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Statistical release

P4141

Electricity generated and available for distribution (Preliminary)

July 2016

This is the first publication showing the index of the volume of electricity generated at base year 2015=100. The previous base period of the index was 2010.

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Enquiries:

Nicolai Claassen
Tel: (012) 310 8007

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

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

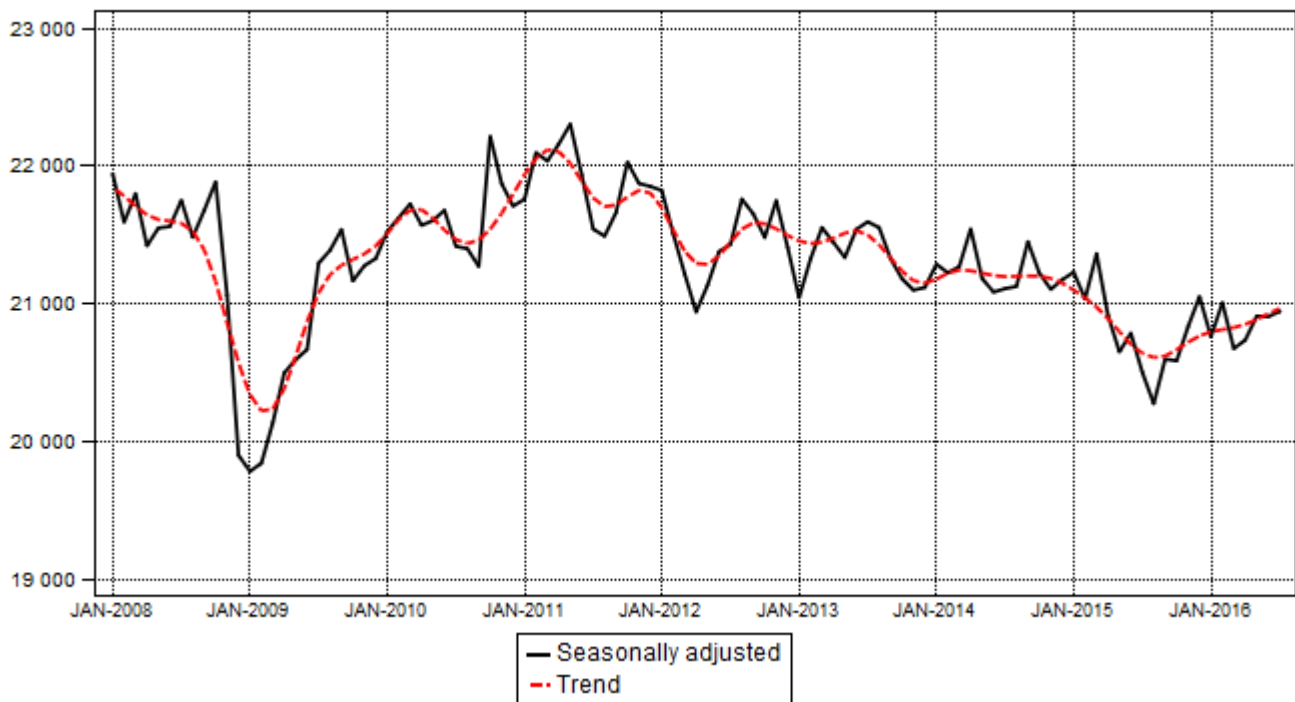
	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16
Year-on-year % change, unadjusted	2,7	-4,2	0,7	1,0	0,3	2,0
Month-on-month % change, seasonally adjusted	1,2	-1,6	0,3	0,8	0,0	0,2
3-month % change, seasonally adjusted ¹	1,3	-0,1	-0,4	-0,8	0,2	0,5

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

Electricity generation (production) increased by 2,0% year-on-year in July 2016. Seasonally adjusted electricity generation increased by 0,2% in July 2016 compared with June 2016. This followed month-on-month changes of 0,0% in June 2016 and 0,8% in May 2016. Seasonally adjusted electricity generation increased by 0,5% in the three months ended July 2016 compared with the previous three months.

Figure 1 – Electricity generated in South Africa

Gigawatt-hours



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

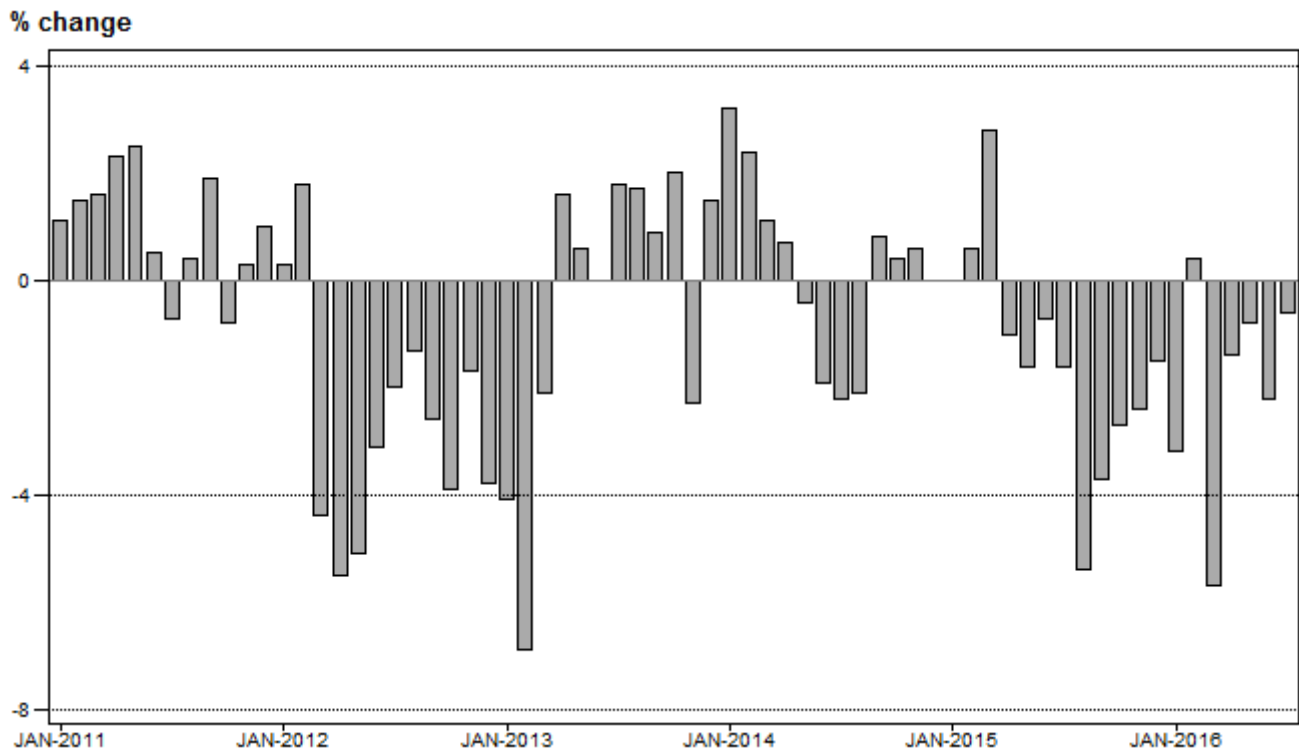
Table B – Key growth rates in the volume of electricity distributed

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

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

Electricity distribution (consumption) decreased by 0,6% year-on-year in July 2016. Seasonally adjusted electricity distribution increased by 0,5% month-on-month in July 2016, following month-on-month changes of -1,0% in June 2016 and 0,6% in May 2016. Seasonally adjusted electricity distribution decreased by 0,2% in the three months ended July 2016 compared with the previous three months.

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



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	107,4
Aug	107,3	107,9	109,6	108,4	106,2	101,1	
Sep	100,8	103,3	102,6	101,2	102,3	98,5	
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	2,0	0,0
Aug	0,6	1,6	-1,1	-2,0	-4,8		
Sep	2,5	-0,7	-1,4	1,1	-3,7		
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	101,0	100,9	1,3	-0,3	-1,0	1,2
Mar	103,5	102,2	102,6	99,3	1,1	0,2	1,6	-1,6
Apr	103,0	103,5	100,5	99,6	-0,5	1,3	-2,0	0,3
May	102,5	101,8	99,2	100,4	-0,5	-1,6	-1,3	0,8
Jun	103,5	101,3	99,8	100,4	1,0	-0,5	0,6	0,0
Jul	103,7	101,4	98,5	100,6	0,2	0,1	-1,3	0,2
Aug	103,5	101,5	97,4		-0,2	0,1	-1,1	
Sep	102,4	103,0	98,9		-1,1	1,5	1,5	
Oct	101,7	101,9	98,9		-0,7	-1,1	0,0	
Nov	101,3	101,4	100,1		-0,4	-0,5	1,2	
Dec	101,4	101,7	101,1		0,1	0,3	1,0	

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	18 442
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	
Sep	19 619	19 100	19 271	19 428	18 707	
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		
Sep	-2,6	0,9	0,8	-3,7		
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	18 966	19 502	19 523	18 926	-2,4	-0,3	0,1	-1,3
Feb	19 089	19 476	19 547	18 971	0,6	-0,1	0,1	0,2
Mar	19 327	19 391	19 821	18 898	1,2	-0,4	1,4	-0,4
Apr	19 209	19 593	19 443	18 851	-0,6	1,0	-1,9	-0,2
May	19 402	19 387	19 110	18 971	1,0	-1,1	-1,7	0,6
Jun	19 629	19 317	19 160	18 775	1,2	-0,4	0,3	-1,0
Jul	19 764	19 306	18 966	18 875	0,7	-0,1	-1,0	0,5
Aug	19 766	19 383	18 493		0,0	0,4	-2,5	
Sep	19 634	19 693	18 915		-0,7	1,6	2,3	
Oct	19 542	19 541	19 031		-0,5	-0,8	0,6	
Nov	19 283	19 569	19 110		-1,3	0,1	0,4	
Dec	19 562	19 508	19 176		1,4	-0,3	0,3	

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

	Mar-16	Apr-16	May-16	Jun-16	Jul-16 ¹	Jul-16 year-on-year % change
Total - all producers						
Generated	20 666	20 230	21 335	21 436	22 336	1,9
Inflow into South Africa	1 000	976	930	788	863	-28,1
Consumed in power stations and auxiliary systems	1 412	1 394	1 482	1 497	1 568	-2,8
Outflow from South Africa	1 427	1 371	1 367	1 411	1 439	21,8
Distributed in South Africa	18 827	18 442	19 415	19 315	20 192	-0,6
Eskom						
Generated	19 287	18 775	19 908	19 986	20 830	1,7
Inflow into South Africa	1 000	976	930	788	863	-28,1
Consumed in power stations and auxiliary systems	1 344	1 327	1 409	1 415	1 477	-2,4
Outflow from South Africa	1 427	1 371	1 367	1 411	1 439	21,8
Distributed in South Africa	17 515	17 054	18 062	17 947	18 777	-1,1

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

	Jan – Jul 2015 (GWh)	Jan – Jul 2016 (GWh)	% change between Jan – Jul 2015 and Jan – Jul 2016	Difference between Jan – Jul 2015 and Jan – Jul 2016 (GWh)
Total - all producers				
Generated	146 500	146 543	0,0	43
Inflow into South Africa	7 870	6 545	-16,8	-1 325
Consumed in power stations and auxiliary systems	10 529	10 193	-3,2	-336
Outflow from South Africa	8 021	9 752	21,6	1 731
Distributed in South Africa	135 822	133 141	-2,0	-2 681
Eskom				
Generated	137 178	136 731	-0,3	-447
Inflow into South Africa	7 870	6 545	-16,8	-1 325
Consumed in power stations and auxiliary systems	9 990	9 684	-3,1	-306
Outflow from South Africa	8 021	9 752	21,6	1 731
Distributed in South Africa	127 038	123 838	-2,5	-3 200

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

Province	Mar-16	Apr-16	May-16	Jun-16	Jul-16 ¹	Jul-16 year-on-year % change
Western Cape	1 940	1 830	1 897	1 896	1 964	-0,2
Eastern Cape	690	661	677	700	760	0,9
Northern Cape	444	411	392	379	374	-21,9
Free State	821	813	886	894	916	-2,4
KwaZulu-Natal	3 459	3 379	3 489	3 452	3 576	-1,3
North West	2 416	2 342	2 424	2 347	2 414	-0,4
Gauteng	4 552	4 531	5 120	5 326	5 572	-0,1
Mpumalanga	2 866	2 894	2 971	2 744	2 790	-4,6
Limpopo	1 173	1 155	1 168	1 102	1 115	-0,3
Total	18 362	18 015	19 023	18 839	19 481	-1,6

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 of 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 July 2016 was 96%. The collection rate for June 2016 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	<p>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.</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. 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	<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 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

Technical enquiries

Tsholofelo Ditinti	Email: tsholofelod@statssa.gov.za
Nicolai Claassen	Telephone number: (012) 310 8007 Email: nicolaic@statssa.gov.za

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Orders/subscription services	Telephone number: (012) 310 8044 Email address: magdaj@statssa.gov.za
Postal address	Private Bag X44, Pretoria, 0001

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