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Statistical release
P4141

Electricity generated and available for distribution (Preliminary)

January 2012

Embargoed until:
1 March 2012
13:00

Enquiries:
User Information Services
Tel: (012) 310 8600 / 4892 /8390

Forthcoming issue:	Expected release date:
February 2012	5 April 2012

Contents

Results for January 2012

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

Actual estimates	January 2012 1/	% change between January 2011 and January 2012	% change between November 2010 to January 2011 and November 2011 to January 2012
Electricity available for distribution (Gigawatt-hours)	19 700	0,4	0,6
Index of the physical volume of electricity production (2005=100)	105,3	1,3	0,6

1/ Preliminary.

Seasonally adjusted estimates	January 2012	% change between December 2011 and January 2012	% change between August to October 2011 and November 2011 to January 2012
Electricity available for distribution (Gigawatt-hours)	20 236	0,3	1,4
Index of the physical volume of electricity production (2005=100)	108,0	0,5	1,1

Consumption of electricity

Seasonally adjusted electricity consumption increased by 1,4% for the three months ended January 2012 compared with the previous three months. In January 2012, a month-on-month increase of 0,3% was recorded, following month-on-month changes of 0,3% in December 2011 and 1,0% in November 2011.

The actual volume of electricity consumption increased by 0,4% year-on-year in January 2012.

Production of electricity

Seasonally adjusted electricity production increased by 1,1% for the three months ended January 2012 compared with the previous three months. In January 2012, a month-on-month increase of 0,5% was recorded, following month-on-month changes of 0,0% in December 2011 and 0,3% in November 2011.

The actual estimated electricity production increased by 1,3% year-on-year in January 2012.

Electricity delivered by Eskom to the provinces

The total volume of electricity delivered by Eskom to the provinces decreased by 0,2% in January 2012 compared with January 2011. Notable decreases in volume terms recorded for Mpumalanga, Gauteng and Western Cape were to a large extent counteracted by increases recorded for KwaZulu-Natal, Eastern Cape, Northern Cape and North West.

Table B – Comparison of the seasonally adjusted volume of electricity generated and available for distribution between the three months ended January 2012 and the previous three months

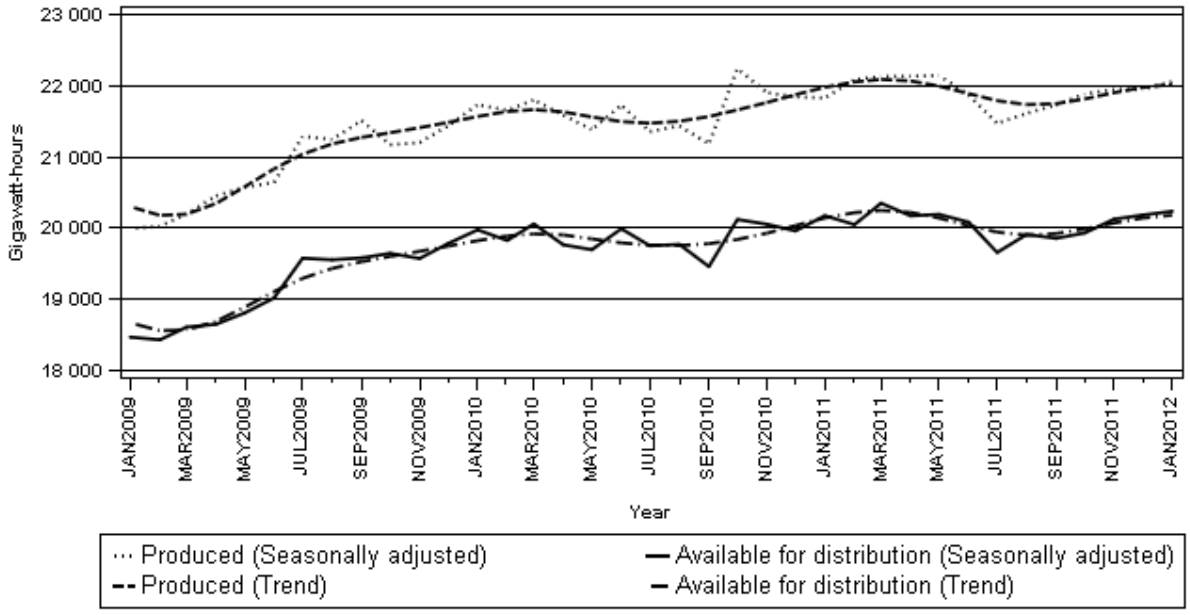
Gigawatt-hours	Seasonally adjusted quantity August to October 2011	Seasonally adjusted quantity November 2011 to January 2012	% change between August to October 2011 and November 2011 to January 2012	Quantity difference between August to October 2011 and November 2011 to January 2012
Electricity produced	65 212	65 936	1,1	724
Electricity available for distribution in South Africa	59 703	60 546	1,4	843

Table C – Comparison of actual estimates between the three months ended January 2012 and the three months ended January 2011

Gigawatt-hours	Actual volume November 2010 to January 2011	Actual volume November 2011 to January 2012	% change between November 2010 to January 2011 and November 2011 to January 2012	Quantity difference between November 2010 to January 2011 and November 2011 to January 2012
Electricity produced	63 696	64 072	0,6	376
Purchased outside South Africa (import) 1/	3 036	3 245	6,9	209
Consumed in power stations and auxiliary systems	4 760	4 741	-0,4	-19
Sold outside South Africa (export) 2/	3 658	3 914	7,0	256
Electricity available for distribution in South Africa	58 314	58 663	0,6	349

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

Tables

Table 1 – Total volume of electricity available for distribution in South Africa: 2007–2012

Month	Gigawatt-hours					
	2007	2008	2009	2010	2011	2012
January	19 561	19 256	17 919	19 396	19 616	1/ 19 700
February	18 301	18 668	16 757	18 181	18 455	
March	20 160	19 603	18 694	20 186	20 518	
April	18 982	19 127	17 934	19 102	19 539	
May	20 901	20 365	19 548	20 435	20 938	
June	21 020	20 515	19 819	20 800	20 914	
July	21 780	21 610	21 151	21 307	21 162	
August	21 353	20 736	20 398	20 540	20 617	
September	19 732	19 725	19 382	19 256	19 619	
October	20 435	20 138	19 899	20 371	20 198	
November	19 785	18 640	19 248	19 702	19 763	
December	19 160	17 541	18 850	18 996	19 200	
Year	**241 170**	**235 924**	**229 599**	**238 272**	**240 539**	

1/ Preliminary.

Table 2 – Annual percentage change in electricity available for distribution in South Africa: 2007–2012

Month	Percentage change 2/					
	2007	2008	2009	2010	2011	2012
January	5,1	-1,6	-6,9	8,2	1,1	0,4
February	5,2	2,0	-10,2	8,5	1,5	
March	6,2	-2,8	-4,6	8,0	1,6	
April	4,7	0,8	-6,2	6,5	2,3	
May	2,9	-2,6	-4,0	4,5	2,5	
June	4,2	-2,4	-3,4	4,9	0,5	
July	5,6	-0,8	-2,1	0,7	-0,7	
August	5,2	-2,9	-1,6	0,7	0,4	
September	3,9	-0,0	-1,7	-0,7	1,9	
October	3,9	-1,5	-1,2	2,4	-0,8	
November	2,8	-5,8	3,3	2,4	0,3	
December	1,3	-8,4	7,5	0,8	1,1	
Year	**4,3**	**-2,2**	**-2,7**	**3,8**	**1,0**	

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: 2007–2012

Month	Gigawatt-hours						
	2007	2008	2009	2010	2011	2012	% change between current and previous month
January	20 052	19 789	18 475	19 977	20 175	20 236	0,3
February	19 941	19 958	18 437	19 828	20 050		
March	20 134	19 556	18 615	20 059	20 350		
April	19 794	19 899	18 655	19 768	20 174		
May	20 146	19 616	18 813	19 699	20 193		
June	20 269	19 751	19 023	19 992	20 084		
July	20 281	20 053	19 580	19 754	19 660		
August	20 452	19 844	19 558	19 773	19 912		
September	19 950	19 931	19 584	19 463	19 858		
October	20 154	19 883	19 647	20 122	19 933		
November	20 088	18 958	19 576	20 055	20 126		
December	20 002	18 428	19 786	19 962	20 184		

Table 4 – Indices of the physical volume of electricity production: 2007–2012

Month	Base: 2005=100					
	2007	2008	2009	2010	2011	2012
January	103,9	105,3	95,0	103,4	104,0	1/ 105,3
February	97,2	99,7	88,5	96,5	98,9	
March	107,8	105,6	99,3	107,4	109,2	
April	100,9	102,0	96,1	102,0	104,8	
May	111,9	109,6	104,5	108,5	112,2	
June	112,5	108,8	104,8	110,1	110,8	
July	116,6	115,1	112,8	113,0	113,2	
August	114,1	110,3	108,8	109,4	110,0	
September	105,5	104,8	104,4	102,8	105,3	
October	109,1	109,4	105,6	110,8	109,2	
November	106,9	101,4	102,6	105,9	106,1	
December	104,6	93,6	100,3	102,1	102,5	
Year	**107,6**	**105,5**	**101,9**	**106,0**	**107,2**	

1/ Preliminary.

Table 5 – Annual percentage change in indices of the physical volume of electricity production: 2007–2012

Month	Percentage change 2/					
	2007	2008	2009	2010	2011	2012
January	4,1	1,3	-9,8	8,8	0,6	1,3
February	3,4	2,6	-11,2	9,0	2,5	
March	4,4	-2,0	-6,0	8,2	1,7	
April	3,0	1,1	-5,8	6,1	2,7	
May	3,5	-2,1	-4,7	3,8	3,4	
June	4,8	-3,3	-3,7	5,1	0,6	
July	5,2	-1,3	-2,0	0,2	0,2	
August	4,6	-3,3	-1,4	0,6	0,5	
September	3,6	-0,7	-0,4	-1,5	2,4	
October	1,8	0,3	-3,5	4,9	-1,4	
November	3,5	-5,1	1,2	3,2	0,2	
December	3,7	-10,5	7,2	1,8	0,4	
Year	**3,8**	**-2,0**	**-3,4**	**4,0**	**1,1**	

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: 2007–2012

Month	Base: 2005=100						
	2007	2008	2009	2010	2011	2012	% change between current and previous month
January	106,6	108,1	97,9	106,4	106,9	108,0	0,5
February	106,6	107,2	98,1	106,0	108,2		
March	107,7	105,3	98,9	106,8	108,4		
April	105,4	106,3	100,2	105,7	108,4		
May	108,2	105,8	100,8	104,7	108,4		
June	108,9	105,2	101,1	106,4	107,1		
July	108,3	106,6	104,3	104,6	105,2		
August	108,9	105,2	104,0	105,0	105,8		
September	106,5	105,7	105,3	103,7	106,4		
October	107,1	107,5	103,7	108,9	107,2		
November	108,2	102,7	103,8	107,3	107,5		
December	108,8	98,0	105,0	107,0	107,5		

Table 7 – Total volume of electricity imported: 2007–2012 1/

Month	Gigawatt-hours					
	2007	2008	2009	2010	2011	2012
January	1 088	638	1 102	1 122	1 088	2/ 1 085
February	942	885	999	995	730	
March	973	802	1 064	1 040	1 112	
April	1 055	844	906	931	912	
May	900	761	937	1 074	907	
June	880	1 002	1 088	1 019	1 009	
July	984	1 089	1 040	1 117	979	
August	1 045	1 076	1 072	1 109	1 108	
September	1 026	1 044	920	1 068	974	
October	1 040	645	1 115	770	911	
November	796	711	940	1 018	1 073	
December	619	1 075	1 112	930	1 087	
Year	**11 348**	**10 572**	**12 295**	**12 193**	**11 890**	

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

Table 8 – Total volume of electricity exported: 2007–2012 1/

Month	Gigawatt-hours					
	2007	2008	2009	2010	2011	2012
January	1 134	1 280	1 096	1 217	1 133	2/ 1 247
February	1 060	1 101	979	1 128	1 069	
March	1 231	1 136	1 100	1 252	1 279	
April	1 132	998	1 086	1 170	1 190	
May	1 203	1 120	1 109	1 177	1 241	
June	1 256	1 162	1 175	1 132	1 174	
July	1 301	1 249	1 223	1 206	1 247	
August	1 252	1 220	1 235	1 275	1 298	
September	1 186	1 203	1 285	1 248	1 288	
October	1 252	1 258	1 288	1 338	1 378	
November	1 256	1 252	1 213	1 316	1 381	
December	1 233	1 189	1 263	1 209	1 286	
Year	**14 496**	**14 168**	**14 052**	**14 668**	**14 964**	

1/ Physical energy flowing out of South Africa as measured by the metering systems at the South African borders.
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 2011	December 2011	January 2012 1/	% change between January 2011 and January 2012	Difference between January 2011 and January 2012
Total - All producers	**Electricity produced**	21 233	20 920	21 487	1,3	254
	Purchased outside South Africa (import) 2/	1 088	1 087	1 085	-0,3	-3
	Consumed in power stations and auxiliary systems	1 572	1 522	1 625	3,4	53
	Sold outside South Africa (export) 3/	1 133	1 286	1 247	10,1	114
	Electricity available for distribution in South Africa	**19 616**	**19 200**	**19 700**	**0,4**	**84**
ESKOM	**Electricity produced**	20 437	19 989	20 612	0,9	175
	Purchased outside South Africa (import)	1 088	1 087	1 085	-0,3	-3
	Consumed in power stations and auxiliary systems	1 489	1 453	1 540	3,4	51
	Sold outside South Africa (export)	1 133	1 286	1 247	10,1	114
	Electricity available for distribution in South Africa	**18 903**	**18 337**	**18 910**	**0,0**	**7**

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.

Table 10 – Total volume of electricity delivered by Eskom to provinces for 2011 and 2012

Period		Gigawatt-hours 1/									
		Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpuma-langa	Limpopo	Total South Africa
2011	**January**	1 962	777	408	721	3 417	2 187	4 738	3 052	1 021	**18 283**
	February	1 881	734	372	665	3 256	2 044	4 394	2 808	937	**17 091**
	March	2 031	773	417	774	3 631	2 292	4 955	3 017	1 063	**18 953**
	April	1 877	726	389	753	3 432	2 159	5 016	2 946	992	**18 290**
	May	1 980	811	406	772	3 624	2 283	5 435	3 106	1 000	**19 417**
	June	1 966	826	417	812	3 527	2 097	5 804	2 945	1 020	**19 414**
	July	2 014	876	428	814	3 639	2 086	5 971	2 852	972	**19 652**
	August	1 985	884	414	783	3 574	2 029	5 727	2 830	960	**19 186**
	September	1 752	840	418	688	3 381	2 172	4 985	2 788	1 028	**18 052**
	October	1 801	840	447	709	3 547	2 268	4 991	2 997	1 051	**18 651**
	November	1 767	840	428	666	3 429	2 248	4 814	2 916	1 035	**18 143**
	December	1 763	783	441	647	3 466	2 107	4 426	2 895	1 050	**17 578**
	Year	**22 779**	**9 710**	**4 985**	**8 804**	**41 923**	**25 972**	**61 256**	**35 152**	**12 129**	**222 710**
2012	**January 2/**	1 889	844	464	706	3 527	2 237	4 631	2 910	1 038	**18 246**

1/ Wholesale energy (Gigawatt-hours) as delivered by Eskom to the various provinces.
2/ Preliminary.

Explanatory Notes

Introduction 1 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.

2 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.

3 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 survey 4 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 survey 5 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.

Collection rate 7 The collection rate for the survey on electricity generated and available for distribution for January 2012 was 96%.

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 9 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.

10 The survey is conducted by mail, email and telephone. Information is collected from a sample of 23 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.

13 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 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 at http://www.statssa.gov.za/publications/P4141/electricity_seasonal_adjustment_note_2011.pdf

Trend cycle

15 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.

Related publications

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

- *Bulletin of Statistics;* and
- *SA Statistics.*

Rounding-off of figures

17 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

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Stats SA publishes approximately 300 different statistical releases each year. It is not economically viable to produce them in more than one of South Africa's eleven official languages. Since the releases are used extensively, not only locally but also by international economic and social-scientific communities, Stats SA releases are published in English only.

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