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Electricity generated and available for distribution (Preliminary)

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Electricity generated (produced) in South Africa: results for September 2017

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

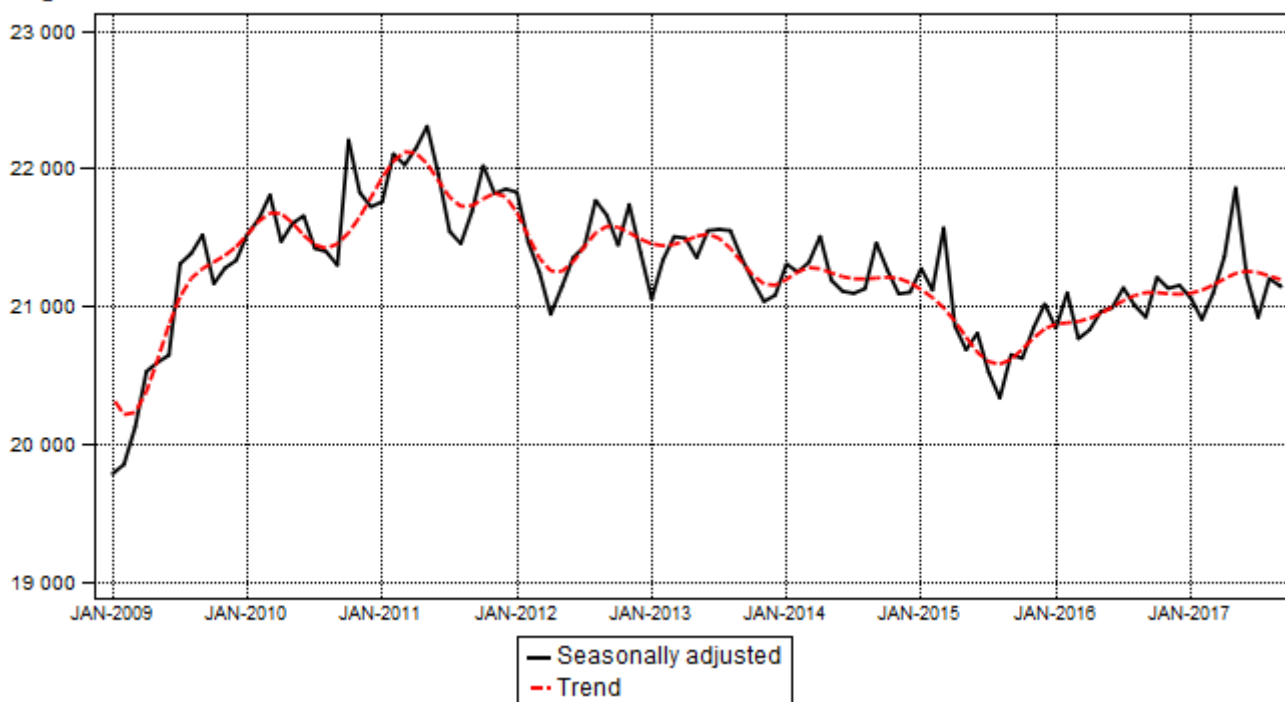
	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17
Year-on-year % change, unadjusted	0,8	4,6	1,6	-1,8	0,8	1,1
Month-on-month % change, seasonally adjusted	1,3	2,3	-3,0	-1,4	1,3	-0,2
3-month % change, seasonally adjusted ¹	0,0	1,9	2,2	1,0	-1,5	-1,8

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 2017. Seasonally adjusted electricity generation decreased by 0,2% in September 2017 compared with August 2017. This followed month-on-month changes of 1,3% in August 2017 and -1,4% in July 2017. Seasonally adjusted electricity generation decreased by 1,8% in the third quarter of 2017 compared with the second quarter of 2017.

Figure 1 – Electricity generated in South Africa

Gigawatt-hours



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

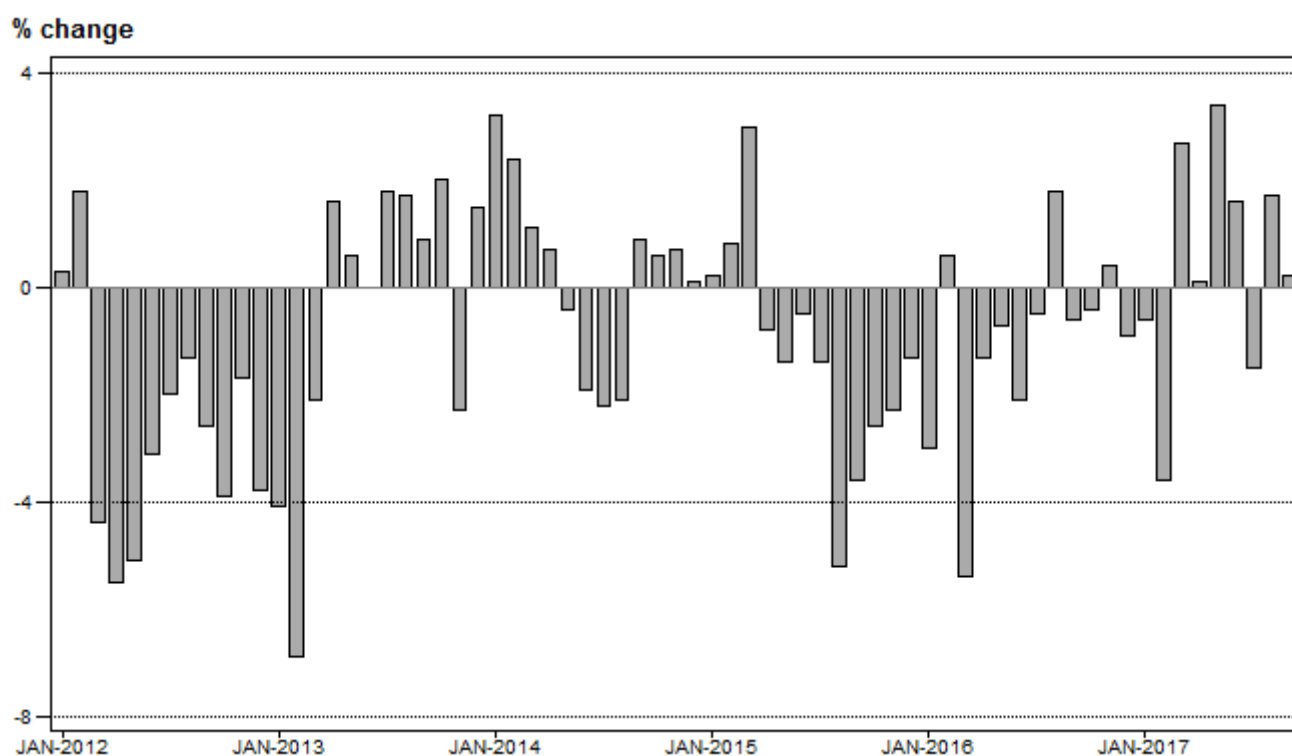
Table B – Key growth rates in the volume of electricity distributed

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

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

Electricity distribution (consumption) increased by 0,2% year-on-year in September 2017. Seasonally adjusted electricity distribution decreased by 0,8% month-on-month in September 2017, following month-on-month changes of 1,7% in August 2017 and -1,5% in July 2017. Seasonally adjusted electricity distribution decreased by 1,9% in the third quarter of 2017 compared with the second quarter of 2017.

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: 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	
Nov	103,9	103,3	100,0	99,3	98,0	100,2	
Dec	100,3	97,6	96,9	97,5	97,3	98,1	
Total	105,0	103,1	102,4	101,9	100,0	101,0	

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		
Nov	-0,6	-3,2	-0,7	-1,3	2,2		
Dec	-2,7	-0,7	0,6	-0,2	0,8		
Total	-1,8	-0,7	-0,5	-1,9	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	101,0	1,1	0,8	-0,9	-0,4
Feb	101,9	101,2	101,2	100,2	-0,3	-0,8	1,3	-0,8
Mar	102,2	103,4	99,6	101,1	0,3	2,2	-1,6	0,9
Apr	103,1	100,0	99,9	102,4	0,9	-3,3	0,3	1,3
May	101,6	99,2	100,5	104,8	-1,5	-0,8	0,6	2,3
Jun	101,2	99,7	100,6	101,7	-0,4	0,5	0,1	-3,0
Jul	101,1	98,4	101,3	100,3	-0,1	-1,3	0,7	-1,4
Aug	101,3	97,5	100,7	101,6	0,2	-0,9	-0,6	1,3
Sep	102,9	99,0	100,3	101,4	1,6	1,5	-0,4	-0,2
Oct	101,9	98,9	101,7		-1,0	-0,1	1,4	
Nov	101,1	99,9	101,3		-0,8	1,0	-0,4	
Dec	101,2	100,8	101,4		0,1	0,9	0,1	

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	19 881
Sep	19 100	19 271	19 450	18 757	18 646	18 677
Oct	19 413	19 795	19 905	19 389	19 318	
Nov	19 426	18 984	19 126	18 684	18 756	
Dec	18 456	18 733	18 752	18 503	18 342	
Total	234 174	233 169	233 631	230 615	228 218	

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	1,7	0,5
Sep	0,9	0,9	-3,6	-0,6	0,2	0,5
Oct	2,0	0,6	-2,6	-0,4		
Nov	-2,3	0,7	-2,3	0,4		
Dec	1,5	0,1	-1,3	-0,9		
Total	-0,4	0,2	-1,3	-1,0		

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	19 541	19 600	19 035	18 974	0,0	0,6	-0,9	-0,2
Feb	19 443	19 573	19 066	18 992	-0,5	-0,1	0,2	0,1
Mar	19 397	19 983	18 934	19 202	-0,2	2,1	-0,7	1,1
Apr	19 544	19 345	18 922	19 269	0,8	-3,2	-0,1	0,3
May	19 402	19 137	19 020	19 620	-0,7	-1,1	0,5	1,8
Jun	19 349	19 210	18 861	19 083	-0,3	0,4	-0,8	-2,7
Jul	19 320	19 030	18 945	18 803	-0,1	-0,9	0,4	-1,5
Aug	19 389	18 544	18 782	19 121	0,4	-2,6	-0,9	1,7
Sep	19 758	19 027	18 926	18 975	1,9	2,6	0,8	-0,8
Oct	19 588	19 081	19 115		-0,9	0,3	1,0	
Nov	19 498	19 055	18 995		-0,5	-0,1	-0,6	
Dec	19 490	19 200	19 013		0,0	0,8	0,1	

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

	May-17	Jun-17	Jul-17	Aug-17	Sep-17 ¹	Sep-17 year-on-year % change
Total - all producers						
Generated	22 387	21 845	22 203	22 083	21 013	1,1
Inflow into South Africa	731	718	765	786	648	-28,6
Consumed in power stations and auxiliary systems	1 711	1 633	1 706	1 689	1 644	-1,1
Outflow from South Africa	1 264	1 234	1 290	1 299	1 340	-3,2
Distributed in South Africa	20 143	19 696	19 972	19 881	18 677	0,2
Eskom						
Generated	20 827	20 062	20 479	20 154	19 240	1,0
Inflow into South Africa	731	718	765	786	648	-28,6
Consumed in power stations and auxiliary systems	1 644	1 560	1 636	1 611	1 575	-1,0
Outflow from South Africa	1 264	1 234	1 290	1 299	1 340	-3,2
Distributed in South Africa	18 650	17 986	18 317	18 030	16 972	-0,1

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

	Jan – Sep 2016 (GWh)	Jan – Sep 2017 (GWh)	% change between Jan – Sep 2016 and Jan – Sep 2017	Difference between Jan – Sep 2016 and Jan – Sep 2017 (GWh)
Total - all producers				
Generated	189 885	191 320	0,8	1 435
Inflow into South Africa	8 223	6 576	-20,0	-1 647
Consumed in power stations and auxiliary systems	13 790	14 275	3,5	485
Outflow from South Africa	12 515	11 016	-12,0	-1 499
Distributed in South Africa	171 802	172 604	0,5	802
Eskom				
Generated	176 184	175 881	-0,2	-303
Inflow into South Africa	8 223	6 576	-20,0	-1 647
Consumed in power stations and auxiliary systems	13 138	13 658	4,0	520
Outflow from South Africa	12 515	11 016	-12,0	-1 499
Distributed in South Africa	158 752	157 779	-0,6	-973

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

Province	May-17	Jun-17	Jul-17	Aug-17	Sep-17 ¹	Sep-17 year-on-year % change
Western Cape	1 949	1 915	1 978	1 976	1 828	2,8
Eastern Cape	765	764	795	787	747	-4,2
Northern Cape	480	484	519	524	480	4,6
Free State	870	873	886	888	824	-0,2
KwaZulu-Natal	3 653	3 627	3 715	3 741	3 545	2,9
North West	2 614	2 336	2 348	2 357	2 472	2,6
Gauteng	5 217	5 371	5 473	5 363	4 638	-1,1
Mpumalanga	2 983	2 818	2 778	2 727	2 726	0,5
Limpopo	1 182	1 130	1 114	1 114	1 090	-2,5
Total	19 713	19 320	19 606	19 476	18 349	0,7

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 September 2017 was 96%. The collection rate for August 2017 was 100%.</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</p> <p>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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