
Statistical release

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Electricity generated and available for distribution (Preliminary)

December 2015

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Contents

Electricity generated (produced) in South Africa: results for December 2015	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 December 2015	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
Tables.....	4
Table 1 – Index of the volume of electricity generated (Base: 2010=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 December 2015

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

	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Year-on-year % change, unadjusted	-2,7	-4,9	-3,7	-3,2	-1,5	-0,3
Month-on-month % change, seasonally adjusted	-1,0	-2,1	2,6	-0,1	0,8	1,6
3-month % change, seasonally adjusted ¹	-1,9	-2,1	-1,6	-1,0	1,0	2,0

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

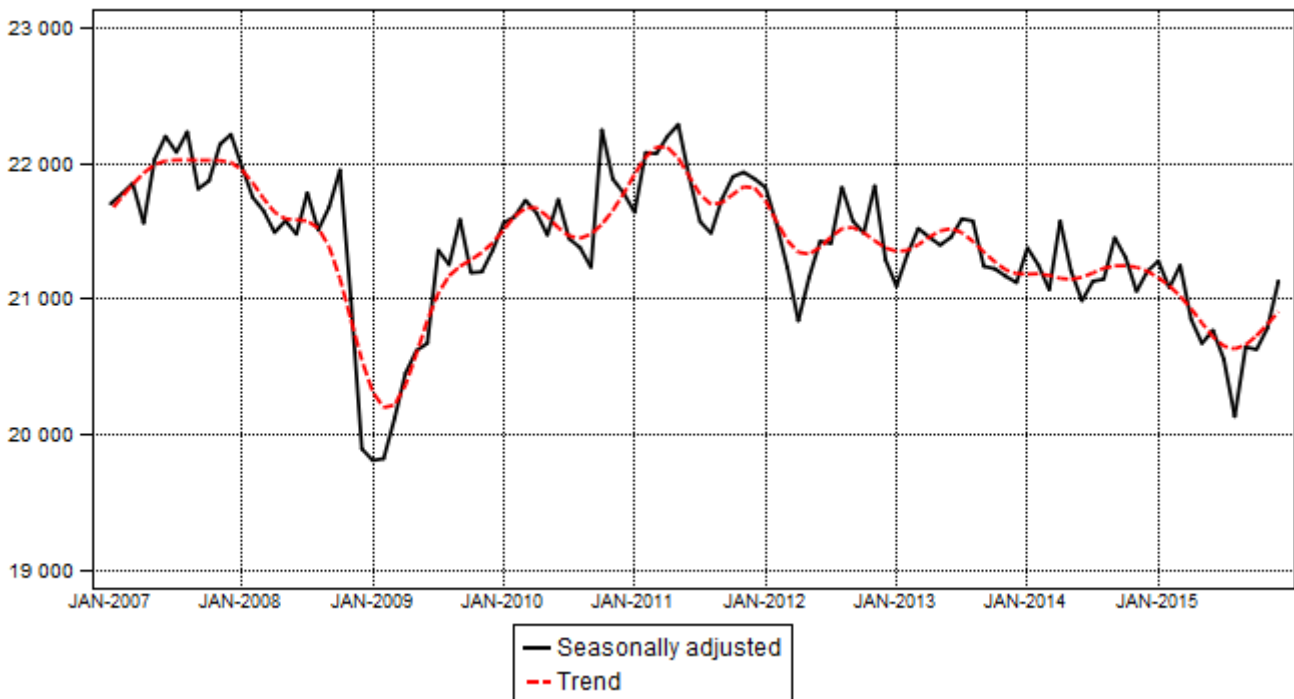
Electricity generation (production) decreased by 0,3% year-on-year in December 2015.

Total electricity generation was 2,0% lower in 2015 compared with 2014. The 2,0% decrease in annual electricity production followed a decrease of 0,6% in 2014 and a decrease of 0,6% in 2013.

Seasonally adjusted electricity generation increased by 1,6% in December 2015 compared with November 2015. This followed month-on-month changes of 0,8% in November 2015 and -0,1% in October 2015. Seasonally adjusted electricity generation increased by 2,0% in the three months ended December 2015 compared with the previous three months.

Figure 1 – Electricity generated in South Africa

Gigawatt-hours



Electricity distributed (consumed) in South Africa: results for December 2015

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

	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Year-on-year % change, unadjusted	-1,6	-5,4	-3,7	-2,7	-2,4	-1,5
Month-on-month % change, seasonally adjusted	-0,6	-3,5	3,2	0,7	0,1	0,8
3-month % change, seasonally adjusted ¹	-2,4	-3,0	-2,4	-1,6	1,0	1,9

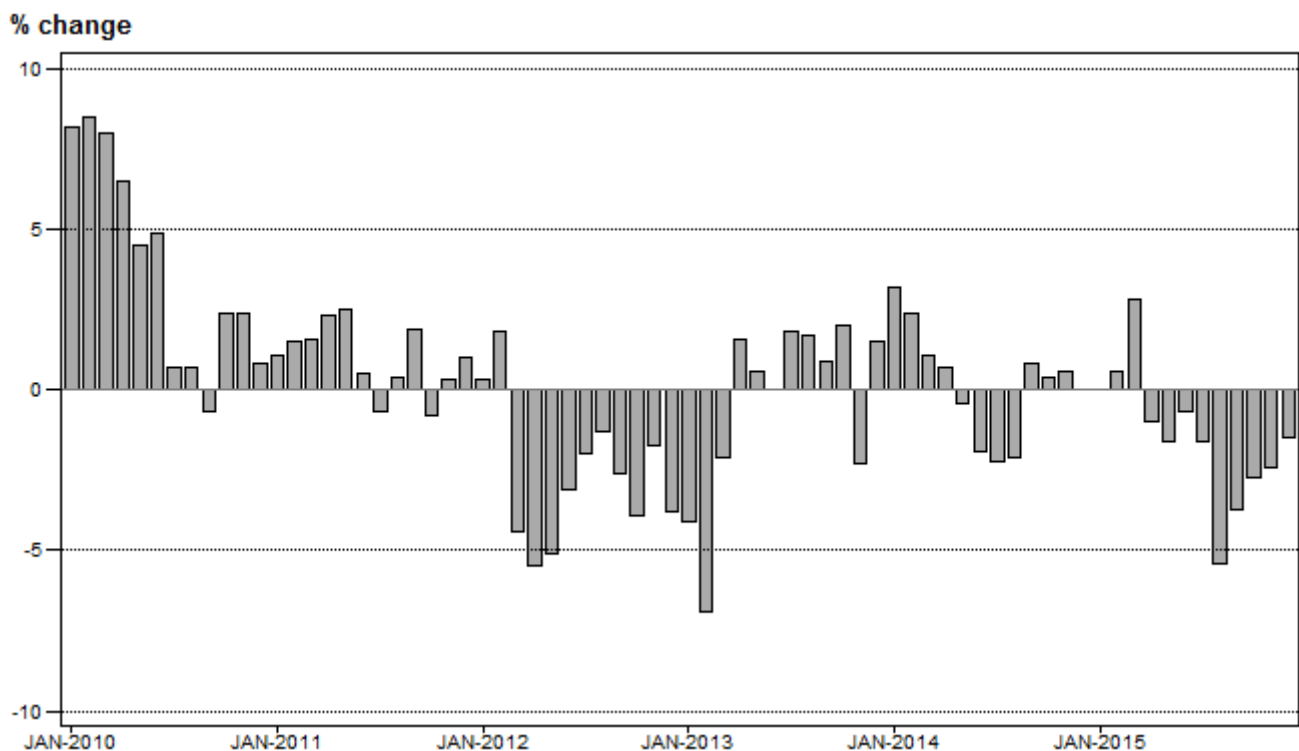
¹ Percentage change between the previous 3 months and the 3 months ending in the month indicated.

Electricity distribution (consumption) decreased by 1,5% year-on-year in December 2015.

Total electricity consumption was 1,5% lower in 2015 compared with 2014. The 1,5% decrease in annual electricity consumption followed an increase of 0,2% in 2014 and a decrease of 0,4% in 2013.

Seasonally adjusted electricity distribution increased by 0,8% month-on-month in December 2015, following month-on-month changes of 0,1% in November 2015 and 0,7% in October 2015. Seasonally adjusted electricity distribution increased by 1,9% in the three months ended December 2015 compared with the previous three months.

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



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Statistician-General

Tables

Table 1 – Index of the volume of electricity generated (Base: 2010=100)

Month	2009	2010	2011	2012	2013	2014	2015 ¹
Jan	89,7	97,6	98,1	99,2	96,2	97,7	97,4
Feb	83,5	91,1	93,3	93,8	90,5	90,3	89,6
Mar	93,7	101,3	103,0	99,3	99,6	98,8	99,8
Apr	90,7	96,2	98,9	92,9	96,7	96,0	92,8
May	98,6	102,3	105,9	100,3	101,2	100,1	97,6
Jun	98,8	103,8	104,6	102,2	102,2	99,8	98,7
Jul	106,4	106,6	106,8	105,7	106,4	104,1	101,3
Aug	102,7	103,2	103,7	105,4	104,2	102,2	97,2
Sep	98,5	97,0	99,4	98,7	97,3	98,4	94,8
Oct	99,6	104,6	103,1	101,1	99,9	100,3	97,1
Nov	96,8	100,0	100,1	99,5	96,3	95,6	94,2
Dec	94,6	96,3	96,7	94,0	93,4	93,8	93,5
Total	96,1	100,0	101,1	99,3	98,7	98,1	96,2

¹ Latest month is preliminary.

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

Month	2010	2011	2012	2013	2014	2015	2015 year-to-date
Jan	8,8	0,5	1,1	-3,0	1,6	-0,3	-0,3
Feb	9,1	2,4	0,5	-3,5	-0,2	-0,8	-0,5
Mar	8,1	1,7	-3,6	0,3	-0,8	1,0	0,0
Apr	6,1	2,8	-6,1	4,1	-0,7	-3,3	-0,8
May	3,8	3,5	-5,3	0,9	-1,1	-2,5	-1,2
Jun	5,1	0,8	-2,3	0,0	-2,3	-1,1	-1,2
Jul	0,2	0,2	-1,0	0,7	-2,2	-2,7	-1,4
Aug	0,5	0,5	1,6	-1,1	-1,9	-4,9	-1,9
Sep	-1,5	2,5	-0,7	-1,4	1,1	-3,7	-2,1
Oct	5,0	-1,4	-1,9	-1,2	0,4	-3,2	-2,2
Nov	3,3	0,1	-0,6	-3,2	-0,7	-1,5	-2,1
Dec	1,8	0,4	-2,8	-0,6	0,4	-0,3	-2,0
Total	4,1	1,1	-1,8	-0,6	-0,6	-2,0	

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

Month	Base: 2010=100				Month-on-month % change			
	2012	2013	2014	2015	2012	2013	2014	2015
Jan	100,8	97,5	98,8	98,3	-0,3	-0,9	1,2	0,3
Feb	99,6	98,6	98,2	97,4	-1,2	1,1	-0,6	-0,9
Mar	98,1	99,4	97,4	98,2	-1,5	0,8	-0,8	0,8
Apr	96,3	99,1	99,7	96,4	-1,8	-0,3	2,4	-1,8
May	97,8	98,9	98,0	95,5	1,6	-0,2	-1,7	-0,9
Jun	99,0	99,1	97,0	96,0	1,2	0,2	-1,0	0,5
Jul	98,9	99,8	97,6	95,0	-0,1	0,7	0,6	-1,0
Aug	100,8	99,7	97,7	93,0	1,9	-0,1	0,1	-2,1
Sep	99,7	98,2	99,1	95,4	-1,1	-1,5	1,4	2,6
Oct	99,3	98,1	98,4	95,3	-0,4	-0,1	-0,7	-0,1
Nov	100,9	97,8	97,3	96,1	1,6	-0,3	-1,1	0,8
Dec	98,4	97,6	98,0	97,6	-2,5	-0,2	0,7	1,6

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

Month	2010	2011	2012	2013	2014	2015 ¹
Jan	19 396	19 616	19 676	18 860	19 457	19 463
Feb	18 181	18 455	18 783	17 493	17 917	18 028
Mar	20 186	20 518	19 623	19 202	19 415	19 961
Apr	19 102	19 539	18 466	18 762	18 895	18 706
May	20 435	20 938	19 869	19 991	19 907	19 581
Jun	20 800	20 914	20 274	20 270	19 891	19 759
Jul	21 307	21 162	20 743	21 119	20 661	20 324
Aug	20 540	20 617	20 345	20 689	20 253	19 160
Sep	19 256	19 619	19 100	19 271	19 428	18 707
Oct	20 371	20 198	19 413	19 795	19 876	19 343
Nov	19 702	19 763	19 426	18 984	19 103	18 637
Dec	18 996	19 189	18 456	18 733	18 728	18 453
Total	238 272	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	2011	2012	2013	2014	2015	2015 year-to-date
Jan	1,1	0,3	-4,1	3,2	0,0	0,0
Feb	1,5	1,8	-6,9	2,4	0,6	0,3
Mar	1,6	-4,4	-2,1	1,1	2,8	1,2
Apr	2,3	-5,5	1,6	0,7	-1,0	0,6
May	2,5	-5,1	0,6	-0,4	-1,6	0,2
Jun	0,5	-3,1	0,0	-1,9	-0,7	0,0
Jul	-0,7	-2,0	1,8	-2,2	-1,6	-0,2
Aug	0,4	-1,3	1,7	-2,1	-5,4	-0,9
Sep	1,9	-2,6	0,9	0,8	-3,7	-1,2
Oct	-0,8	-3,9	2,0	0,4	-2,7	-1,4
Nov	0,3	-1,7	-2,3	0,6	-2,4	-1,5
Dec	1,0	-3,8	1,5	0,0	-1,5	-1,5
Total	0,9	-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			
	2012	2013	2014	2015	2012	2013	2014	2015
Jan	19 916	19 043	19 633	19 621	-0,8	-1,3	0,4	0,5
Feb	19 708	19 041	19 450	19 539	-1,0	0,0	-0,9	-0,4
Mar	19 448	19 271	19 198	19 723	-1,3	1,2	-1,3	0,9
Apr	19 179	19 246	19 639	19 431	-1,4	-0,1	2,3	-1,5
May	19 343	19 496	19 436	19 128	0,9	1,3	-1,0	-1,6
Jun	19 529	19 568	19 245	19 140	1,0	0,4	-1,0	0,1
Jul	19 373	19 771	19 340	19 026	-0,8	1,0	0,5	-0,6
Aug	19 400	19 765	19 370	18 352	0,1	0,0	0,2	-3,5
Sep	19 360	19 519	19 671	18 936	-0,2	-1,2	1,6	3,2
Oct	19 240	19 575	19 615	19 070	-0,6	0,3	-0,3	0,7
Nov	19 796	19 374	19 534	19 087	2,9	-1,0	-0,4	0,1
Dec	19 301	19 551	19 525	19 245	-2,5	0,9	0,0	0,8

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

	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15 ¹	Dec-15 year-on-year % change
Total - all producers						
Generated	21 033	20 498	21 008	20 384	20 232	-0,3
Inflow into South Africa	1 033	971	1 144	947	1 094	6,3
Consumed in power stations and auxiliary systems	1 517	1 492	1 539	1 417	1 490	1,2
Outflow from South Africa	1 389	1 270	1 269	1 277	1 383	22,8
Distributed in South Africa	19 160	18 707	19 343	18 637	18 453	-1,5
Eskom						
Generated	19 639	19 079	19 740	18 929	18 826	-0,6
Inflow into South Africa	1 033	971	1 144	947	1 094	6,3
Consumed in power stations and auxiliary systems	1 441	1 423	1 477	1 351	1 418	1,2
Outflow from South Africa	1 389	1 270	1 269	1 277	1 383	22,8
Distributed in South Africa	17 842	17 357	18 138	17 248	17 119	-1,8

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

	Jan – Dec 2014 (GWh)	Jan – Dec 2015 (GWh)	% change between Jan – Dec 2014 and Jan – Dec 2015	Difference between Jan – Dec 2014 and Jan – Dec 2015 (GWh)
Total - all producers				
Generated	254 663	249 655	-2,0	-5 008
Inflow into South Africa	11 177	13 059	16,8	1 882
Consumed in power stations and auxiliary systems	18 474	17 984	-2,7	-490
Outflow from South Africa	13 836	14 609	5,6	773
Distributed in South Africa	233 531	230 122	-1,5	-3 409
Eskom				
Generated	240 401	233 391	-2,9	-7 010
Inflow into South Africa	11 177	13 059	16,8	1 882
Consumed in power stations and auxiliary systems	17 591	17 100	-2,8	-491
Outflow from South Africa	13 836	14 609	5,6	773
Distributed in South Africa	220 149	214 742	-2,5	-5 407

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

Province	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15 ¹	Dec-15 year-on-year % change
Western Cape	1 943	1 848	1 912	1 835	1 875	-1,0
Eastern Cape	729	696	715	701	682	8,4
Northern Cape	* 474	479	509	490	506	-3,3
Free State	887	825	840	822	844	5,5
KwaZulu-Natal	3 543	3 436	3 487	3 357	3 385	-2,5
North West	2 322	2 363	2 516	2 452	2 375	-0,2
Gauteng	5 099	4 715	4 737	4 542	4 239	-1,6
Mpumalanga	2 739	2 777	2 898	2 804	2 876	-0,1
Limpopo	1 141	* 1 177	1 243	1 169	1 177	-5,6
Total	18 877	18 316	18 857	18 171	17 959	-0,9

¹ Preliminary.

* Revised.

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 2010.</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 2015 was 96%. The collection rate for November 2015 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>
Related publications	<p>10 Users may also refer to the following publications available from Stats SA:</p> <ul style="list-style-type: none"> • <i>Bulletin of Statistics</i>; and • <i>South African Statistics</i>.
Rounding-off of figures	<p>11 Where figures have been rounded off, discrepancies may occur between sums of the component items and the totals.</p>
Historical data	<p>12 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>13 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	<p>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.</p> <p>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.</p>
Monthly index of electricity generated	<p>3 The calculation of the monthly index of electricity generated is based on the volume of electricity units produced.</p>
Benchmarking	<p>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.</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	<p>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 at Click to download Electricity seasonal adjustment August 2014.pdf</p>
Trend cycle	<p>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.</p>
Month-on-month percentage change	<p>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.</p>
Year-on-year percentage change	<p>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.</p>

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 2010. 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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