Generation and consumption of electricity
P4141

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Contents

Key figures as at the end of June 2000

Actual estimates	**June 2000**	**% change between June 1999 and June 2000**	**% change between April 1999 to June 1999 and April 2000 to June 2000**	**% change between January 1999 to June 1999 and January 2000 to June 2000**
Electricity consumed (Gigawatt-hours)	16 818	+2,6%	+3,1%	+3,4%
Index of the physical volume of electricity production	118,4	+6,1%	+7,0%	+4,2%

Seasonally adjusted estimates	**June 2000**	**% change between May 2000 and June 2000**	**% change between January 2000 to March 2000 and April 2000 to June 2000**
Electricity consumed (Gigawatt-hours)	16 211	-1,2%	+0,6%
Index of the physical volume of electricity production	114,1	-1,0%	+3,4%

Key findings as at the end of June 2000

Consumption of electricity increases

The consumption of electricity in South Africa for the second quarter of 2000 increased by 0,6% (+231 Gigawatt-hours) after seasonal adjustment, compared with the first quarter of 2000. Furthermore, the consumption of electricity for the first six months of 2000 increased by 3,4% compared with the first six months of 1999.

Production of electricity increases

The production of electricity in South Africa for the second quarter of 2000, after seasonal adjustment, increased by 3,4% (+1 726 Gigawatt-hours) compared with the first quarter of 2000. Furthermore, the production of electricity for the first six months of 2000 increased by 4,2% compared with the first six months of 1999.

The seasonally adjusted import figures of electricity for the second quarter of 2000 decreased by 98,3% (-1 266 Gigawatt-hours) compared with the first quarter of 2000. This was mainly due to severe floods in neighbouring countries during this period. Furthermore, the seasonally adjusted export figures of electricity to neighbouring countries for the second quarter of 2000 decreased by 15,5% or 109 Gigawatt-hours compared with the first quarter of 2000.

Notes

	Issue	Expected release date
	July 2000	7 September 2000
	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 develop government policy.	

Table 1 - Electricity consumed in South Africa: 1995 to 2000 (Gigawatt-hours) 1/

Month	1995	1996	1997	1998	1999	2000
			Actual figures			
J	13 782	14 155	15 009	15 403	15 153	15 512
F	12 858	13 710	14 088	14 459	14 360	15 224
M	14 145	14 361	15 155	15 714	15 791	16 225
A	13 350	14 006	15 247	14 923	15 063	15 399
M	14 687	15 315	16 423	16 261	16 327	17 064
J	14 998	15 325	16 474	16 280	16 393	16 818
J	15 440	16 862	17 187	16 867	17 051	
A	14 994	16 151	16 303	16 417	16 708	
S	13 939	14 698	15 503	15 536	15 937	
O	14 306	15 356	16 005	15 957	16 322	
N	14 070	14 792	15 235	15 136	15 831	
D	13 534	14 207	14 878	14 563	15 184	
YEAR	170 103	178 938	187 507	187 516	190 120	
			Seasonally adjusted figures			
J	14 088	14 459	15 287	15 731	15 481	15 889

F	14 147	15 042	15 406	15 747	15 592	16 508
M	14 144	14 318	15 098	15 668	15 741	16 185
A	14 111	14 781	16 067	15 698	15 829	16 244
M	14 281	14 799	15 827	15 638	15 716	16 412
J	14 170	14 516	15 687	15 561	15 743	16 211
J	14 094	15 427	15 754	15 514	15 721	
A	14 066	15 198	15 355	15 525	15 818	
S	14 120	14 889	15 683	15 656	16 046	
O	14 154	15 186	15 782	15 676	16 029	
N	14 426	15 188	15 643	15 528	16 227	
D	14 394	15 166	15 940	15 615	16 249	

1/ As indicated by electricity available for distribution

Table 2 - Indices of the physical volume of electricity production: 1995 to 2000 (Base : 1995=100)

Month	1995	1996	1997	1998	1999	2000
			Actual indices			
J	97,5	100,6	108,3	109,6	106,9	104,4
F	90,7	98,5	101,5	102,8	100,5	102,9
M	99,8	103,6	109,5	110,6	109,4	113,9
A	93,9	100,5	109,6	105,5	101,7	108,2
M	102,6	109,9	117,8	115,4	110,6	119,9
J	105,2	110,1	118,3	115,4	111,6	118,4
J	108,7	121,1	124,1	119,9	117,4	
A	105,6	115,8	118,0	111,9	114,9	
S	98,5	105,7	112,9	109,1	109,4	
O	101,4	110,7	115,8	112,6	111,9	
N	99,9	107,3	110,0	106,2	108,4	
D	96,2	102,7	106,7	101,3	102,4	
YEAR	100,0	107,2	112,7	110,0	108,8	
			Seasonally adjusted indices			
J	99,8	102,9	110,7	112,0	109,3	106,8
F	99,6	107,8	110,8	112,0	109,3	111,9
M	100,0	103,8	109,7	110,6	109,2	113,6
A	99,2	106,2	115,8	111,3	107,3	114,3
M	99,7	106,4	113,7	111,1	106,3	115,3
J	99,5	104,6	113,0	110,6	107,3	114,1
J	99,3	110,7	113,5	109,9	107,7	
A	99,1	109,0	111,2	105,7	108,6	
S	99,5	106,6	113,5	109,5	109,7	
O	100,2	109,1	113,8	110,4	109,5	
N	102,1	109,7	112,5	108,7	111,1	
D	102,1	109,3	114,0	108,4	109,7	

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

Gigawatt-hours

Description	Year 1999	June 2000	May 2000	June 1999	January - June 2000	January - June 1999
Total - All producers						
Electricity produced						
Actual figures	203 012	18 410	18 656	17 360	103 776	99 666
Seasonally adjusted figures		17 761	17 943	16 717	-	-
Purchased outside South Africa	6 673	2	20	654	1 264	2 743
Consumed in power stations and auxiliary systems	15 299	1 401	1 399	1 274	7 763	7 579
Sold outside South Africa	4 266	193	213	347	1 123	1 743
Electricity consumed in South Africa 1/						
Actual figures	190 120	16 818	17 064	16 393	96 153	93 087
Seasonally adjusted figures		16 211	16 412	15 743	-	-
Eskom						
Electricity produced						
Actual figures	192 391	17 522	17 757	16 460	98 768	94 347
Seasonally adjusted figures		16 917	17 080	15 868	-	-
Purchased outside South Africa	6 673	2	20	654	1 264	2 743
Consumed in power stations and auxiliary systems	14 144	1 297	1 294	1 180	7 214	7 008
Sold outside South Africa	4 266	193	213	347	1 123	1 743
Electricity consumed in South Africa 1/						
Actual figures	180 654	16 034	16 270	15 587	91 693	88 339
Seasonally adjusted figures		15 468	15 647	14 986	-	-

1/ As indicated by electricity available for distribution
* Revised

Additional information

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 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 1995=100. Rebased indices were published in the October 1997 Statistical release P4141 - Generation and Consumption of Electricity on 4 December 1997.
3	In order to improve timeliness of the publication, some information for the curren 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.
Scope of the survey 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.
Classification 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.
Statistical unit 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 6).
Survey methodology and design 7	The Business Address Register of Stats SA provides the population frame from which undertakings and establishments are selected for inclusion in the sample. A stratified systematic sample design based on electricity generated is used. 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 24 electricity undertakings or establishments.
Monthly production indices 9	The calculation of the monthly production indices is based on the number of electri city units produced.
Benchmarking 10	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.
11	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.
Seasonal adjustment 12	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.

Trend cycle 13	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 14	Users may also wish to refer to the following publications which are available from Stats SA - • Bulletin of Statistics. • SA Statistics.
Unpublished statistics 15	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.
Rounding-off of figures 16	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: 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. Stats SA pre-release policy may be inspected at its Website, www.statssa.gov.za
Technical notes	
Response rates	The response rate for June 2000 is 100%.

Glossary

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.
Establishment (branch)	An establishment (branch) is defined as the smallest economic unit which operates as a separate entity for which comprehensive financial records are kept.

Index of physical volume of electricity production	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 1995. 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 unit of electricity is equal to 1 kilowatt-hour (kWh). One gigawatt-hours (gWh) of electricity is equal to one thousand kilowatt-hours.

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