

South Africa - Domestic Electrical Load Survey - Key Variables 1994-2014

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Report generated on: May 17, 2024

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Identification

SURVEY ID NUMBER

zaf-erc-delskv-1994-2014-v1

TITLE

Domestic Electrical Load Survey - Key Variables 1994-2014

COUNTRY

Name	Country code
South Africa	ZAF

STUDY TYPE

Household Survey [hh]

SERIES INFORMATION

Toussaint, Wiebke. Domestic Electrical Load Survey - Key Variables 1994-2014 [dataset]. version 1. Johannesburg: SANEDI [funders]. Cape Town: UCT Energy Research Centre [producers], 2014. Cape Town: DataFirst [distributor], 2019. DOI: <https://doi.org/10.25828/mf8s-hh79>

ABSTRACT

This dataset is a harmonisation of the Domestic Electrical Load Survey (DELS) 1994-2014 dataset. The DELS 1994-2014 questionnaires were changed in 2000. Subsequently survey questions vary between 1994-1999 and 2000-2014. This makes data processing complex, as survey responses first need to be associated with their year of collection and corresponding questionnaire before they can be correctly interpreted. This Key Variables dataset is a user-friendly version of the original dataset. It contains household responses to the most important survey questions, as well as geographic and linking information that allows for the households to be matched to their respective electricity metering data. This dataset and similar custom datasets can be produced from the DELS 1994-2014 dataset with the python package delprocess. The data processing section includes a description of how this dataset was created. The development of the tools to create this dataset was funded by the South African National Energy Development Initiative (SANEDI).

KIND OF DATA

Administrative records

UNIT OF ANALYSIS

Households

Version

VERSION DESCRIPTION

v1: licensed data, available under conditions

VERSION DATE

2019-05-13

VERSION NOTES

Version 1

Scope

NOTES

The scope of the South African Domestic Electrical Load Survey includes:

HOUSEHOLD: Household characteristics, occupant demographics of gender and age, employment, income, number of household occupants with income

DWELLING: Dwelling characteristics, wall material, roof material, floor area, water source

APPLIANCES: stove, hotplate, kettle, heater, iron, geyser, washing machine, TV, fridge, freezer, microwave

BEHAVIOUR: frequency of appliance usage

ELECTRICITY: time since electrification, circuit breaker

KEYWORDS

Keyword
electrical
household
load data
domestic
electrification
electricity
consumption
energy
rural
residential
appliance

Coverage

GEOGRAPHIC COVERAGE

The study had national coverage.

GEOGRAPHIC UNIT

Settlement/suburb and municipality

UNIVERSE

The dataset covers South African households in the DELS 1994-2014 dataset. These are electrified households that received electricity either directly from Eskom or from their local municipality.

Producers and sponsors

PRIMARY INVESTIGATORS

Name	Affiliation
Wiebke Toussaint	University of Cape Town

FUNDING AGENCY/SPONSOR

Name	Abbreviation	Role
South African National Energy Development Initiative	SANEDI	Funder

OTHER IDENTIFICATIONS/ACKNOWLEDGMENTS

Name	Affiliation	Role
Marcus Dekenah	MDekenah Consulting	[Expert knowledge for] understanding database design and conveying details around data collection

Sampling

SAMPLING PROCEDURE

The dataset includes all households for which survey responses have been captured in the DELS1994-2014 dataset.

WEIGHTING

Data is provided as is and no weightings have been applied.

Data Collection

DATES OF DATA COLLECTION

Start	End	Cycle
1994	2013	Other cycles
2014	2014	Final cycle

DATA COLLECTION MODE

Face-to-face [f2f]

Data Processing

DATA EDITING

This dataset has been constructed from the DELS 1994-2014 dataset using the data processing functions in the delprocess python package (www.github.com/wiebkett/delprocess: release v1.0). The delprocess python package takes the complexities of the original DELS 1994-2014 dataset into account and makes use of 'spec files' to specify the processing steps that must be performed. To retrieve data for all survey years, two separate spec files are required to process survey response from 1994-1999 and 2000-2014. The spec files used to produce this dataset are included in the program files and can be used as templates for new custom datasets. Full instructions on how to use them to process the data are in the README file contained in the delprocess package.

SPEC FILES specify the following processing steps:

1. List of search terms for which survey questions will be searched, and variables returned
2. Transformations (addition, subtraction, multiplication) of variables retrieved from search output
3. Bin intervals for variables (requires numeric data)
4. Labels for bins (requires binned data)
5. Details of bin segments
6. Replacement (encoding) of coded variable values
7. Higher level geography detail

In particular, the DELSKV 1994-2014 dataset has been produced by specifying the following processing steps:

TRANSFORMATIONS

- * monthly_income from 1994 - 1999 is the variable returned by the 'income' search term
- * monthly_income from 2000 - 2014 is calculated as the sum of the variables returned by the 'earn per month', 'money from small business' and 'external' search terms
- * Appliance numbers from 1994 - 1999 is the count of appliances (no data was collected on broken appliances)
- * Appliance numbers from 2000-2014 is the count of appliances [minus] the count of broken appliances (except for TV which included no information on broken appliances)
- * A new total_adults variable was created by summing the number of all occupants (male and female) over 16 years old
- * A new total_children variable was created by summing the number of all occupants (male and female) under 16 years old
- * A new total_pensioners variable was created by summing the number of pensioners (male and female) over 16 years old
- * A new total_unemployed variable was created by summing the number of unemployed occupants (male and female) over 16 years old
- * A new total_part_time variable was created by summing the number of part time employed occupants (male and female) over 16 years old

- * roof_material and wall_material values for 1994-1999 were augmented by 1
- * water_access was transformed for 1994-1999 to be 4 [minus] the 'watersource' value

REPLACEMENTS

- * Appliance usage values have been replaced with:

0=never
1=monthly
2=weekly
3=daily

- * water_access values have been replaced with:

1=nearby river/dam/borehole
2=block/street taps
3=tap in yard
4=tap inside house

- * roof_material and wall_material values have been replaced with:

1=IBR/Corr.Iron/Zinc
2=Thatch/Grass
3=Wood/Masonite board
4=Brick
5=Block
6=Plaster
7=Concrete
8=Tiles
9=Plastic
10=Asbestos
11=Daub/Mud/Clay

OTHER NOTES

Appliance usage information was only collected after 2000.
No binning was done to segment survey responses for this dataset.

Data Appraisal

DATA APPRAISAL

- * The 2000-2014 survey questions contain no variable for 'number of females: 50+', which goes against the pattern of other occupant age categories.
- * Spacing in the original questions is irregular and can cause challenges when specifying transformations (eg. 'number of males: 16-24' and 'number of males: 25 - 34', 'part time' and 'parttime').
- * Spelling mistakes in the original questions can cause challenges when specifying transformations (eg. 'head emploed part time').

MISSING VALUES

Missing values have not been replaced and are represented as blanks except for imputed columns (total_adults, total_children, ...) and appliances after 2000, where missing values have been replaced with a 0.

Access policy

CONTACTS

Name	Affiliation	Email	URL
DataFirst Support Site	University of Cape Town	support@data1st.org	support.data1st.org

ACCESS CONDITIONS

Licensed use files, available for non-commercial use only

CITATION REQUIREMENTS

Toussaint, Wiebke. Domestic Electrical Load Survey - Key Variables 1994-2014 [dataset]. version 1. Johannesburg: SANEDI

[funders]. Cape Town: UCT Energy Research Centre [producers], 2014. Cape Town: DataFirst [distributor], 2019. DOI: <https://doi.org/10.25828/mf8s-hh79>

ACCESS AUTHORITY

Name	Affiliation	Email	URL
DataFirst	University of Cape Town	support@data1st.org	support.data1st.org

Metadata production

PRODUCERS

Name	Abbreviation	Affiliation	Role
Energy Research Centre	ERC	University of Cape Town	Metadata producer

DATE OF METADATA PRODUCTION

2020-04-29

DDI DOCUMENT VERSION

Version 4

Data Description

Data file	Cases	Variables
DELSKV	0	79

Data file: DELSKV

Cases: 0

Variables: 79

Variables

ID	Name	Label	Question
V1	ProfileID	ProfileID	
V2	AnswerID	AnswerID	
V3	Unitofmeasurement	Unit of measurement	
V4	Survey	Survey	
V5	QuestionnaireID	QuestionnaireID	
V6	Year	Year	
V7	LocName	LocName	
V8	Municipality	Municipality	
V9	cb_size	cb_size	
V10	females16to24	females16to24	
V11	females25to34	females25to34	
V12	females35to49	females35to49	
V13	femalesolder50	femalesolder50	
V14	femalesyounger16	femalesyounger16	
V15	floor_area	floor_area	
V16	heademploedparttime	head employed part time	
V17	headonpension	head on pension	
V18	headunemployed	head unemployed	
V19	headparttime	headparttime	
V20	V20	headunemployed	
V21	males16to24	males16to24	
V22	males25to34	males25to34	
V23	males35to49	males35to49	
V24	malesolder50	malesolder50	
V25	malesyounger16	malesyounger16	
V26	monthly_income	monthly_income	
V27	numberoffemales1624	number of females: 16-24	
V28	numberoffemales2534	number of females: 25-34	
V29	numberoffemales3549	number of females: 35 - 49	
V30	numberoffemales16	number of females: <16	
V31	numberofmales1624	number of males: 16-24	
V32	numberofmales2534	number of males: 25 - 34	
V33	numberofmales3549	number of males: 35-49	
V34	numberofmales50	number of males: 50+	
V35	numberofmales16	number of males: <16	
V36	older16parttime	older16parttime	
V37	older16unemployed	older16unemployed	
V38	persionsyoungerthan16year	persions younger than 16 year : employed parttime	

ID	Name	Label	Question
V39	personsolderthan16yearsemp	persons older than 16 years: employed parttime	
V40	V40	persons older than 16 years: employed unemployed	
V41	personsolderthan16yearspen	persons older than 16 years: pension	
V42	personsyoungerthan16yearsps	persons younger than 16 years: pension	
V43	personsyoungerthan16yearsun	persons younger than 16 years: unemployed	
V44	roof_material	roof_material	
V45	spouseemployedparttime	spouse employed part time	
V46	spouseonpension	spouse on pension	
V47	spouseunemployed	spouse unemployed	
V48	spouseparttime	spouseparttime	
V49	V49	spouseunemployed	
V50	total_adults	total_adults	
V51	total_children	total_children	
V52	total_part_time	total_part_time	
V53	total_pensioners	total_pensioners	
V54	total_unemployed	total_unemployed	
V55	wall_material	wall_material	
V56	water_access	water_access	
V57	years_electrified	years_electrified	
V58	younger16parttime	younger16parttime	
V59	younger16unemployed	younger16unemployed	
V60	plate	3_plate	
V61	V61	4_plate	
V62	fridge_freezer	fridge_freezer	
V63	geyser	geyser	
V64	heater	heater	
V65	hotplate	hotplate	
V66	iron	iron	
V67	kettle	kettle	
V68	microwave	microwave	
V69	tv	tv	
V70	washing_machine	washing_machine	
V71	plate_use	3_plate_use	
V72	V72	4_plate_use	
V73	geyser_use	geyser_use	
V74	heater_use	heater_use	
V75	hotplate_use	hotplate_use	
V76	iron_use	iron_use	
V77	kettle_use	kettle_use	
V78	microwave_use	microwave_use	
V79	washing_machine_use	washing_machine_use	

Total: 79

PROFILEID: ProfileID**Data file: DELSKV****Overview**

Valid: Invalid:
Type: Continuous Range: - Format: Numeric

Description

SOURCE OF INFORMATION
ProfileID

Imputation and derivation

IMPUTATION
ProfileID

Others

SECURITY
ProfileID

FEMALES16TO24: females16to24**Data file: DELSKV****Overview**

Valid: Invalid:
Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
females16to24

Imputation and derivation

IMPUTATION
females16to24

Others

SECURITY
females16to24

ANSWERID: AnswerID**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Continuous Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 AnswerID

Imputation and derivation

IMPUTATION
 AnswerID

Others

SECURITY
 AnswerID

UNITOFMEASUREMENT: Unit of measurement**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 Unit of measurement

Imputation and derivation

IMPUTATION
 Unit of measurement

Others

SECURITY
 Unit of measurement

SURVEY: Survey**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION

Survey

Imputation and derivation

IMPUTATION

Survey

Others

SECURITY

Survey

QUESTIONAIREID: QuestionnaireID**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

QuestionnaireID

Imputation and derivation

IMPUTATION

QuestionnaireID

Others

SECURITY

QuestionnaireID

YEAR: Year**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

Year

Imputation and derivation

IMPUTATION

Year

Others

SECURITY

Year

LOCNAME: LocName**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION

LocName

Imputation and derivation

IMPUTATION

LocName

Others

SECURITY

LocName

MUNICIPALITY: Municipality**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION

Municipality

Imputation and derivation

IMPUTATION

Municipality

Others

SECURITY

Municipality

CB_SIZE: cb_size**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Continuous Decimal: 2 Range: - Format: Numeric

Description

SOURCE OF INFORMATION

cb_size

Imputation and derivation

IMPUTATION

cb_size

Others

SECURITY

cb_size

FEMALES25TO34: females25to34**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
females25to34**Imputation and derivation**

IMPUTATION
females25to34**Others**

SECURITY
females25to34

FEMALES35TO49: females35to49**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
females35to49**Imputation and derivation**

IMPUTATION
females35to49**Others**

SECURITY
females35to49

FEMALESOLDER50: femalesolder50**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
femalesolder50**Imputation and derivation**

IMPUTATION
femalesolder50**Others**

SECURITY
femalesolder50

FEMALESYOUNGER16: femalesyounger16**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
femalesyounger16**Imputation and derivation**

IMPUTATION
femalesyounger16**Others**

SECURITY
femalesyounger16

FLOOR_AREA: floor_area**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Continuous Decimal: 2 Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 floor_area

Imputation and derivation

IMPUTATION
 floor_area

Others

SECURITY
 floor_area

HEADEMPLOEDPARTTIME: head employed part time**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 head employed part time

Imputation and derivation

IMPUTATION
 head employed part time

Others

SECURITY
 head employed part time

HEADONPENSION: head on pension**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

head on pension

Imputation and derivation

IMPUTATION

head on pension

Others

SECURITY

head on pension

HEADUNEMPLOYED: head unemployed**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

head unemployed

Imputation and derivation

IMPUTATION

head unemployed

Others

SECURITY

head unemployed

HEADPARTTIME: headparttime**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

headparttime

Imputation and derivation

IMPUTATION

headparttime

Others

SECURITY

headparttime

V20: headunemployed**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

headunemployed

Imputation and derivation

IMPUTATION

headunemployed

Others

SECURITY

headunemployed

MALES16TO24: males16to24**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

males16to24

Imputation and derivation

IMPUTATION

males16to24

Others

SECURITY

males16to24

MALES25TO34: males25to34**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

males25to34

Imputation and derivation

IMPUTATION

males25to34

Others

SECURITY

males25to34

MALES35TO49: males35to49**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
males35to49**Imputation and derivation**

IMPUTATION
males35to49**Others**

SECURITY
males35to49

MALESOLDER50: malesolder50**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
malesolder50**Imputation and derivation**

IMPUTATION
malesolder50**Others**

SECURITY
malesolder50

MALESYOUNGER16: malesyounger16**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 malesyounger16

Imputation and derivation

IMPUTATION
 malesyounger16

Others

SECURITY
 malesyounger16

MONTHLY_INCOME: monthly_income**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Continuous Decimal: 2 Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 monthly_income

Imputation and derivation

IMPUTATION
 monthly_income

Others

SECURITY
 monthly_income

NUMBEROFFEMALES1624: number of females: 16-24**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

number of females: 16-24

Imputation and derivation

IMPUTATION

number of females: 16-24

Others

SECURITY

number of females: 16-24

NUMBEROFFEMALES2534: number of females: 25-34**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

number of females: 25-34

Imputation and derivation

IMPUTATION

number of females: 25-34

Others

SECURITY

number of females: 25-34

NUMBEROFFEMALES3549: number of females: 35 - 49**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

number of females: 35 - 49

Imputation and derivation

IMPUTATION

number of females: 35 - 49

Others

SECURITY

number of females: 35 - 49

NUMBEROFFEMALES16: number of females: <16**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Continuous Range: - Format: Numeric

Description

SOURCE OF INFORMATION

number of females: <16

Imputation and derivation

IMPUTATION

number of females: <16

Others

SECURITY

number of females: <16

NUMBEROFMALES1624: number of males: 16-24**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

number of males: 16-24

Imputation and derivation

IMPUTATION

number of males: 16-24

Others

SECURITY

number of males: 16-24

NUMBEROFMALES2534: number of males: 25 - 34**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

number of males: 25 - 34

Imputation and derivation

IMPUTATION

number of males: 25 - 34

Others

SECURITY

number of males: 25 - 34

NUMBEROFMALES3549: number of males: 35-49**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

number of males: 35-49

Imputation and derivation

IMPUTATION

number of males: 35-49

Others

SECURITY

number of males: 35-49

NUMBEROFMALES50: number of males: 50+**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

number of males: 50+

Imputation and derivation

IMPUTATION

number of males: 50+

Others

SECURITY

number of males: 50+

NUMBEROFMALES16: number of males: <16**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Continuous Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 number of males: <16

Imputation and derivation

IMPUTATION
 number of males: <16

Others

SECURITY
 number of males: <16

OLDER16PARTTIME: older16parttime**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 older16parttime

Imputation and derivation

IMPUTATION
 older16parttime

Others

SECURITY
 older16parttime

OLDER16UNEMPLOYED: older16unemployed**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 older16unemployed

Imputation and derivation

IMPUTATION
 older16unemployed

Others

SECURITY
 older16unemployed

PERSIONSYOUNGERTHAN16YEAR: persions younger than 16 year : employed parttime**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 persions younger than 16 year : employed parttime

Imputation and derivation

IMPUTATION
 persions younger than 16 year : employed parttime

Others

SECURITY
 persions younger than 16 year : employed parttime

PERSONSOLDERTHAN16YEARSEMP: persons older than 16 years: employed parttime**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

persons older than 16 years: employed parttime

Imputation and derivation

IMPUTATION

persons older than 16 years: employed parttime

Others

SECURITY

persons older than 16 years: employed parttime

V40: persons older than 16 years: employed unemployed**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

persons older than 16 years: employed unemployed

Imputation and derivation

IMPUTATION

persons older than 16 years: employed unemployed

Others

SECURITY

persons older than 16 years: employed unemployed

PERSONSOLDERTHAN16YEARSPE: persons older than 16 years: pension**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

persons older than 16 years: pension

Imputation and derivation

IMPUTATION

persons older than 16 years: pension

Others

SECURITY

persons older than 16 years: pension

PERSONSYOUNGERTHAN16YEARSPE: persons younger than 16 years: pension**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

persons younger than 16 years: pension

Imputation and derivation

IMPUTATION

persons younger than 16 years: pension

Others

SECURITY

persons younger than 16 years: pension

PERSONSYOUNGERTHAN16YEARSU: persons younger than 16 years: unemployed**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Continuous Range: - Format: Numeric

Description

SOURCE OF INFORMATION

persons younger than 16 years: unemployed

Imputation and derivation

IMPUTATION

persons younger than 16 years: unemployed

Others

SECURITY

persons younger than 16 years: unemployed

ROOF_MATERIAL: roof_material**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION

roof_material

Imputation and derivation

IMPUTATION

roof_material

Others

SECURITY

roof_material

SPOUSEEMPLOYEDPARTTIME: spouse employed part time**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 spouse employed part time

Imputation and derivation

IMPUTATION
 spouse employed part time

Others

SECURITY
 spouse employed part time

SPOUSEONPENSION: spouse on pension**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 spouse on pension

Imputation and derivation

IMPUTATION
 spouse on pension

Others

SECURITY
 spouse on pension

SPOUSEUNEMPLOYED: spouse unemployed**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

spouse unemployed

Imputation and derivation

IMPUTATION

spouse unemployed

Others

SECURITY

spouse unemployed

SPOUSEPARTTIME: spouseparttime**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

spouseparttime

Imputation and derivation

IMPUTATION

spouseparttime

Others

SECURITY

spouseparttime

V49: spouseunemployed**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
spouseunemployed**Imputation and derivation**

IMPUTATION
spouseunemployed**Others**

SECURITY
spouseunemployed

TOTAL_ADULTS: total_adults**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
total_adults**Imputation and derivation**

IMPUTATION
total_adults**Others**

SECURITY
total_adults

TOTAL_CHILDREN: total_children

Data file: DELSKV

Overview

Valid: Invalid:
Type: Continuous Range: - Format: Numeric

Description

SOURCE OF INFORMATION
total_children

Imputation and derivation

IMPUTATION
total_children

Others

SECURITY
total_children

TOTAL_PART_TIME: total_part_time

Data file: DELSKV

Overview

Valid: Invalid:
Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
total_part_time

Imputation and derivation

IMPUTATION
total_part_time

Others

SECURITY
total_part_time

TOTAL_PENSIONERS: total_pensioners**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

total_pensioners

Imputation and derivation

IMPUTATION

total_pensioners

Others

SECURITY

total_pensioners

TOTAL_UNEMPLOYED: total_unemployed**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

total_unemployed

Imputation and derivation

IMPUTATION

total_unemployed

Others

SECURITY

total_unemployed

WALL_MATERIAL: wall_material**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION
wall_material**Imputation and derivation**

IMPUTATION
wall_material**Others**

SECURITY
wall_material

WATER_ACCESS: water_access**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION
water_access**Imputation and derivation**

IMPUTATION
water_access**Others**

SECURITY
water_access

YEARS_ELECTRIFIED: years_electrified**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Continuous Decimal: 2 Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 years_electrified

Imputation and derivation

IMPUTATION
 years_electrified

Others

SECURITY
 years_electrified

YOUNGER16PARTTIME: younger16parttime**Data file: DELSKV****Overview**

Valid: Invalid:
 Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
 younger16parttime

Imputation and derivation

IMPUTATION
 younger16parttime

Others

SECURITY
 younger16parttime

YOUNGER16UNEMPLOYED: younger16unemployed**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

younger16unemployed

Imputation and derivation

IMPUTATION

younger16unemployed

Others

SECURITY

younger16unemployed

PLATE: 3_plate**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

3_plate

Imputation and derivation

IMPUTATION

3_plate

Others

SECURITY

3_plate

V61: 4_plate**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

4_plate

Imputation and derivation

IMPUTATION

4_plate

Others

SECURITY

4_plate

FRIDGE_FREEZER: fridge_freezer**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

fridge_freezer

Imputation and derivation

IMPUTATION

fridge_freezer

Others

SECURITY

fridge_freezer

GEYSER: geyser**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

geyser

Imputation and derivation

IMPUTATION

geyser

Others

SECURITY

geyser

HEATER: heater**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

heater

Imputation and derivation

IMPUTATION

heater

Others

SECURITY

heater

HOTPLATE: hotplate**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

hotplate

Imputation and derivation

IMPUTATION

hotplate

Others

SECURITY

hotplate

IRON: iron**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

iron

Imputation and derivation

IMPUTATION

iron

Others

SECURITY

iron

KETTLE: kettle**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
kettle**Imputation and derivation**

IMPUTATION
kettle**Others**

SECURITY
kettle**MICROWAVE: microwave****Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION
microwave**Imputation and derivation**

IMPUTATION
microwave**Others**

SECURITY
microwave

TV: tv**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

tv

Imputation and derivation

IMPUTATION

tv

Others

SECURITY

tv

WASHING_MACHINE: washing_machine**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: Numeric

Description

SOURCE OF INFORMATION

washing_machine

Imputation and derivation

IMPUTATION

washing_machine

Others

SECURITY

washing_machine

PLATE_USE: 3_plate_use**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION

3_plate_use

Imputation and derivation

IMPUTATION

3_plate_use

Others

SECURITY

3_plate_use

V72: 4_plate_use**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION

4_plate_use

Imputation and derivation

IMPUTATION

4_plate_use

Others

SECURITY

4_plate_use

■ GEYSER_USE: geyser_use

Data file: DELSKV

Overview

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION
geyser_use

Imputation and derivation

IMPUTATION
geyser_use

Others

SECURITY
geyser_use

■ HEATER_USE: heater_use

Data file: DELSKV

Overview

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION
heater_use

Imputation and derivation

IMPUTATION
heater_use

Others

SECURITY
heater_use

HOTPLATE_USE: hotplate_use**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION

hotplate_use

Imputation and derivation

IMPUTATION

hotplate_use

Others

SECURITY

hotplate_use

IRON_USE: iron_use**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION

iron_use

Imputation and derivation

IMPUTATION

iron_use

Others

SECURITY

iron_use

KETTLE_USE: kettle_use**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION
kettle_use**Imputation and derivation**

IMPUTATION
kettle_use**Others**

SECURITY
kettle_use**MICROWAVE_USE: microwave_use****Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION
microwave_use**Imputation and derivation**

IMPUTATION
microwave_use**Others**

SECURITY
microwave_use

■ WASHING_MACHINE_USE: washing_machine_use**Data file: DELSKV****Overview**

Valid: Invalid:

Type: Discrete Range: - Format: character

Description

SOURCE OF INFORMATION

washing_machine_use

Imputation and derivation

IMPUTATION

washing_machine_use

Others

SECURITY

washing_machine_use

Download related resources

Questionnaires

National Load Research Tracking Study 1995

Title	National Load Research Tracking Study 1995
Date	2014-01-01
Country	South Africa
Language	English
Contributor(s)	This is the questionnaire used for the 1994-1999 rounds of the survey.
Filename	q-dels-nlrts-1994-1999.pdf

Reports

Big data for household energy insights: DELS project report

Title	Big data for household energy insights: DELS project report
Author(s)	Toussaint, Wiebke
Date	2020
Country	South Africa
Language	English
Publisher(s)	Energy Research Centre
Description	This is the final report from the Project which involved a household survey and the collection of meter readings for each household over 20 years.
Filename	dels-2020-report.pdf

Technical documents

The Domestic Electrical Load (DEL) Study Datasets for South Africa

Title	The Domestic Electrical Load (DEL) Study Datasets for South Africa
Author(s)	Toussaint, Wiebke
Date	2020
Country	South Africa
Language	English
Publisher(s)	DataFirst
Description	This is the data descriptor for DELS 1994-2014
Filename	dels-del-m-1994-2014-descriptor.pdf
