

Statistical release

Electricity generated and available for distribution (Preliminary)

January 2011

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Results for January 2011

Table A – Selected key figures regarding electricity generated and available for distribution

Actual estimates	January 2011 1/	% change between January 2010 and January 2011	% change between November 2009 to January 2010 and November 2010 to January 2011
Electricity available for distribution			
(Gigawatt-hours)	19 609	1,1	1,6
Index of the physical volume of electricity			
production (2005=100)	104,0	0,6	2,0

1/ Preliminary.

Seasonally adjusted estimates	January 2011	% change between December 2010 and January 2011	% change between August to October 2010 and November 2010 to January 2011
Electricity available for distribution			
(Gigawatt-hours)	20 231	1,5	2,3
Index of the physical volume of electricity			
production (2005=100)	107,8	0,8	2,1

Consumption of electricity

The actual estimated volume of electricity consumed increased by 1,1% (213 Gigawatt-hours) in January 2011 compared with January 2010 (see Tables A, 2 and 9). Seasonally adjusted electricity consumption increased by 2,3% in the three months ended January 2011 compared with the three months ended October 2010 (see Tables A and B).

Production of electricity

The actual estimated production of electricity increased by 0,6% (114 Gigawatt-hours) in January 2011 compared with January 2010 (see Tables A, 5 and 9). Seasonally adjusted electricity production increased by 2,1% in the three months ended January 2011 compared with the three months ended October 2010 (see Tables A and B).

Electricity delivered by Eskom to the provinces

Electricity delivered to the provinces decreased by 0,2% (-28 Gigawatt-hours) for January 2011 compared with January 2010. The biggest percentage decreases were reported in Eastern Cape (-4,9% or -38 Gigawatt-hours), Free State (-4,0% or -30 Gigawatt-hours), KwaZulu-Natal (-3,5% or -123 Gigwatt-hours) and Gauteng (-2,1% or -102 Gigawatt-hours) (see Table 10).

International trade in electricity

The volume of electricity purchased from outside South African borders decreased from 3 174 Gigawatt-hours in the three months ending January 2010 to 3 036 Gigawatt-hours in the three months ending January 2011, representing a decrease of 4,3% (-138 Gigawatt-hours). The volume of electricity sold to neighbouring countries decreased by 2,2% (-83 Gigawatt-hours) in the above-mentioned period (see Table C).

Table B – Comparison of the seasonally adjusted volume of electricity generated and available for distribution between the three months ended January 2011 and the previous three months

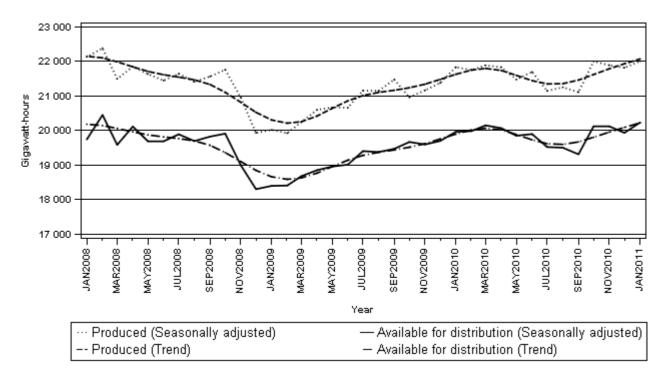
Gigawatt-hours	Seasonally adjusted quantity August to October 2010	Seasonally adjusted quantity November 2010 to January 2011	% change between August to October 2010 and November 2010 to January 2011	Quantity difference between August to October 2010 and November 2010 to January 2011
Electricity produced	64 371	65 722	2,1	1 351
Electricity available for distribution in South Africa	58 932	60 284	2,3	1 352

Table C – Comparison of actual estimates between the three months ended January 2011 and the three months ended January 2010

Gigawatt-hours	Actual volume November 2009 to January 2010	Actual volume November 2010 to January 2011	% change between November 2009 to January 2010 and November 2010 to January 2011	Quantity difference between November 2009 to January 2010 and November 2010 to January 2011
Electricity produced	62 517	63 737	2,0	1 220
Electricity imported 1/	3 174	3 036	-4,3	-138
Consumed in power stations and auxiliary systems	4 505	4 757	5,6	252
Electricity exported 2/	3 693	3 610	-2,2	-83
Electricity available for distribution in South Africa	57 494	58 404	1,6	910

^{1/} Physical energy flowing into South Africa as measured by the metering systems at the South African borders.

Figure 1 - Electricity produced and available for distribution in South Africa, seasonally adjusted and trend



PJ Lehohla Statistician-General

^{2/} Physical energy flowing out of South Africa as measured by the metering systems at the South African borders.

Tables

Table 1 - Total volume of electricity available for distribution in South Africa: 2006 - 2011

Month		Gigawatt-hours								
	2006	2007	2008	2009	2010	2011				
January	18 603	19 561	19 256	17 919	19 396	1/ 19 609				
February	17 396	18 301	18 668	16 757	18 181					
March	18 982	20 160	19 603	18 694	20 186					
April	18 122	18 982	19 127	17 934	19 110					
May	20 312	20 901	20 365	19 548	20 441					
June	20 166	21 020	20 515	19 819	20 758					
July	20 632	21 780	21 610	21 151	21 316					
August	20 307	21 353	20 736	20 398	20 540					
September	18 987	19 732	19 725	19 382	19 257					
October	19 663	20 435	20 138	19 899	20 368					
November	19 244	19 785	18 640	19 248	19 742					
December	18 909	19 160	17 541	18 850	19 053					
Year	231 323	241 170	235 924	229 599	238 348					

^{1/} Preliminary.

Table 2 – Annual percentage change in electricity available for distribution in South Africa: 2006 – 2011

Month	Percentage change 2/								
WOITH	2006	2007	2008	2009	2010	2011			
January	2,5	5,1	-1,6	-6,9	8,2	1,1			
February	1,3	5,2	2,0	-10,2	8,5				
March	2,7	6,2	-2,8	-4,6	8,0				
April	-0,1	4,7	0,8	-6,2	6,6				
May	5,7	2,9	-2,6	-4,0	4,6				
June	6,2	4,2	-2,4	-3,4	4,7				
July	5,0	5,6	-0,8	-2,1	0,8				
August	5,8	5,2	-2,9	-1,6	0,7				
September	3,3	3,9	-0,0	-1,7	-0,6				
October	2,8	3,9	-1,5	-1,2	2,4				
November	3,9	2,8	-5,8	3,3	2,6				
December	3,7	1,3	-8,4	7,5	1,1				
Year	3,6	4,3	-2,2	-2,7	3,8				

^{2/} The annual percentage change is the change in the volume of electricity available for distribution of the relevant month of the current year compared with the corresponding month of the previous year expressed as a percentage.

Table 3 – Seasonally adjusted total volume of electricity available for distribution in South Africa: 2006 – 2011

	Gigawatt-hours									
Month	2006	2007	2008	2009	2010	2011	% change between current and previous month			
January	18 977	19 983	19 744	18 394	19 961	20 231	1,5			
February	18 926	19 954	20 451	18 405	19 983					
March	18 961	20 150	19 584	18 675	20 149					
April	19 074	19 965	20 115	18 849	20 068					
May	19 545	20 143	19 686	18 955	19 849					
June	19 411	20 206	19 686	19 010	19 897					
July	19 145	20 118	19 890	19 402	19 520					
August	19 362	20 314	19 693	19 376	19 502					
September	19 147	19 860	19 823	19 468	19 309					
October	19 460	20 231	19 909	19 667	20 121					
November	19 563	20 137	18 992	19 595	20 121					
December	19 690	20 001	18 299	19 697	19 932					

Table 4 – Indices of the physical volume of electricity production: 2006 – 2011

Month		Base: 2005=100									
	2006	2007	2008	2009	2010	2011					
January	99,8	103,9	105,3	95,0	103,4	1/ 104,0					
February	94,0	97,2	99,7	88,5	96,5						
March	103,3	107,8	105,6	99,3	107,4						
April	98,0	100,9	102,0	96,1	102,0						
May	108,1	111,9	109,6	104,5	108,5						
June	107,3	112,5	108,8	104,8	110,1						
July	110,8	116,6	115,1	112,8	113,0						
August	109,1	114,1	110,3	108,8	109,4						
September	101,8	105,5	104,8	104,4	102,8						
October	107,2	109,1	109,4	105,6	110,8						
November	103,3	106,9	101,4	102,6	106,0						
December	100,9	104,6	93,6	100,3	102,2						
Year	103,6	107,6	105,5	101,9	106,0						

^{1/} Preliminary.

Table 5 - Annual percentage change in indices of the physical volume of electricity production: 2006 - 2011

Month	Percentage change 2/								
	2006	2007	2008	2009	2009	2011			
January	2,3	4,1	1,3	-9,8	8,8	0,6			
February	2,5	3,4	2,6	-11,2	9,0				
March	3,1	4,4	-2,0	-6,0	8,2				
April	-0,1	3,0	1,1	-5,8	6,1				
May	5,1	3,5	-2,1	-4,7	3,8				
June	5,6	4,8	-3,3	-3,7	5,1				
July	5,0	5,2	-1,3	-2,0	0,2				
August	5,9	4,6	-3,3	-1,4	0,6				
September	2,7	3,6	-0,7	-0,4	-1,5				
October	4,6	1,8	0,3	-3,5	4,9				
November	3,9	3,5	-5,1	1,2	3,3				
December	2,7	3,7	-10,5	7,2	1,9				
Year	3,7	3,8	-2,0	-3,4	4,0				

^{2/} The annual percentage change is the change in the index of the physical volume of electricity production of the relevant month of the current year compared with the corresponding month of the previous year expressed as a percentage.

Table 6 - Seasonally adjusted indices of the physical volume of electricity production: 2006 - 2011

		Base: 2005=100									
Month	2006	2007	2008	2009	2010	2011	% change between current and previous month				
January	102,4	106,7	108,4	98,0	106,9	107,8	0,8				
February	102,8	106,6	109,6	97,6	106,5						
March	103,0	107,5	105,3	99,1	107,2						
April	102,8	105,9	107,0	100,9	106,9						
May	104,2	108,0	106,0	101,2	105,2						
June	103,6	108,7	105,0	101,2	106,3						
July	102,7	107,7	106,0	103,6	103,6						
August	104,0	108,6	104,9	103,6	104,1						
September	102,7	106,4	105,6	105,2	103,4						
October	104,7	106,5	106,6	102,7	107,8						
November	104,7	108,2	102,6	103,7	107,2						
December	105,1	109,0	97,6	104,7	106,9						

Table 7 – Total volume of electricity imported: 2006 – 2011 1/

Month	Gigawatt-hours									
	2006	2007	2008	2009	2010	2011				
January	872	1 088	638	1 102	1 122	2/ 1 088				
February	646	942	885	999	995					
March	581	973	802	1 064	1 040					
April	587	1 055	844	906	931					
May	879	900	761	937	1 074					
June	881	880	1 002	1 088	1 019					
July	926	984	1 089	1 040	1 117					
August	930	1 045	1 076	1 072	1 109					
September	971	1 026	1 044	920	1 068					
October	682	1 040	645	1 115	770					
November	862	796	711	940	1 018					
December	965	619	1 075	1 112	930					
Year	9 782	11 348	10 572	12 295	12 193	•				

^{1/} Physical energy flowing into South Africa as measured by the metering systems at the South African borders.

Table 8 - Total volume of electricity exported: 2006 - 2011 1/

Month	Gigawatt-hours Gigawatt-hours								
WOITH	2006	2007	2008	2009	2010	2011			
January	1 056	1 134	1 280	1 096	1 217	2/ 1 133			
February	1 050	1 060	1 101	979	1 128				
March	1 129	1 231	1 136	1 100	1 252				
April	1 017	1 132	998	1 086	1 164				
May	1 046	1 203	1 120	1 109	1 172				
June	1 102	1 256	1 162	1 175	1 175				
July	1 239	1 301	1 249	1 223	1 197				
August	1 262	1 252	1 220	1 235	1 275				
September	1 239	1 186	1 203	1 285	1 247				
October	1 311	1 252	1 258	1 288	1 341				
November	1 186	1 256	1 252	1 213	1 298				
December	1 129	1 233	1 189	1 263	1 179				
Year	13 766	14 496	14 168	14 052	14 645				

^{1/} Physical energy flowing out of South Africa as measured by the metering systems at the South African borders. 2/ Preliminary.

^{2/} Preliminary.

Table 9 - Electricity produced and consumed in power stations, purchased and sold outside South Africa and available for distribution in South Africa (monthly figures)

		Gigawatt-hours						
		January 2010	December 2010	January 2011 1/	% change between January 2010 and January 2011	Difference between January 2010 and January 2011		
Total - All producers	Electricity produced	21 113	20 867	21 227	0,6	114		
	Electricity imported 2/	1 122	930	1 088	-3,0	-34		
	Consumed in power stations and auxiliary systems	1 622	1 565	1 572	-3,1	-50		
	Electricity exported 3/	1 217	1 179	1 133	-6,9	-84		
	Electricity available for distribution in South Africa	19 396	19 053	19 609	1,1	213		
ESKOM	Electricity produced	20 541	20 256	20 430	-0,5	-111		
	Electricity imported 2/	1 122	930	1 088	-3,0	-34		
	Consumed in power stations and auxiliary systems	1 567	1 510	1 489	-5,0	-78		
	Electricity exported 3/	1 217	1 179	1 133	-6,9	-84		
	Electricity available for distribution in South Africa	18 880	18 498	18 896	0,1	16		

Table 10 - Total volume of electricity delivered by Eskom to provinces for 2010 and 2011 1/

		Gigawatt-hours									
Period		Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu- Natal	North West	Gauteng	Mpuma- langa	Limpopo	Total South Africa
2010	January	1 932	780	404	751	3 540	2 182	4 806	2 845	991	18 231
	February	1 842	719	383	706	3 281	2 029	4 592	2 658	917	17 127
	March	2 037	809	405	780	3 629	2 273	5 086	2 926	1 032	18 977
	April	1 873	750	362	735	3 432	2 106	4 929	2 813	983	17 982
	May	1 930	825	365	788	3 551	2 259	5 411	3 079	979	19 187
	June	1 946	797	378	814	3 527	2 175	5 784	3 011	991	19 424
	July	2 005	811	400	824	3 684	2 188	5 978	2 948	1 062	19 900
	August	2 004	899	392	779	3 508	2 208	5 416	2 797	1 038	19 041
	September	1 851	764	387	673	3 474	2 095	4 824	2 580	1 054	17 702
	October	1 911	802	419	708	3 577	2 272	4 969	2 907	1 088	18 653
	November	1 882	778	406	703	3 441	2 211	4 877	2 944	1 033	18 275
	December	1 909	730	418	694	3 371	2 066	4 575	2 945	1 044	17 750
	Year	23 122	9 464	4 719	8 955	42 015	26 064	61 247	34 453	12 212	222 249
2011	January 2/	1 957	742	408	721	3 417	2 180	4 704	3 052	1 022	18 203

^{1/} Wholesale energy as delivered by Eskom to the various provinces.

^{1/} Preliminary.
2/ Physical energy flowing into South Africa as measured by the metering systems at the South African borders.

^{3/} Physical energy flowing out of South Africa as measured by the metering systems at the South African borders.

^{2/} Preliminary.

Explanatory Notes

Introduction

Statistics South Africa (Stats SA) conducts a monthly sample survey of the electricity industry covering electricity undertakings and establishments (branches). This statistical release contains information regarding the volume of electricity units generated and available for distribution in South Africa, the volume of units purchased and sold outside South Africa and the volume of units distributed by Eskom by province on a monthly basis. Both actual and seasonally adjusted figures are published.

- This statistical release reflects indices of the physical volume of electricity production on the basis of 2005=100. In accordance with international practice, the indices have to be rebased every five years to a new base year.
- In order to improve timeliness of the publication, 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 4 survey

The results of the monthly electricity generated and available for distribution 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 5 survey

This survey covers electricity undertakings and establishments conducting activities concerned with the generation or transmission and distribution of electricity. 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 Standard Industrial Classification of all Economic Activities (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 International Standard Industrial Classification of all Economic Activities (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.

Response rate 7

The response rate for the survey on electricity generated and available for distribution for January 2011 was 100%.

Statistical unit 8

The basic 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. Each statistical unit is classified to an industry (see paragraph 5).

Survey methodology and design

All statistical units are stratified by type of economic activity according to the *Standard Industrial Classification of all Economic Activities (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 category one cases) 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 kilowatt is excluded from the sample.

The survey is conducted by mail, email and telephone. Information is collected from a sample of 22 electricity undertakings or establishments.

Monthly production indices

11

The calculation of the monthly production indices is based on the volume of electricity units produced.

Benchmarking 12

The index of physical volume of electricity production should provide an accurate reflection of the trend of activities of the relevant industry. The level of activities, as measured by the monthly electricity generated and available for distribution 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. It is necessary to adjust the level of activities as measured by the monthly sample survey to the level of activities as measured periodically by the Census of electricity, gas and steam. This procedure, whereby the latest results of an economic census are used to compile more accurate level estimates for a certain year, is known as benchmarking.

The results of the 1995 Census of electricity, gas and steam served as a benchmark to verify or adjust the level of the monthly physical volume of electricity production indices collected through the monthly sample survey. The level adjustments were done on the volume indices for August of the relevant census year (the 1995 census year covered the period 1 January 1995 to 31 December 1995 and therefore, the benchmarking was done using the index of August 1995 as reference point).

Seasonal adjustment

14

16

17

Seasonally adjusted estimates of all items are generated each month, using the X-11 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.

Trend cycle 15

The trend is the long-term pattern or movement of a time series. The X-11 Seasonal Adjustment Program is used for smoothing seasonally adjusted estimates.

Related publications

Users may also wish to refer to the following publications which are available from Stats SA:

- Bulletin of Statistics; and
- SA Statistics.

Unpublished statistics

In some cases Stats SA can also make available statistics which are not published. The statistics can be made available as computer printouts or on CD. Generally a charge is made for providing unpublished statistics.

Rounding-off 18 of figures

Where necessary, the figures in the tables have been rounded off to the nearest digit shown. There may therefore be slight discrepancies between the sums of the constituent items and the totals shown.

Glossary

Consumption of electricity

For purposes of this release the term 'consumption of electricity' is used

interchangeably with the term 'electricity available for distribution'.

Electricity undertaking

An electricity undertaking is an undertaking concerned with the generation or transmission and distribution of electricity, including electrical power installations, which, as subsidiary divisions of undertakings, produce electricity for regular use by these undertakings.

Index of physical volume of electricity production

A statistical measure of the change in the volume of production of electricity in a given period and the volume of production of electricity in the base period. The base period is 2005. The production in the base period is set at 100.

Industry

An industry consists of a group of undertakings or establishments engaged in the same or similar kinds of economic activity. Industries are defined in the 1993 System of National Accounts (1993 SNA) in the same way as in the Standard Industrial Classification of all Economic Activities (SIC), Fifth Edition, Report No. 09-90-02.

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

ISIC International Standard Industrial Classification

SIC Standard Industrial Classification of all Economic Activities

Stats SA Statistics South Africa
* Revised figures

General information

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