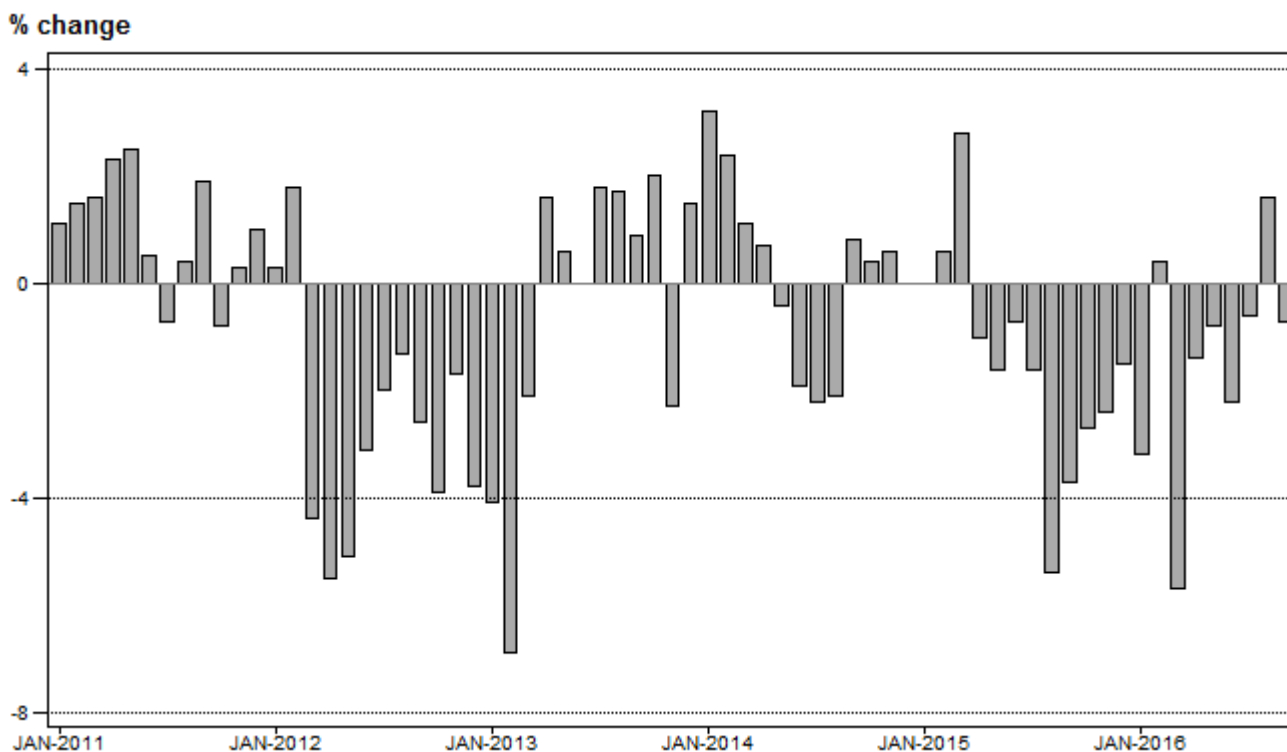
Table B – Key growth rates in the volume of electricity distributed

	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16
Year-on-year % change, unadjusted	-1,4	-0,8	-2,2	-0,6	1,6	-0,7
Month-on-month % change, seasonally adjusted	-0,3	0,7	-1,0	0,4	-0,6	0,2
3-month % change, seasonally adjusted ¹	-0,8	-0,6	-0,3	-0,2	-0,6	-0,4

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

Electricity distribution (consumption) decreased by 0,7% year-on-year in September 2016. Seasonally adjusted electricity distribution increased by 0,2% month-on-month in September 2016, following month-on-month changes of -0,6% in August 2016 and 0,4% in July 2016. Seasonally adjusted electricity distribution decreased by 0,4% in the third quarter of 2016 compared with the second 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	
Nov	103,9	104,1	103,5	100,2	99,4	98,0	
Dec	100,2	100,5	97,8	97,1	97,6	97,2	
Total	104,0	105,2	103,3	102,6	102,0	100,0	

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		
Nov	0,2	-0,6	-3,2	-0,8	-1,4		
Dec	0,3	-2,7	-0,7	0,5	-0,4		
Total	1,2	-1,8	-0,7	-0,6	-2,0		

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	102,0	99,7	-1,7	0,9	0,3	-1,4
Feb	102,4	102,0	101,1	100,9	1,3	-0,3	-0,9	1,2
Mar	103,5	102,2	102,7	99,4	1,1	0,2	1,6	-1,5
Apr	103,0	103,5	100,5	99,6	-0,5	1,3	-2,1	0,2
May	102,5	101,8	99,2	100,5	-0,5	-1,6	-1,3	0,9
Jun	103,5	101,3	99,8	100,4	1,0	-0,5	0,6	-0,1
Jul	103,7	101,3	98,3	101,1	0,2	0,0	-1,5	0,7
Aug	103,5	101,4	97,4	100,6	-0,2	0,1	-0,9	-0,5
Sep	102,5	103,1	99,0	100,0	-1,0	1,7	1,6	-0,6
Oct	101,7	101,9	98,9		-0,8	-1,2	-0,1	
Nov	101,3	101,3	100,0		-0,4	-0,6	1,1	
Dec	101,4	101,7	101,1		0,1	0,4	1,1	

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	
Nov	19 763	19 426	18 984	19 103	18 637	
Dec	19 189	18 456	18 733	18 728	18 453	
Total	240 528	234 174	233 169	233 531	230 122	

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		
Nov	-1,7	-2,3	0,6	-2,4		
Dec	-3,8	1,5	0,0	-1,5		
Total	-2,6	-0,4	0,2	-1,5		

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	18 960	19 498	19 516	18 917	-2,4	-0,3	0,1	-1,3
Feb	19 085	19 471	19 539	18 960	0,7	-0,1	0,1	0,2
Mar	19 324	19 385	19 817	18 892	1,3	-0,4	1,4	-0,4
Apr	19 210	19 591	19 440	18 843	-0,6	1,1	-1,9	-0,3
May	19 405	19 390	19 107	18 969	1,0	-1,0	-1,7	0,7
Jun	19 630	19 324	19 165	18 777	1,2	-0,3	0,3	-1,0
Jul	19 768	19 305	18 958	18 847	0,7	-0,1	-1,1	0,4
Aug	19 767	19 399	18 530	18 734	0,0	0,5	-2,3	-0,6
Sep	19 653	19 723	18 954	18 777	-0,6	1,7	2,3	0,2
Oct	19 542	19 539	19 023		-0,6	-0,9	0,4	
Nov	19 270	19 547	19 089		-1,4	0,0	0,3	
Dec	19 559	19 501	19 166		1,5	-0,2	0,4	

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

	May-16	Jun-16	Jul-16	Aug-16	Sep-16 ¹	Sep-16 year-on-year % change
Total - all producers						
Generated	21 335	21 436	22 520	21 830	20 712	1,0
Inflow into South Africa	930	788	863	770	908	-6,5
Consumed in power stations and auxiliary systems	1 482	1 497	1 752	1 750	1 662	11,4
Outflow from South Africa	1 367	1 411	1 439	1 378	1 385	9,1
Distributed in South Africa	19 415	19 315	20 192	19 472	18 574	-0,7
Eskom						
Generated	19 908	19 986	21 015	20 215	19 053	-0,1
Inflow into South Africa	930	788	863	770	908	-6,5
Consumed in power stations and auxiliary systems	1 409	1 415	1 661	1 679	1 591	11,8
Outflow from South Africa	1 367	1 411	1 439	1 378	1 385	9,1
Distributed in South Africa	18 062	17 947	18 777	17 929	16 985	-2,1

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

	Jan – Sep 2015 (GWh)	Jan – Sep 2016 (GWh)	% change between Jan – Sep 2015 and Jan – Sep 2016	Difference between Jan – Sep 2015 and Jan – Sep 2016 (GWh)
Total - all producers				
Generated	188 031	189 269	0,7	1 238
Inflow into South Africa	9 874	8 223	-16,7	-1 651
Consumed in power stations and auxiliary systems	13 538	13 790	1,9	252
Outflow from South Africa	10 680	12 515	17,2	1 835
Distributed in South Africa	173 689	171 186	-1,4	-2 503
Eskom				
Generated	175 896	176 184	0,2	288
Inflow into South Africa	9 874	8 223	-16,7	-1 651
Consumed in power stations and auxiliary systems	12 854	13 138	2,2	284
Outflow from South Africa	10 680	12 515	17,2	1 835
Distributed in South Africa	162 237	158 752	-2,1	-3 485

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

Province	May-16	Jun-16	Jul-16	Aug-16	Sep-16 ¹	Sep-16 year-on-year % change
Western Cape	1 897	1 896	1 964	1 820	1 778	-3,8
Eastern Cape	677	700	760	773	755	8,5
Northern Cape	392	379	374	390	412	-14,0
Free State	886	894	916	903	826	0,1
KwaZulu-Natal	3 489	3 452	3 576	3 551	3 445	0,3
North West	2 424	2 347	2 414	2 391	2 409	1,9
Gauteng	5 120	5 326	5 572	5 218	4 691	-0,5
Mpumalanga	2 971	2 744	2 794	2 787	2 713	-2,3
Limpopo	1 168	1 102	1 115	1 110	1 118	-5,0
Total	19 023	18 839	19 485	18 944	18 146	-0,9

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 September 2016 was 100%. The collection rate for August 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 (SIC)</i> 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 2015.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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