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Electricity generated and available for distribution (Preliminary)

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

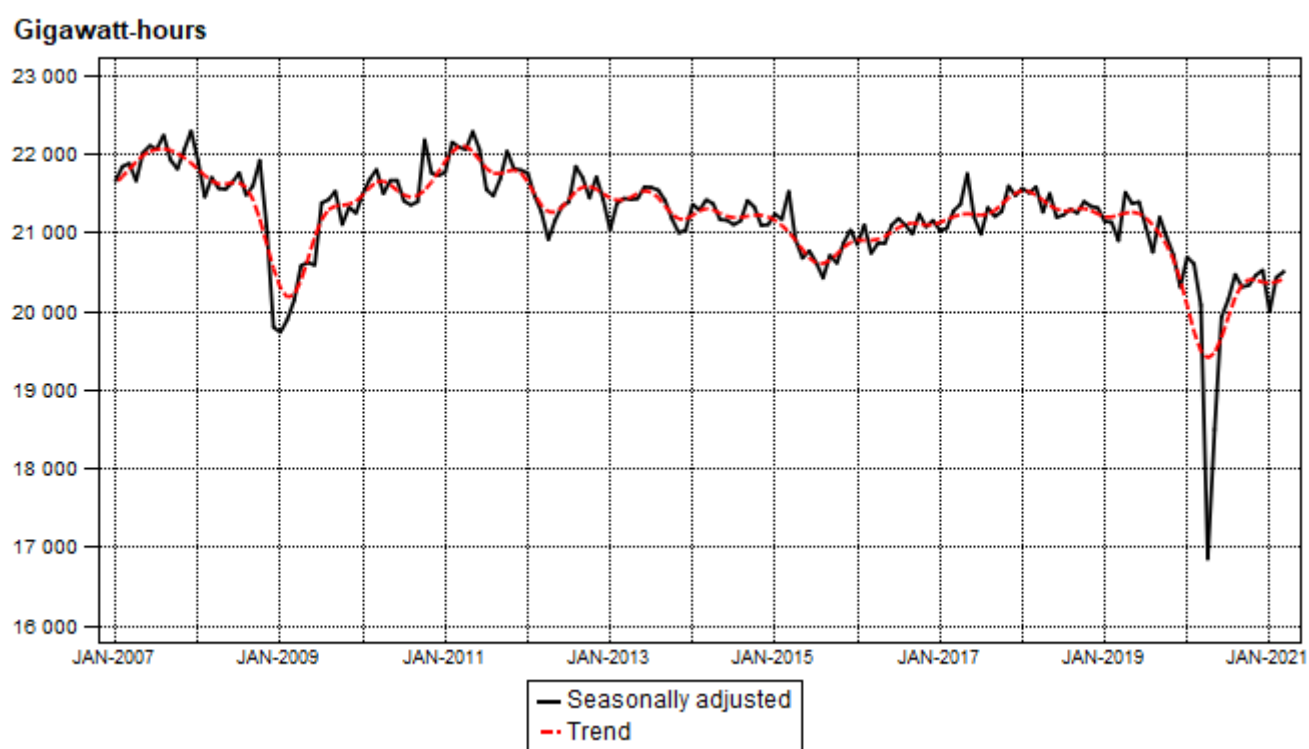
Table A – Key growth rates in the volume of electricity generated

	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
Year-on-year % change, unadjusted	-2,8	-2,4	1,1	-3,2	-4,3	1,8
Month-on-month % change, seasonally adjusted	0,1	0,6	0,3	-2,5	2,2	0,3
3-month % change, seasonally adjusted ¹	4,3	1,0	0,7	-0,2	-0,2	-0,6

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

Electricity generation (production) increased by 1,8% year-on-year in March 2021. Seasonally adjusted electricity generation increased by 0,3% in March 2021 compared with February 2021. This followed month-on-month changes of 2,2% in February 2021 and -2,5% in January 2021. Seasonally adjusted electricity generation decreased by 0,6% in the first quarter of 2021 compared with the fourth quarter of 2020.

Figure 1 – Electricity generated in South Africa



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

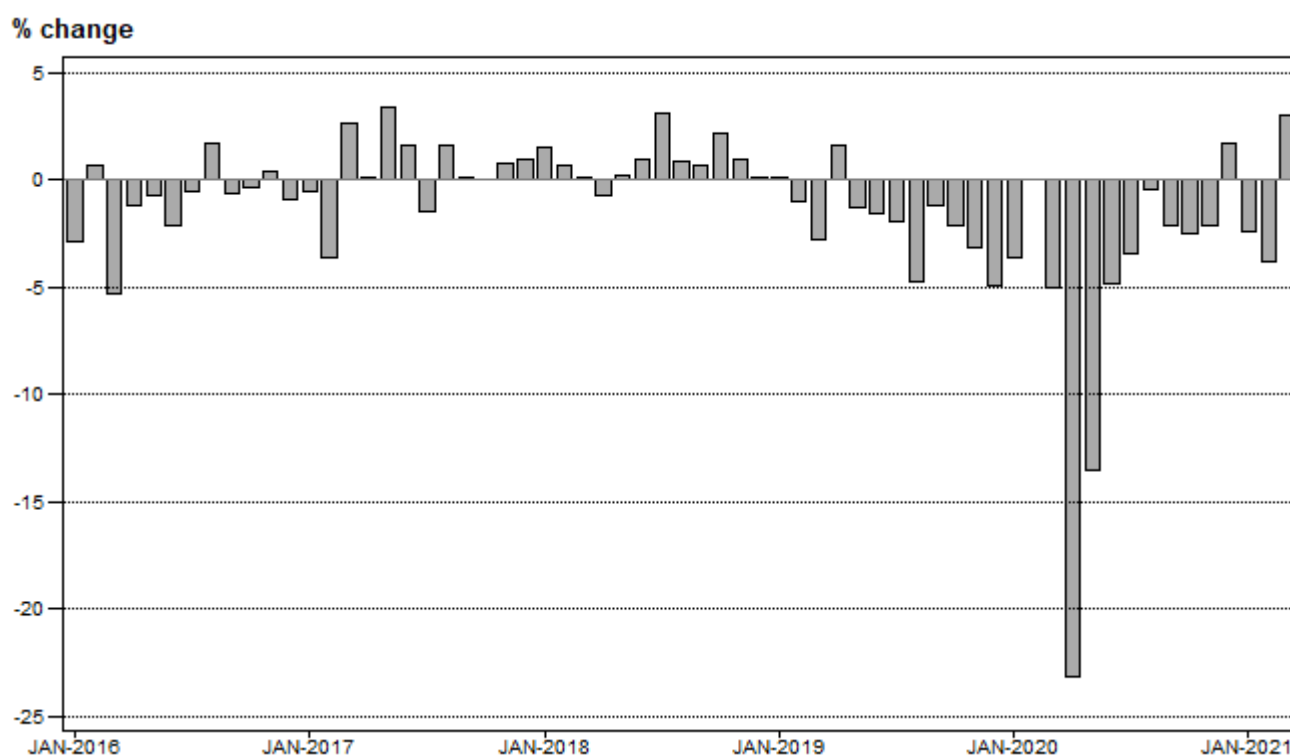
Table B – Key growth rates in the volume of electricity distributed

	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
Year-on-year % change, unadjusted	-2,5	-2,1	1,7	-2,4	-3,8	3,0
Month-on-month % change, seasonally adjusted	0,0	0,4	0,7	-2,3	1,2	0,5
3-month % change, seasonally adjusted ¹	5,0	0,9	0,3	-0,3	-0,2	-0,7

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

Electricity distribution (consumption) increased by 3,0% year-on-year in March 2021. Seasonally adjusted electricity distribution increased by 0,5% month-on-month in March 2021, following month-on-month changes of 1,2% in February 2021 and -2,3% in January 2021. Seasonally adjusted electricity distribution decreased by 0,7% in the first quarter of 2021 compared with the fourth quarter of 2020.

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 ¹
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	
May	101,4	102,7	107,4	106,5	105,9	91,9	
Jun	102,7	103,2	104,8	105,1	105,2	99,1	
Jul	105,4	108,4	106,5	108,8	108,1	103,2	
Aug	101,2	105,1	106,0	105,5	103,0	100,5	
Sep	98,6	99,8	100,8	100,0	99,6	96,5	
Oct	101,0	103,2	104,6	105,4	103,4	100,5	
Nov	98,1	100,3	101,9	101,8	99,0	96,6	
Dec	97,3	98,2	99,6	98,0	94,1	95,1	
Total	100,0	101,1	102,0	102,4	100,9	95,6	

¹ 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		
May	1,3	4,6	-0,8	-0,6	-13,2		
Jun	0,5	1,6	0,3	0,1	-5,8		
Jul	2,8	-1,8	2,2	-0,6	-4,5		
Aug	3,9	0,9	-0,5	-2,4	-2,4		
Sep	1,2	1,0	-0,8	-0,4	-3,1		
Oct	2,2	1,4	0,8	-1,9	-2,8		
Nov	2,2	1,6	-0,1	-2,8	-2,4		
Dec	0,9	1,4	-1,6	-4,0	1,1		
Total	1,1	0,9	0,4	-1,5	-5,3		

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	101,3	99,1	95,8	0,5	-0,8	1,8	-2,5
Feb	103,0	101,2	98,7	97,9	-0,3	-0,1	-0,4	2,2
Mar	103,4	100,1	96,2	98,2	0,4	-1,1	-2,5	0,3
Apr	101,8	103,0	80,7		-1,5	2,9	-16,1	
May	103,0	102,3	88,6		1,2	-0,7	9,8	
Jun	101,5	102,4	95,4		-1,5	0,1	7,7	
Jul	101,7	100,9	96,5		0,2	-1,5	1,2	
Aug	102,0	99,4	98,0		0,3	-1,5	1,6	
Sep	101,8	101,5	97,3		-0,2	2,1	-0,7	
Oct	102,5	100,3	97,4		0,7	-1,2	0,1	
Nov	102,2	99,2	98,0		-0,3	-1,1	0,6	
Dec	102,1	97,3	98,3		-0,1	-1,9	0,3	

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

Month	2016	2017	2018	2019	2020	2021 ¹
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	
May	19 502	20 161	20 207	19 943	17 254	
Jun	19 405	19 720	19 926	19 609	18 664	
Jul	20 297	19 997	20 626	20 224	19 533	
Aug	19 570	19 880	20 053	19 105	19 038	
Sep	18 679	18 707	18 839	18 605	18 216	
Oct	19 349	19 352	19 785	19 367	18 883	
Nov	18 790	18 940	19 123	18 539	18 153	
Dec	18 370	18 562	18 582	17 678	17 979	
Total	228 546	229 669	231 805	227 336	216 010	

¹ 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		
May	3,4	0,2	-1,3	-13,5		
Jun	1,6	1,0	-1,6	-4,8		
Jul	-1,5	3,1	-1,9	-3,4		
Aug	1,6	0,9	-4,7	-0,4		
Sep	0,1	0,7	-1,2	-2,1		
Oct	0,0	2,2	-2,1	-2,5		
Nov	0,8	1,0	-3,1	-2,1		
Dec	1,0	0,1	-4,9	1,7		
Total	0,5	0,9	-1,9	-5,0		

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	19 270	19 296	18 652	18 195	0,2	-0,6	1,9	-2,3
Feb	19 292	19 124	18 445	18 422	0,1	-0,9	-1,1	1,2
Mar	19 423	18 853	17 903	18 522	0,7	-1,4	-2,9	0,5
Apr	19 175	19 366	15 079		-1,3	2,7	-15,8	
May	19 517	19 243	16 607		1,8	-0,6	10,1	
Jun	19 190	19 056	17 922		-1,7	-1,0	7,9	
Jul	19 295	18 902	18 297		0,5	-0,8	2,1	
Aug	19 443	18 465	18 633		0,8	-2,3	1,8	
Sep	19 256	19 040	18 416		-1,0	3,1	-1,2	
Oct	19 394	18 929	18 416		0,7	-0,6	0,0	
Nov	19 224	18 638	18 490		-0,9	-1,5	0,4	
Dec	19 421	18 309	18 617		1,0	-1,8	0,7	

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

	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21 ¹	Mar-21 year-on-year % change
Total - all producers						
Generated	20 150	19 839	19 772	18 566	20 466	1,8
Inflow into South Africa	698	776	858	743	743	-19,2
Consumed in power stations and auxiliary systems	1 529	1 537	1 570	1 482	1 613	-2,8
Outflow from South Africa	1 166	1 100	1 058	1 002	1 074	-22,9
Distributed in South Africa	18 153	17 979	18 002	16 825	18 522	3,0
Eskom						
Generated	17 822	17 483	17 612	16 549	18 377	0,4
Inflow into South Africa	698	776	858	743	743	-19,2
Consumed in power stations and auxiliary systems	1 461	1 462	1 498	1 413	1 541	-3,8
Outflow from South Africa	1 166	1 100	1 058	1 002	1 074	-22,9
Distributed in South Africa	15 893	15 698	15 914	14 877	16 505	1,7

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

	Jan – Mar 2020 (GWh)	Jan – Mar 2021 (GWh)	% change between Jan – Mar 2020 and Jan – Mar 2021	Difference between Jan – Mar 2020 and Jan – Mar 2021 (GWh)
Total - all producers				
Generated	59 958	58 804	-1,9	-1 154
Inflow into South Africa	2 715	2 344	-13,7	-371
Consumed in power stations and auxiliary systems	4 821	4 665	-3,2	-156
Outflow from South Africa	3 940	3 134	-20,5	-806
Distributed in South Africa	53 911	53 349	-1,0	-562
Eskom				
Generated	54 407	52 538	-3,4	-1 869
Inflow into South Africa	2 715	2 344	-13,7	-371
Consumed in power stations and auxiliary systems	4 652	4 452	-4,3	-200
Outflow from South Africa	3 940	3 134	-20,5	-806
Distributed in South Africa	48 531	47 296	-2,5	-1 235

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

Province	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21 ¹	Mar-21 year-on-year % change
Western Cape	1 626	1 662	1 689	1 598	1 721	-6,2
Eastern Cape	713	686	697	642	723	2,7
Northern Cape	501	534	509	506	517	9,1
Free State	928	911	849	824	877	-3,8
KwaZulu-Natal	3 277	3 325	3 266	3 034	3 376	2,1
North West	1 778	1 757	1 772	1 668	1 894	23,9
Gauteng	4 568	4 350	4 462	4 252	4 674	1,6
Mpumalanga	2 639	2 666	2 652	2 392	2 652	-1,6
Limpopo	1 701	1 745	1 735	1 585	1 763	6,1
Total	17 731	17 636	17 632	16 501	18 197	2,7

¹ Preliminary.

Survey information

Introduction	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: - 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. Both unadjusted and seasonally adjusted figures are published. 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. 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.
Purpose of the survey	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.
Scope of the survey	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.
Classification	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.
Collection rate	7 The collection rate for the survey on electricity generated and available for distribution for March 2021 was 100%. The collection rate for February 2021 was 100%.
Statistical unit	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).
Revised figures	9 Normally revised figures are due to: - late submission of data to Stats SA; and - revisions or corrections by respondents to previous reported data. Data are edited at enterprise level.
Rounding-off of figures	10 Where figures have been rounded off, discrepancies may occur between sums of the component items and the totals.
Historical data	11 Historical electricity data are available on the Stats SA webpage. Click on the following link (Time series data) to access the data electronically.
Past publications	12 Past electricity releases are available on the Stats SA webpage. Click on the following link (Past publications) to access the releases electronically.

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	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. 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).
	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: Click to download Electricity seasonal adjustment September 2017 Note: 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.
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.
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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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