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## **STATISTICAL RELEASE**

### **P4141**

# Electricity generated and available for distribution (Preliminary)

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## Electricity generated (produced) in South Africa: results for November 2021

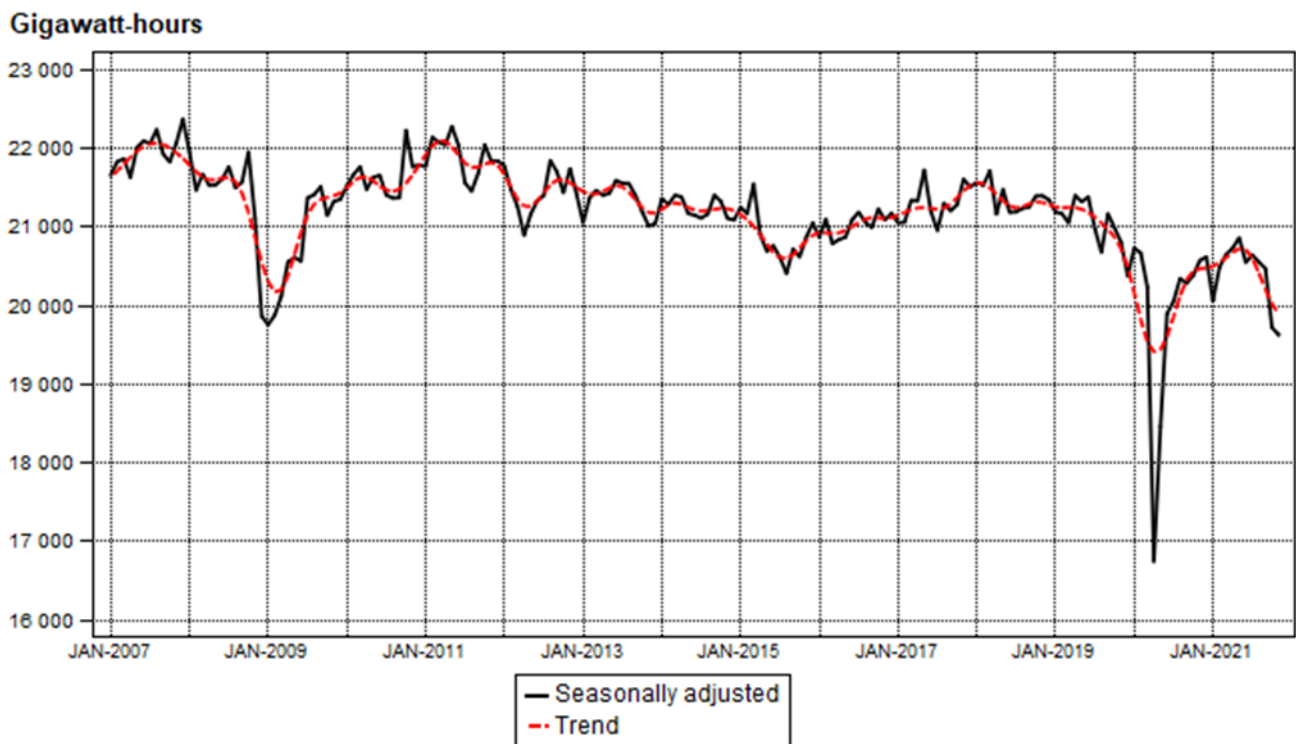
**Table A – Key growth rates in the volume of electricity generated**

	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21
Year-on-year % change, unadjusted	3,2	3,4	2,0	0,0	-3,4	-3,7
Month-on-month % change, seasonally adjusted	-1,5	0,4	-0,4	-0,4	-3,7	-0,4
3-month % change, seasonally adjusted <sup>1</sup>	1,5	0,3	-0,8	-0,8	-2,1	-3,1

<sup>1</sup> Percentage change between the previous 3 months and the 3 months ending in the month indicated.

Electricity generation (production) decreased by 3,7% year-on-year in November 2021. Seasonally adjusted electricity generation decreased by 0,4% in November 2021 compared with October 2021. This followed month-on-month changes of -3,7% in October 2021 and -0,4% in September 2021. Seasonally adjusted electricity generation decreased by 3,1% in the three months ended November 2021 compared with the previous three months.

**Figure 1 – Electricity generated in South Africa**



**Electricity distributed (consumed) in South Africa: results for November 2021**

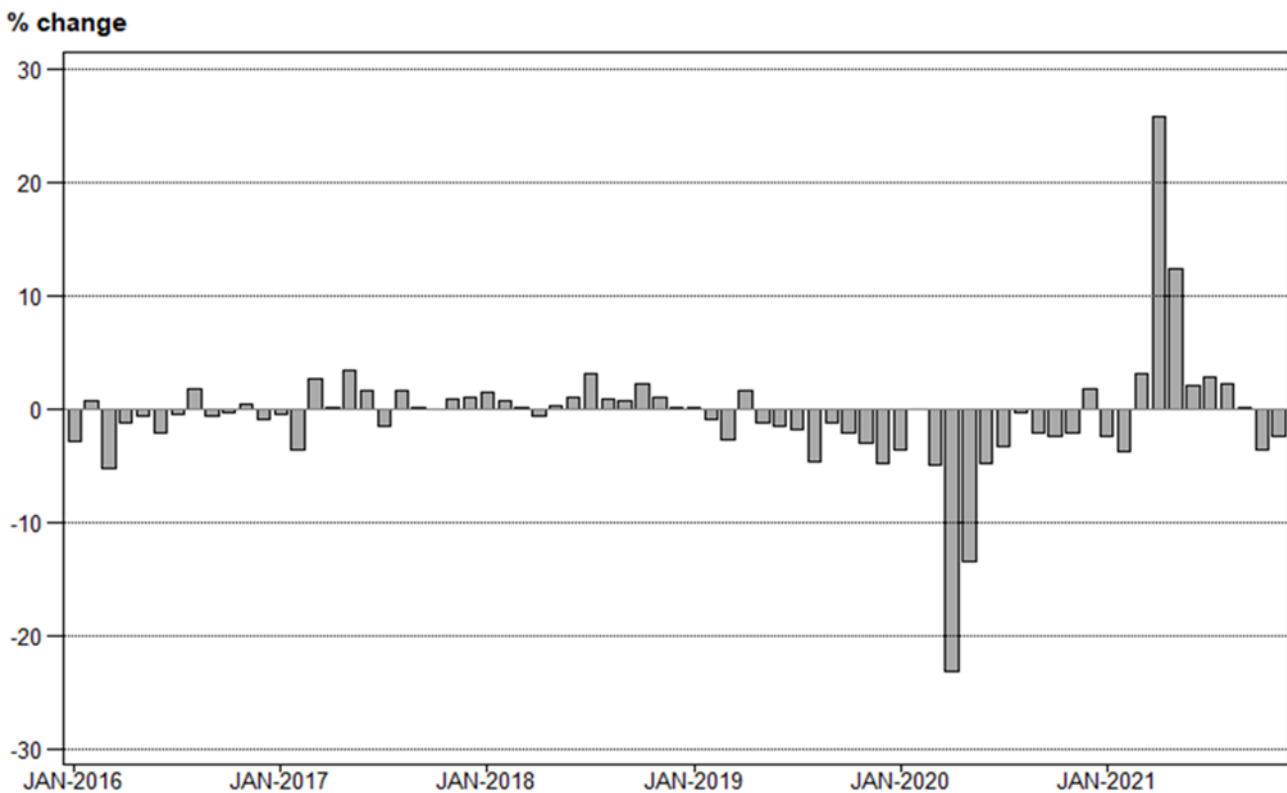
**Table B – Key growth rates in the volume of electricity distributed**

	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21
Year-on-year % change, unadjusted	2,1	2,8	2,2	0,1	-3,6	-2,4
Month-on-month % change, seasonally adjusted	-2,3	1,6	0,6	-0,9	-4,1	0,6
3-month % change, seasonally adjusted <sup>1</sup>	0,6	0,0	-0,6	0,5	-1,0	-2,5

<sup>1</sup> Percentage change between the previous 3 months and the 3 months ending in the month indicated.

Electricity distribution (consumption) decreased by 2,4% year-on-year in November 2021. Seasonally adjusted electricity distribution increased by 0,6% month-on-month in November 2021, following month-on-month changes of -4,1% in October 2021 and -0,9% in September 2021. Seasonally adjusted electricity distribution decreased by 2,5% in the three months ended November 2021 compared with the previous three months.

**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: 2015=100)

Month	2015	2016	2017	2018	2019	2020	2021 <sup>1</sup>
Jan	101,2	99,2	100,1	102,4	100,4	97,9	94,8
Feb	93,0	95,9	92,2	93,9	92,1	93,0	89,0
Mar	103,6	99,6	102,2	103,4	100,4	96,4	98,1
Apr	96,5	97,4	98,1	97,6	99,4	76,7	96,3
May	101,4	102,7	107,4	106,5	105,9	91,9	103,1
Jun	102,7	103,2	104,8	105,1	105,2	99,1	102,3
Jul	105,4	108,4	106,5	108,8	108,1	103,2	106,7
Aug	101,2	105,1	106,0	105,5	103,0	100,5	102,5
Sep	98,6	99,8	100,8	100,0	99,6	96,5	96,5
Oct	101,0	103,2	104,6	105,4	103,4	100,5	97,1
Nov	98,1	100,3	101,9	101,8	99,0	96,6	93,0
Dec	97,3	98,2	99,6	98,0	94,1	95,1	
<b>Total</b>	<b>100,0</b>	<b>101,1</b>	<b>102,0</b>	<b>102,4</b>	<b>100,9</b>	<b>95,6</b>	

<sup>1</sup> Latest month is preliminary.

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

Month	2016	2017	2018	2019	2020	2021	2021 year-to-date
Jan	-2,0	0,9	2,3	-2,0	-2,5	-3,2	-3,2
Feb	3,1	-3,9	1,8	-1,9	1,0	-4,3	-3,7
Mar	-3,9	2,6	1,2	-2,9	-4,0	1,8	-1,9
Apr	0,9	0,7	-0,5	1,8	-22,8	25,6	3,9
May	1,3	4,6	-0,8	-0,6	-13,2	12,2	5,6
Jun	0,5	1,6	0,3	0,1	-5,8	3,2	5,2
Jul	2,8	-1,8	2,2	-0,6	-4,5	3,4	4,9
Aug	3,9	0,9	-0,5	-2,4	-2,4	2,0	4,5
Sep	1,2	1,0	-0,8	-0,4	-3,1	0,0	4,0
Oct	2,2	1,4	0,8	-1,9	-2,8	-3,4	3,2
Nov	2,2	1,6	-0,1	-2,8	-2,4	-3,7	2,6
Dec	0,9	1,4	-1,6	-4,0	1,1		
<b>Total</b>	<b>1,1</b>	<b>0,9</b>	<b>0,4</b>	<b>-1,5</b>	<b>-5,3</b>		

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

Month	Base: 2015=100				Month-on-month % change			
	2018	2019	2020	2021	2018	2019	2020	2021
Jan	103,3	101,5	99,3	96,1	0,3	-0,7	1,7	-2,6
Feb	103,1	101,4	99,0	98,1	-0,2	-0,1	-0,3	2,1
Mar	104,0	100,8	96,9	98,9	0,9	-0,6	-2,1	0,8
Apr	101,3	102,5	80,2	99,3	-2,6	1,7	-17,2	0,4
May	102,8	102,1	88,4	99,9	1,5	-0,4	10,2	0,6
Jun	101,5	102,4	95,3	98,4	-1,3	0,3	7,8	-1,5
Jul	101,5	100,5	96,0	98,8	0,0	-1,9	0,7	0,4
Aug	101,7	99,0	97,4	98,4	0,2	-1,5	1,5	-0,4
Sep	101,8	101,4	97,1	98,0	0,1	2,4	-0,3	-0,4
Oct	102,4	100,5	97,6	94,4	0,6	-0,9	0,5	-3,7
Nov	102,5	99,6	98,5	94,0	0,1	-0,9	0,9	-0,4
Dec	102,2	97,6	98,7		-0,3	-2,0	0,2	

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

Month	2016	2017	2018	2019	2020	2021 <sup>1</sup>
Jan	18 924	18 820	19 106	19 132	18 444	18 002
Feb	18 190	17 539	17 667	17 493	17 491	16 825
Mar	18 935	19 441	19 470	18 930	17 976	18 522
Apr	18 535	18 550	18 421	18 711	14 379	18 078
May	19 502	20 161	20 207	19 943	17 254	19 371
Jun	19 405	19 720	19 926	19 609	18 664	19 049
Jul	20 297	19 997	20 626	20 224	19 533	20 082
Aug	19 570	19 880	20 053	19 105	19 038	19 459
Sep	18 679	18 707	18 839	18 605	18 216	18 230
Oct	19 349	19 352	19 785	19 367	18 883	18 203
Nov	18 790	18 940	19 123	18 539	18 153	17 713
Dec	18 370	18 562	18 582	17 678	17 979	
<b>Total</b>	<b>228 546</b>	<b>229 669</b>	<b>231 805</b>	<b>227 336</b>	<b>216 010</b>	

<sup>1</sup> Latest month is preliminary.

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

Month	2017	2018	2019	2020	2021	2021 year-to-date
Jan	-0,5	1,5	0,1	-3,6	-2,4	-2,4
Feb	-3,6	0,7	-1,0	0,0	-3,8	-3,1
Mar	2,7	0,1	-2,8	-5,0	3,0	-1,0
Apr	0,1	-0,7	1,6	-23,2	25,7	4,6
May	3,4	0,2	-1,3	-13,5	12,3	6,1
Jun	1,6	1,0	-1,6	-4,8	2,1	5,4
Jul	-1,5	3,1	-1,9	-3,4	2,8	5,0
Aug	1,6	0,9	-4,7	-0,4	2,2	4,6
Sep	0,1	0,7	-1,2	-2,1	0,1	4,1
Oct	0,0	2,2	-2,1	-2,5	-3,6	3,3
Nov	0,8	1,0	-3,1	-2,1	-2,4	2,8
Dec	1,0	0,1	-4,9	1,7		
<b>Total</b>	<b>0,5</b>	<b>0,9</b>	<b>-1,9</b>	<b>-5,0</b>		

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

Month	Gigawatt-hours				Month-on-month % change			
	2018	2019	2020	2021	2018	2019	2020	2021
Jan	19 262	19 325	18 675	18 233	0,0	-0,6	1,7	-2,4
Feb	19 304	19 145	18 494	18 458	0,2	-0,9	-1,0	1,2
Mar	19 546	18 987	18 041	18 650	1,3	-0,8	-2,4	1,0
Apr	19 085	19 268	14 997	18 607	-2,4	1,5	-16,9	-0,2
May	19 494	19 197	16 579	18 757	2,1	-0,4	10,5	0,8
Jun	19 227	19 100	17 945	18 328	-1,4	-0,5	8,2	-2,3
Jul	19 253	18 812	18 206	18 628	0,1	-1,5	1,5	1,6
Aug	19 389	18 400	18 526	18 749	0,7	-2,2	1,8	0,6
Sep	19 254	19 009	18 391	18 574	-0,7	3,3	-0,7	-0,9
Oct	19 376	18 951	18 437	17 818	0,6	-0,3	0,3	-4,1
Nov	19 268	18 696	18 568	17 920	-0,6	-1,3	0,7	0,6
Dec	19 434	18 357	18 686		0,9	-1,8	0,6	

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

	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21 <sup>1</sup>	Nov-21 year-on-year % change
<b>Total - all producers</b>						
Generated	22 258	21 397	20 137	20 253	19 412	-3,7
Inflow into South Africa	853	1 033	927	783	1 021	46,3
Consumed in power stations and auxiliary systems	1 868	1 762	1 637	1 607	1 518	-0,7
Outflow from South Africa	1 161	1 209	1 197	1 225	1 202	3,1
Distributed in South Africa	20 082	19 459	18 230	18 203	17 713	-2,4
<b>Eskom</b>						
Generated	19 848	19 066	17 775	17 886	17 082	-4,2
Inflow into South Africa	853	1 033	927	783	1 021	46,3
Consumed in power stations and auxiliary systems	1 767	1 652	1 542	1 521	1 428	-2,3
Outflow from South Africa	1 161	1 209	1 197	1 225	1 202	3,1
Distributed in South Africa	17 773	17 238	15 963	15 923	15 473	-2,6

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

	Jan – Nov 2020 (GWh)	Jan – Nov 2021 (GWh)	% change between Jan – Nov 2020 and Jan – Nov 2021	Difference between Jan – Nov 2020 and Jan – Nov 2021 (GWh)
<b>Total - all producers</b>				
Generated	219 620	225 211	2,5	5 591
Inflow into South Africa	9 053	9 033	-0,2	-20
Consumed in power stations and auxiliary systems	18 094	18 232	0,8	138
Outflow from South Africa	12 547	12 479	-0,5	-68
Distributed in South Africa	198 031	203 534	2,8	5 503
<b>Eskom</b>				
Generated	197 709	200 798	1,6	3 089
Inflow into South Africa	9 053	9 033	-0,2	-20
Consumed in power stations and auxiliary systems	17 321	17 292	-0,2	-29
Outflow from South Africa	12 547	12 479	-0,5	-68
Distributed in South Africa	176 895	180 062	1,8	3 167

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

Province	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21 <sup>1</sup>	Nov-21 year-on-year % change
Western Cape	1 782	1 737	1 646	1 582	1 539	-5,4
Eastern Cape	789	810	770	745	706	-1,0
Northern Cape	539	513	501	473	472	-5,8
Free State	1 022	988	887	865	859	-7,4
KwaZulu-Natal	3 387	3 464	3 297	3 278	3 156	-3,7
North West	1 924	1 749	1 796	1 889	1 863	4,8
Gauteng	5 810	5 435	4 717	4 639	4 491	-1,7
Mpumalanga	2 681	2 632	2 497	2 634	2 532	-4,1
Limpopo	1 749	1 719	1 734	1 746	1 735	2,0
<b>Total</b>	<b>19 683</b>	<b>19 046</b>	<b>17 844</b>	<b>17 851</b>	<b>17 354</b>	<b>-2,1</b>

<sup>1</sup> Preliminary.

## Survey information

<b>Introduction</b>	<p><b>1</b> 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"> <li>• generated and distributed in South Africa;</li> <li>• flowing into and out from South Africa as measured by the metering systems at the South African borders; and</li> <li>• delivered to provinces.</li> </ul> <p>Both unadjusted and seasonally adjusted figures are published.</p> <p><b>2</b> 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><b>3</b> 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>
<b>Purpose of the survey</b>	<p><b>4</b> 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>
<b>Scope of the survey</b>	<p><b>5</b> 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>
<b>Classification</b>	<p><b>6</b> 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>
<b>Collection rate</b>	<p><b>7</b> The collection rate for the survey on electricity generated and available for distribution for November 2021 was 96%. The collection rate for October 2021 was 96%.</p>
<b>Statistical unit</b>	<p><b>8</b> 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>
<b>Revised figures</b>	<p><b>9</b> Normally revised figures are due to:</p> <ul style="list-style-type: none"> <li>• late submission of data to Stats SA; and</li> <li>• revisions or corrections by respondents to previous reported data.</li> </ul> <p>Data are edited at enterprise level.</p>
<b>Rounding-off of figures</b>	<p><b>10</b> Where figures have been rounded off, discrepancies may occur between sums of the component items and the totals.</p>
<b>Historical data</b>	<p><b>11</b> Historical electricity data are available on the Stats SA webpage. Click on the following link (<a href="#">Time series data</a>) to access the data electronically.</p>
<b>Past publications</b>	<p><b>12</b> Past electricity releases are available on the Stats SA webpage. Click on the following link (<a href="#">Past publications</a>) to access the releases electronically.</p>



## Technical notes

- |   |   |   |
|---|---|---|
| <b>Survey methodology and design</b>          | 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.   |
| <b>Monthly index of electricity generated</b> | 3 | The calculation of the monthly index of electricity generated is based on the volume of electricity units produced.   |
| <b>Benchmarking</b>                           | 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>  |
| <b>Seasonal adjustment</b>                    | 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:</p> <p><a href="#">Click to download Electricity seasonal adjustment September 2017</a></p> <p><b>Note:</b> Owing to the impact of the COVID-19 lockdown, a transitory change adjustment was applied to April 2020. Transitory (temporary) change describes a temporary effect on the level of a series after a certain point in time. The methodology will be reviewed as more data points are added to the time series.</p> |
| <b>Trend cycle</b>                            | 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.   |
| <b>Month-on-month percentage change</b>       | 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 *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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