



# Generation and consumption of electricity

January 2002

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**Date: 7 March 2002**

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This data in this statistical release adheres to the Special Data Dissemination Standard (SDDS) of the International Monetary Fund (IMF), which sets out standards on coverage, periodicity and timeliness of data; access by the public; integrity; and quality of the disseminated data.

**Key figures as at the end of January 2002****Actual estimates**

	<b>January 2002</b>	<b>% change between January 2001 and January 2002</b>	<b>% change between November 2000 to January 2001 and November 2001 to January 2002</b>
Electricity consumed (Gigawatt-hours)	15 968	-0,6%	-1,0%
Electricity imported (Gigawatt-hours)	670	+17,8%	+3,4%
Electricity exported (Gigawatt-hours)	558	-9,4%	-2,7%
Index of the physical volume of electricity production (2000=100)	97,1	-1,5%	-1,7%

**Seasonally adjusted  
estimates**

	<b>January 2002</b>	<b>% change between December 2001 and January 2002</b>	<b>% change between August 2001 to October 2001 and November 2001 to January 2002</b>
Electricity consumed (Gigawatt-hours)	16 253	-0,0%	-1,1%
Electricity imported (Gigawatt-hours)	630	+13,7%	+23,7%
Electricity exported (Gigawatt-hours)	532	+4,3%	+2,4%
Index of the physical volume of electricity production (2000=100)	98,8	-0,2%	-2,1%

## **Key findings as at the end of January 2002**

### **Consumption of electricity decreases**

*The consumption of electricity for the three months ended January 2002, after seasonal adjustment, decreased by 1,1% (-527 Gigawatt-hours) compared with the previous three months. The consumption of electricity for January 2002 decreased by 0,6% (-96 Gigawatt-hours) compared with January 2001.*

### **Production of electricity decreases**

*The production of electricity for the three months ended January 2002, after seasonal adjustment, decreased by 2,1% (-1 069 Gigawatt-hours) compared with the previous three months. The production of electricity for January 2002 decreased by 1,5% (-265 Gigawatt-hours) compared with January 2001.*

### **Import of electricity increases**

*The seasonally adjusted import of electricity from neighbouring countries for the three months ended January 2002 increased by 23,7% (+338 Gigawatt-hours) compared with the previous three months. The import of electricity for January 2002 increased by 17,8% (+101 Gigawatt-hours) compared with January 2001.*

### **Export of electricity increases**

*The seasonally adjusted export of electricity for the three months ended January 2002 increased by 2,4% (+36 Gigawatt-hours) compared with the previous three months. However, the export of electricity for January 2002 decreased by 9,4% (-58 Gigawatt-hours) compared with January 2001.*

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## Notes

Forthcoming issues	Issue	Expected release date
	February 2002	4 April 2002
	March 2002	2 May 2002
	April 2002	6 June 2002
	May 2002	4 July 2002
	June 2002	1 August 2002
	July 2002	5 September 2002
	August 2002	3 October 2002
	September 2002	7 November 2002
	October 2002	5 December 2002
	November 2002	2 January 2003
	December 2002	6 February 2003

**Purpose of the survey** The Generation and Consumption of Electricity Survey is a countrywide survey covering a sample of electricity undertakings and establishments conducting activities concerned with the generation or transmission and distribution of electricity in the South African economy. The information received is used to estimate key economic statistics and calculate production indices in order to compile estimates of the Gross Domestic Product (GDP) and its components, which are used to formulate and monitor government policy.

Table 1 - Electricity consumed in South Africa: 1997 to 2002 (Gigawatt-hours) 1/

Month	1997	1998	1999	2000	2001	2002
Actual figures						
J	15 009	15 403	15 153	15 512	16 064	15 968
F	14 088	14 459	14 360	15 224	14 871	
M	15 155	15 714	15 791	16 225	16 320	
A	15 247	14 923	15 063	15 399	15 515	
M	16 423	16 261	16 327	17 064	16 929	
J	16 474	16 280	16 393	16 818	16 788	
J	17 187	16 867	17 051	17 759	18 021	
A	16 303	16 417	16 708	17 214	17 300	
S	15 503	15 536	15 937	16 180	16 277	
O	16 005	15 957	16 322	16 709	16 794	
N	15 235	15 136	15 831	16 161	15 960	
D	14 878	14 563	15 184	15 395	15 224	
YEAR	187 507	187 516	190 120	195 660	196 063	
Seasonally adjusted figures						
J	15 343	15 748	15 481	15 802	16 365	16 253
F	15 421	15 810	15 695	16 660	16 216	
M	15 090	15 676	15 755	16 213	16 219	
A	16 023	15 650	15 775	16 194	16 184	
M	15 796	15 621	15 717	16 437	16 287	
J	15 688	15 569	15 738	16 151	16 131	
J	15 773	15 535	15 770	16 447	16 691	
A	15 388	15 562	15 848	16 322	16 395	
S	15 697	15 671	16 069	16 306	16 427	
O	15 780	15 668	16 007	16 391	16 493	
N	15 615	15 483	16 141	16 473	16 274	
D	15 901	15 547	16 161	16 429	16 261	

1/ As indicated by electricity available for distribution

Table 2 - Indices of the physical volume of electricity production: 1997 to 2002 (Base : 2000=100)

Month	1997	1998	1999	2000	2001	2002
Actual indices						
J	95,9	97,1	94,7	92,5	98,6	97,1
F	89,9	91,1	89,0	91,2	90,1	
M	97,0	98,0	97,0	100,9	98,5	
A	97,1	93,5	90,1	95,9	93,6	
M	104,4	102,2	98,0	106,3	103,0	
J	104,8	102,2	98,9	104,9	101,1	
J	109,9	106,2	104,0	107,8	111,1	
A	104,5	99,1	101,8	105,5	108,0	
S	100,0	96,6	96,9	99,1	100,5	
O	102,6	99,8	99,1	103,1	102,7	
N	97,4	94,1	96,0	99,1	97,4	
D	94,6	89,8	90,8	93,8	92,1	
YEAR	99,8	97,5	96,4	100,0	99,7	
Seasonally adjusted indices						
J	98,0	99,2	96,6	94,2	100,3	98,8
F	98,1	99,3	97,0	99,6	98,4	
M	97,1	98,0	96,9	100,8	98,3	
A	102,4	98,6	95,0	101,3	98,9	
M	100,7	98,4	94,3	102,3	99,2	
J	100,0	97,9	95,0	100,9	97,4	
J	100,6	97,3	95,3	98,8	101,8	
A	98,7	93,8	96,4	99,9	102,2	
S	100,7	97,1	97,4	99,5	101,0	
O	100,7	97,7	96,7	100,6	100,2	
N	99,6	96,2	98,0	101,1	99,3	
D	101,0	96,2	97,3	100,7	99,0	

Table 3 - Electricity produced and consumed in power stations, purchased and sold outside South Africa and consumed in South Africa

Description	Gigawatt-hours			
	Year 2001	January	December	January
		2002	2001	2001
Total - All Producers				
Electricity produced				
Actual figures	210 100	17 048	16 165	17 313
Seasonally adjusted figures		17 367	17 396	17 635
Purchased outside South Africa (import)	7 247	670	708	569
Consumed in power stations and auxiliary systems	14 767	1 192	1 102	1 202
Sold outside South Africa (export)	6 519	558	547	616
Electricity consumed in South Africa 1/				
Actual figures	196 063	15 968	15 224	16 064
Seasonally adjusted figures		16 253	16 261	16 365
ESKOM				
Electricity produced				
Actual figures	200 758	16 414	15 526	16 462
Seasonally adjusted figures		16 723	16 726	16 773
Purchased outside South Africa (import)	7 247	670	708	569
Consumed in power stations and auxiliary systems	13 622	1 109	1 024	1 106
Sold outside South Africa (export)	6 519	558	547	616
Electricity consumed in South Africa 1/				
Actual figures	187 863	15 417	14 663	15 309
Seasonally adjusted figures		15 696	15 679	15 605

1/ As indicated by electricity available for distribution

\* Revised

## Additional information

### Explanatory Notes

<b>Introduction</b>	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 number of electricity units produced and consumed in South Africa and the number of units purchased and sold outside South Africa 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. In accordance with international practice, the indices have to be rebased every five years to a new base year. The indices in this statistical release have been calculated on the basis of 2000=100.
	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.
<b>Scope of the survey</b>	4	This survey covers electricity undertakings and establishments conducting activities 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.
<b>Classification</b>	5	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.
<b>Statistical unit</b>	6	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 (cf. paragraph 5).
<b>Survey methodology and design</b>	7	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.
	8	The survey is conducted by mail each month collecting information from a sample of 23 electricity undertakings or establishments.

<b>Monthly production indices</b>	<b>9</b>	The calculation of the monthly production indices is based on the number of electricity units produced.
<b>Benchmarking</b>	<b>10</b>	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 Generation and Consumption of Electricity sample survey is based on information received from a sample of electricity undertakings and establishments which is weighted according to the original sample design in order 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.
	<b>11</b>	The results of the 1995 Census of Electricity, Gas and Steam served as benchmarks 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 July 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 July 1995 as reference point). The results, due to benchmarking, were published in the October 1997 statistical release P4141 - Generation and Consumption of Electricity on 4 December 1997.
<b>Seasonal adjustment</b>	<b>12</b>	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 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.
<b>Trend cycle</b>	<b>13</b>	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.
<b>Related publications</b>	<b>14</b>	Users may also wish to refer to the following publications which are available from Stats SA - <ul style="list-style-type: none"> <li>• Bulletin of Statistics.</li> <li>• SA Statistics.</li> </ul>
<b>Unpublished statistics</b>	<b>15</b>	In some cases Stats SA can also make available statistics which are not published. The statistics can be made available as computer printouts, on diskette or CD. Generally a charge is made for providing unpublished statistics.
<b>Rounding-off of figures</b>	<b>16</b>	The figures in the tables have, where necessary, 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.



- Pre-release policy**
- 17** Stats SA has adopted the confidential pre-release policy in respect of selected economic indicators and specific government departments. The policy accords with practice among leading statistical agencies. The statistical integrity of the indices and strict observance of the release time has been assured by the following procedure:
- 18** In respect of this statistical release, an official representative from the Office of the President, the Department of Trade and Industry, the Department of Finance and the South African Reserve Bank will receive a copy of the release on a strictly confidential basis two hours in advance of the public issue.
- 19** Stats SA pre-release policy may be inspected at its Website, [www.statssa.gov.za](http://www.statssa.gov.za)

## **Technical notes**

- Response rates** The response rate for the survey on the generation and consumption of electricity for January 2002 is 100%.

## Glossary

<b>Electricity undertaking</b>	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.
<b>Establishment (branch)</b>	An establishment (branch) is defined as the smallest economic unit which operates as a separate entity for which comprehensive financial records are kept.
<b>Index of physical volume of electricity production</b>	The index of physical volume of electricity production or a production index is a statistical measure of the change in the volume of production. The production index of electricity is the ratio between 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 2000. The production in the base period is set at 100.
<b>Industry</b>	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.
<b>Unit of electricity</b>	One unit of electricity is equal to 1 kilowatt-hour (kWh). One gigawatt-hours (gWh) of electricity is equal to one million kilowatt-hours.

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