

Generation and consumption of electricity P4141

February 2000

Embargo: 13:00

Date: 6 April 2000

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Dr F M Orkin

Head: Statistics South Africa

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Key figures for the month ended February 2000

Actual estimates	February 2000	% change between February 1999 and February 2000	% change between December 1998 to February 1999 and December 1999 to February 2000	% change between January 1999 to February 1999 and January 2000 to February 2000

Electricity consumed (Gigawatt-hours)	15 226	+6,0%	+4,1%	4,0%
Index of the physical volume of electricity production	103,1	+2,6%	+0,4%	0,0%

Seasonally adjusted estimates	February 2000	% change between January 2000 and February 2000	% change between September 1999 to November 1999 and December 1999 to February 2000
Electricity consumed (Gigawatt-hours)	16 596	+4,9%	+0,8%
Index of the physical volume of electricity production	111,9	+5,1%	-0,6%

Key findings for the month ended February 2000

Consumption of electricity increases

Consumption of electricity in South Africa for the three months up to February 2000 increased slightly by 0,8% (+367 Gigawatt-hours) after seasonal adjustment, compared with the previous three months. Furthermore, the seasonally adjusted consumption of electricity increased by 4,9% (775 Gigawatt-hours) between January 2000 and February 2000.

The index of the physical volume of electricity production in South Africa for the three months up to February 2000, after seasonal adjustment, decreased by 0,6% compared with the previous three months. The seasonally adjusted imports of electricity during this period increased by 8,6% or 170 Gigawatt-hours and the seasonally adjusted exports of electricity to neighbouring countries decreased by 32,6% or 385 Gigawatt-hours during the above-mentioned period.

In February 2000, 3,5% of South African demand for electricity was imported from neighbouring countries, while in February 1999, 1,4% was imported.

Notes

Forthcoming issues Issue Expected release date

March 2000 4 May 2000

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 formal non-agricultural business sector of the South African economy. The information received is used to estimate key economic statistics used by the private and public sectors. The information is also used to 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 1/

Gigawatt-hours						
Month	1995	1996	1997	1998	1999	2000
Actual figures						
J	13 782	14 155	15 009	15 403	15 153	15 464
F	12 858	13 710	14 088	14 459	14 360	15 226
M	14 145	14 361	15 155	15 714	15 791	
A	13 350	14 006	15 247	14 923	15 063	
M	14 687	15 315	16 423	16 261	16 327	
J	14 998	15 325	16 474	16 280	16 393	
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	14 090	14 458	15 288	15 717	15 461	15 821
F	14 147	15 051	15 438	15 793	15 663	16 596
M	14 149	14 329	15 108	15 705	15 785	
A	14 114	14 784	16 069	15 721	15 851	
M	14 285	14 806	15 830	15 670	15 749	
J	14 166	14 512	15 651	15 517	15 673	
J	14 098	15 432	15 767	15 517	15 723	
A	14 060	15 187	15 348	15 507	15 798	
S	14 113	14 881	15 681	15 650	16 042	
O	14 147	15 175	15 763	15 654	16 005	
N	14 426	15 189	15 637	15 518	16 221	
D	14 393	15 159	15 916	15 583	16 218	

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	104,3
F	90,7	98,5	101,5	102,8	100,5	103,1
M	99,8	103,6	109,5	110,6	109,4	
A	93,9	100,5	109,6	105,5	101,7	
M	102,6	109,9	117,8	115,4	110,6	
J	105,2	110,1	118,3	115,4	111,6	
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	102,8	110,7	111,8	109,1	106,5
F	99,6	107,8	110,8	111,8	109,1	111,9
M	100,0	104,0	110,1	111,4	110,3	
A	99,2	106,2	115,6	111,3	107,3	

M	99,7	106,4	113,7	111,3	106,7
J	99,5	104,6	112,8	110,4	106,9
J	99,3	110,7	113,6	109,9	107,7
A	99,1	109,0	111,3	105,7	108,6
S	99,5	106,6	113,6	109,5	109,7
O	100,1	109,1	113,7	110,3	109,5
N	102,1	109,6	112,4	108,5	110,8
D	102,0	109,2	113,7	108,1	109,4

1/ As indicated by electricity available for distribution

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	February	January	February	January - February	
		2000		1999	2000	1999
Total - All producers						
Electricity produced						
Actual figures	203 012	16 040	16 228	15 625	32 268	32 254
Seasonally adjusted figures		17 463	16 585	17 010	-	-
Purchased outside South Africa	6 673	529	660	201	1 189	386
Consumed in power stations and auxiliary systems	15 299	1 174	1 227	1 199	2 401	2 514
Sold outside South Africa	4 266	169	197	267	366	613
Electricity consumed in South Africa 1/						
Actual figures	190 120	15 226	15 464	14 360	30 690	29 513
Seasonally adjusted figures		16 596	15 821	15 663	-	-
Eskom						
Electricity produced						
Actual figures	192 391	15 271	15 414	14 754	30 685	30 416
Seasonally adjusted figures		16 629	15 763	16 061	-	-
Purchased outside South Africa	6 673	529	660	201	1 189	386
Consumed in power stations and auxiliary systems	14 144	1 108	1 138	1 105	2 246	2 327
Sold outside South Africa	4 266	169	197	267	366	613
Electricity consumed in South Africa 1/						

Actual figures	180 654	14 523	14 739	13 583	29 262	27 862
Seasonally adjusted figures		15 839	15 098	14 824	-	-

1/ As indicated by electricity available for distribution

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.

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 and were published in the October 1997 Statistical release P4141 - Generation and Consumption of Electricity on 4 December 1997. Both actual and seasonally adjusted figures are published.

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.

4 Production indices and electricity consumed in South Africa are reflected from January 1995 in this statistical release, in order to provide users with comparable time series.

Scope of the survey 5 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 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.

Statistical unit 7 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. An electricity undertaking or establishment with a total generating capacity of less than 500 kilowatt is excluded from the survey. Each statistical unit is classified to an industry (cf. paragraph 6).

Survey methodology and 8 The survey is conducted by mail each month from a sample of 24 electricity under-

design takings or establishments.

Sample design 9 The Business Address Register of Stats SA provided the population frame from which undertakings and establishments were selected for inclusion in the sample. A stratified systematic sample design based on electricity generated was used. All statistical units were 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 was the electricity generated by the electricity undertaking or establishment. All large undertakings or establishments (size category one cases) are completely enumerated. A sample was drawn from medium and small size undertakings and establishments by systematically selecting undertakings or establishments with equal probability.

Monthly production 10 The calculation of the monthly production indices is based on the number of electri-

indices city units produced.

Benchmarking 11 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. The results, due to benchmarking, were published in the October 1997 statistical release P4141 - Generation and Consumption of Electricity on 4 December 1997.

12 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).

Seasonal adjustment 13 Seasonally adjusted estimates of all items are generated each month, using the proc 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 14 The trend is the long-term pattern or movement of a time series. The X-11 Seasonal Adjustment Program is used for smoothing out seasonally adjusted estimates.

Related publications 15 Users may also wish to refer to the following publications which are available from Stats SA -

- Bulletin of Statistics.
- SA Statistics.

Unpublished statistics 16 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 17 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 18 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 Deputy 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 February 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 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 System of National Accounts (1993SNA) 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).

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(012) 310 8161 (publications)

(012) 310 8490 (library)

Fax number: (012) 310 8332

e-mail: Corrieb@statssa.pwv.gov.za

Gerdab@statssa.pwv.gov.za

Postal address: Private Bag X44, Pretoria, 0001

