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Department:
Statistics South Africa
REPUBLIC OF SOUTH AFRICA

Private Bag X44, Pretoria, 0001, South Africa, ISibalo House, Koch Street, Salvokop, Pretoria, 0002
www.statssa.gov.za, info@statssa.gov.za, Tel +27 12 310 8911

STATISTICAL RELEASE

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Electricity generated and available for distribution (Preliminary)

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Electricity generated (produced) in South Africa: results for March 2023

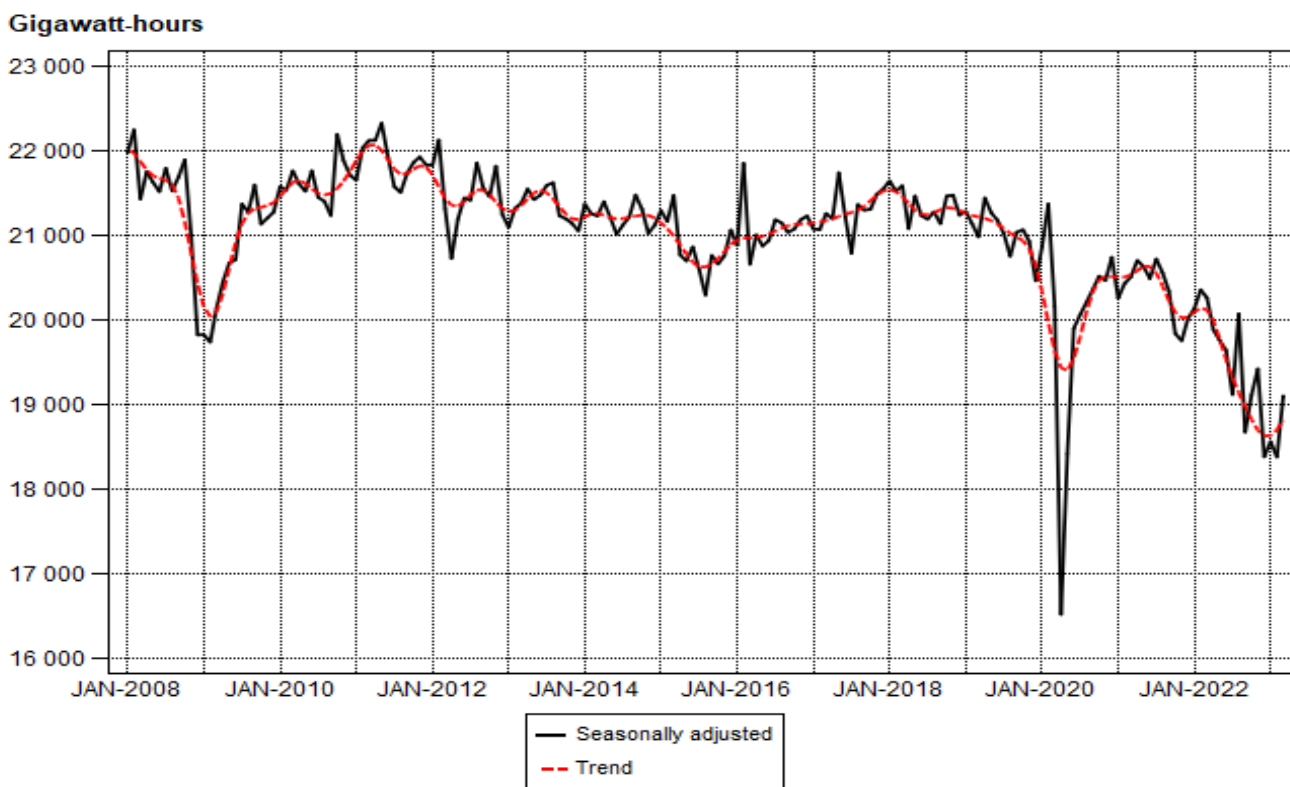
Table A – Key growth rates in the volume of electricity generated

	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Year-on-year % change, unadjusted	-3,8	-1,8	-8,3	-8,0	-9,7	-5,6
Month-on-month % change, seasonally adjusted	2,4	1,7	-5,3	0,9	-1,0	4,0
3-month % change, seasonally adjusted ¹	-1,1	-2,8	-1,6	-2,5	-3,3	-1,6

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

Electricity generation (production) decreased by 5,6% year-on-year in March 2023. Seasonally adjusted electricity generation increased by 4,0% in March 2023 compared with February 2023. This followed month-on-month changes of -1,0% in February 2023 and 0,9% in January 2023. Seasonally adjusted electricity generation decreased by 1,6% in the first quarter of 2023 compared with the fourth quarter of 2022.

Figure 1 – Electricity generated in South Africa



Electricity distributed (consumed) in South Africa: results for March 2023

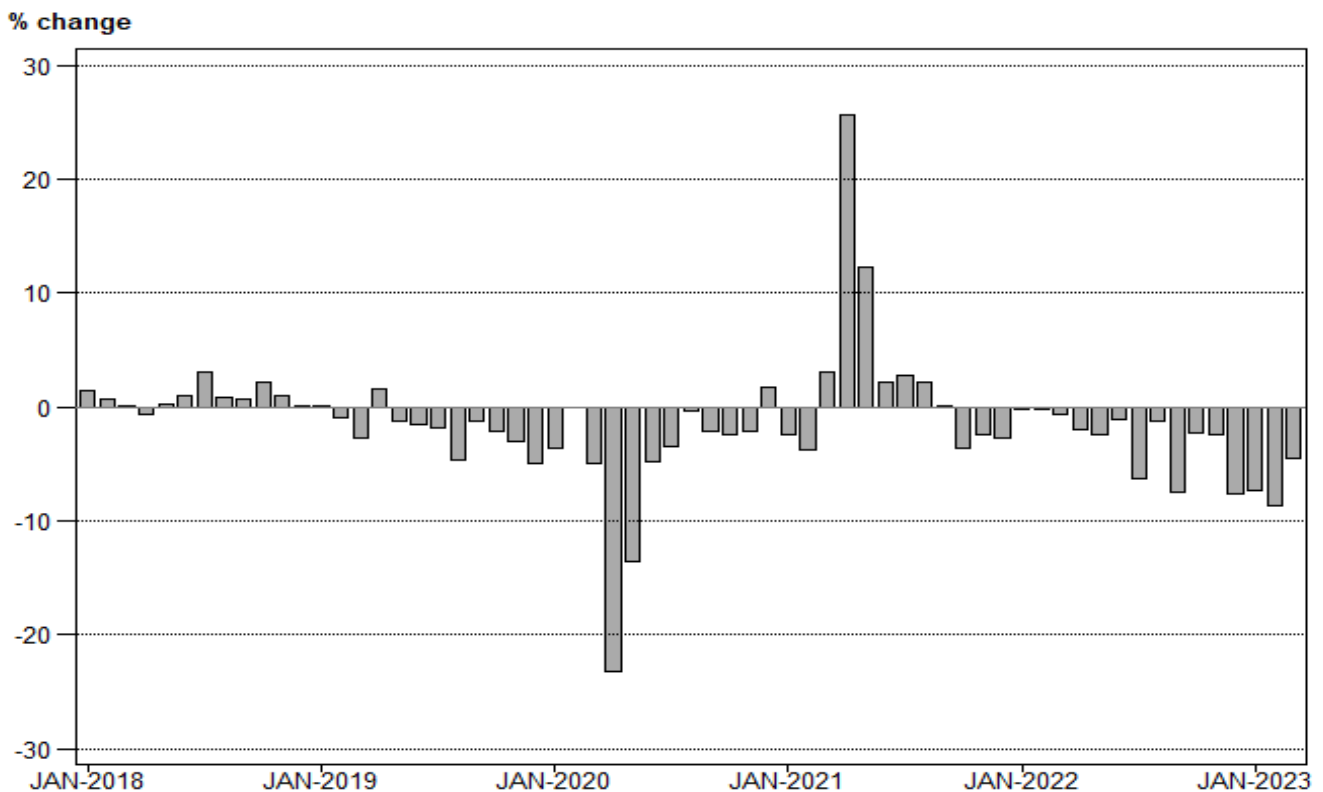
Table B – Key growth rates in the volume of electricity distributed

	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Year-on-year % change, unadjusted	-2,3	-2,4	-7,6	-7,3	-8,7	-4,5
Month-on-month % change, seasonally adjusted	3,0	0,6	-3,9	1,1	-2,2	4,7
3-month % change, seasonally adjusted ¹	-1,1	-3,3	-1,7	-2,5	-2,6	-1,3

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

Electricity distribution (consumption) decreased by 4,5% year-on-year in March 2023. Seasonally adjusted electricity distribution increased by 4,7% month-on-month in March 2023, following month-on-month changes of -2,2% in February 2023 and 1,1% in January 2023. Seasonally adjusted electricity distribution decreased by 1,3% in the first quarter of 2023 compared with the fourth quarter of 2022.

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



Risenga Maluleke
Statistician-General

Tables

Table 1 – Index of the volume of electricity generated (Base: 2019=100)

Month	2017	2018	2019	2020	2021	2022	2023 ¹
Jan	99,2	101,5	99,5	97,1	93,9	93,0	85,6
Feb	91,4	93,1	91,3	92,2	88,2	87,9	79,4
Mar	101,3	102,5	99,5	95,5	97,2	96,2	90,8
Apr	97,3	96,8	98,5	76,1	95,5	91,9	
May	106,4	105,5	104,9	91,1	102,2	97,9	
Jun	103,9	104,2	104,3	98,3	101,4	97,3	
Jul	105,6	107,9	107,1	102,3	105,7	97,6	
Aug	105,0	104,6	102,1	99,7	101,7	99,5	
Sep	100,0	99,2	98,7	95,7	95,7	87,9	
Oct	103,7	104,5	102,5	99,7	96,2	92,5	
Nov	101,0	100,9	98,2	95,7	92,2	90,5	
Dec	98,8	97,1	93,3	94,3	90,8	83,3	
Total	101,1	101,5	100,0	94,8	96,7	93,0	

¹ Latest month is preliminary.

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

Month	2018	2019	2020	2021	2022	2023	2023 year-to-date
Jan	2,3	-2,0	-2,4	-3,3	-1,0	-8,0	-8,0
Feb	1,9	-1,9	1,0	-4,3	-0,3	-9,7	-8,8
Mar	1,2	-2,9	-4,0	1,8	-1,0	-5,6	-7,7
Apr	-0,5	1,8	-22,7	25,5	-3,8		
May	-0,8	-0,6	-13,2	12,2	-4,2		
Jun	0,3	0,1	-5,8	3,2	-4,0		
Jul	2,2	-0,7	-4,5	3,3	-7,7		
Aug	-0,4	-2,4	-2,4	2,0	-2,2		
Sep	-0,8	-0,5	-3,0	0,0	-8,2		
Oct	0,8	-1,9	-2,7	-3,5	-3,8		
Nov	-0,1	-2,7	-2,5	-3,7	-1,8		
Dec	-1,7	-3,9	1,1	-3,7	-8,3		
Total	0,4	-1,5	-5,2	2,0	-3,8		

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

Month	Base: 2019=100				Month-on-month % change			
	2020	2021	2022	2023	2020	2021	2022	2023
Jan	99,1	96,2	95,7	88,2	2,0	-2,3	0,6	0,9
Feb	101,5	97,1	96,7	87,3	2,4	0,9	1,0	-1,0
Mar	95,8	97,4	96,3	90,8	-5,6	0,3	-0,4	4,0
Apr	78,5	98,4	94,5		-18,1	1,0	-1,9	
May	87,5	98,0	93,9		11,5	-0,4	-0,6	
Jun	94,5	97,4	93,3		8,0	-0,6	-0,6	
Jul	95,3	98,5	90,8		0,8	1,1	-2,7	
Aug	96,0	97,7	95,4		0,7	-0,8	5,1	
Sep	96,7	96,6	88,7		0,7	-1,1	-7,0	
Oct	97,5	94,3	90,8		0,8	-2,4	2,4	
Nov	97,2	93,9	92,3		-0,3	-0,4	1,7	
Dec	98,5	95,1	87,4		1,3	1,3	-5,3	

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

Month	2018	2019	2020	2021	2022	2023 ¹
Jan	19 106	19 132	18 444	18 002	17 974	16 658
Feb	17 667	17 493	17 491	16 825	16 815	15 357
Mar	19 470	18 930	17 976	18 522	18 408	17 585
Apr	18 421	18 711	14 379	18 078	17 709	
May	20 207	19 943	17 254	19 371	18 897	
Jun	19 926	19 609	18 664	19 049	18 838	
Jul	20 626	20 224	19 533	20 082	18 814	
Aug	20 053	19 105	19 038	19 459	19 220	
Sep	18 839	18 605	18 216	18 230	16 857	
Oct	19 785	19 367	18 883	18 203	17 784	
Nov	19 123	18 539	18 153	17 713	17 281	
Dec	18 582	17 678	17 979	17 496	16 169	
Total	231 805	227 336	216 010	221 030	214 766	

¹ Latest month is preliminary.

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

Month	2019	2020	2021	2022	2023	2023 year-to-date
Jan	0,1	-3,6	-2,4	-0,2	-7,3	-7,3
Feb	-1,0	0,0	-3,8	-0,1	-8,7	-8,0
Mar	-2,8	-5,0	3,0	-0,6	-4,5	-6,8
Apr	1,6	-23,2	25,7	-2,0		
May	-1,3	-13,5	12,3	-2,4		
Jun	-1,6	-4,8	2,1	-1,1		
Jul	-1,9	-3,4	2,8	-6,3		
Aug	-4,7	-0,4	2,2	-1,2		
Sep	-1,2	-2,1	0,1	-7,5		
Oct	-2,1	-2,5	-3,6	-2,3		
Nov	-3,1	-2,1	-2,4	-2,4		
Dec	-4,9	1,7	-2,7	-7,6		
Total	-1,9	-5,0	2,3	-2,8		

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

Month	Gigawatt-hours				Month-on-month % change			
	2020	2021	2022	2023	2020	2021	2022	2023
Jan	18 819	18 433	18 472	17 142	2,0	-2,1	0,7	1,1
Feb	19 176	18 429	18 422	16 773	1,9	0,0	-0,3	-2,2
Mar	17 984	18 532	18 403	17 564	-6,2	0,6	-0,1	4,7
Apr	14 779	18 583	18 162		-17,8	0,3	-1,3	
May	16 529	18 531	18 089		11,8	-0,3	-0,4	
Jun	17 936	18 248	18 052		8,5	-1,5	-0,2	
Jul	18 202	18 692	17 527		1,5	2,4	-2,9	
Aug	18 396	18 751	18 478		1,1	0,3	5,4	
Sep	18 448	18 443	17 047		0,3	-1,6	-7,7	
Oct	18 572	17 924	17 551		0,7	-2,8	3,0	
Nov	18 480	18 065	17 653		-0,5	0,8	0,6	
Dec	18 821	18 338	16 961		1,8	1,5	-3,9	

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

	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23 ¹	Mar-23 year-on-year % change
Total - all producers						
Generated	19 053	17 524	18 024	16 709	19 107	-5,6
Inflow into South Africa	771	988	1 003	761	883	1,4
Consumed in power stations and auxiliary systems	1 509	1 378	1 370	1 259	1 433	-10,5
Outflow from South Africa	1 034	965	999	855	971	-12,0
Distributed in South Africa	17 281	16 169	16 658	15 357	17 585	-4,5
Eskom						
Generated	16 608	14 935	15 422	14 420	16 591	-9,1
Inflow into South Africa	771	988	1 003	761	883	1,4
Consumed in power stations and auxiliary systems	1 407	1 282	1 274	1 174	1 347	-11,5
Outflow from South Africa	1 034	965	999	855	971	-12,0
Distributed in South Africa	14 938	13 675	14 152	13 152	15 156	-8,2

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

	Jan – Mar 2022 (GWh)	Jan – Mar 2023 (GWh)	% change between Jan – Mar 2022 and Jan – Mar 2023	Difference between Jan – Mar 2022 and Jan – Mar 2023 (GWh)
Total - all producers				
Generated	58 316	53 840	-7,7	-4 476
Inflow into South Africa	2 805	2 647	-5,6	-158
Consumed in power stations and auxiliary systems	4 562	4 062	-11,0	-500
Outflow from South Africa	3 361	2 825	-15,9	-536
Distributed in South Africa	53 197	49 600	-6,8	-3 597
Eskom				
Generated	52 468	46 433	-11,5	-6 035
Inflow into South Africa	2 805	2 647	-5,6	-158
Consumed in power stations and auxiliary systems	4 345	3 795	-12,7	-550
Outflow from South Africa	3 361	2 825	-15,9	-536
Distributed in South Africa	47 566	42 460	-10,7	-5 106

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

Province	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23 ¹	Mar-23 year-on-year % change
Western Cape	1 530	1 392	1 448	1 389	1 546	-12,1
Eastern Cape	696	613	634	581	678	-12,2
Northern Cape	476	480	514	409	504	7,9
Free State	825	805	839	767	859	-2,1
KwaZulu-Natal	3 157	3 049	3 068	2 826	3 204	-4,8
North West	1 853	1 745	1 818	1 659	1 902	-2,2
Gauteng	4 310	3 741	3 890	3 692	4 220	-4,8
Mpumalanga	2 401	2 449	2 536	2 247	2 581	-0,6
Limpopo	1 649	1 598	1 634	1 507	1 762	-1,8
Total	16 897	15 871	16 381	15 075	17 256	-4,2

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 2019.</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 March 2023 was 100%. The collection rate for February 2023 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>
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 email 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 are generated each month using the X-12 Seasonal Adjustment Program developed by the United States Census Bureau. 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 recognised. 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:</p> <p>Click to download Electricity seasonal adjustment February 2022</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 2019. 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	<table> <tr> <td>GDP</td> <td>Gross domestic product</td> </tr> <tr> <td>GWh</td> <td>Gigawatt-hour</td> </tr> <tr> <td>ISIC</td> <td>International Standard Industrial Classification</td> </tr> <tr> <td>SIC</td> <td>Standard Industrial Classification of All Economic Activities</td> </tr> <tr> <td>SA</td> <td>South Africa</td> </tr> <tr> <td>Stats SA</td> <td>Statistics South Africa</td> </tr> <tr> <td>*</td> <td>Revised figures</td> </tr> </table>	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
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	Telephone number: (012) 310 6990 Email: tsholofelod@statssa.gov.za
Nicolai Claassen	Telephone number: 072 310 5351 Email: nicolaic@statssa.gov.za

General information

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Orders/subscription services	Telephone number: (012) 310 8619 Email address: millies@statssa.gov.za
Postal address	Private Bag X44, Pretoria, 0001

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