energy
Department:
Energy
REPUBLIC OF SOUTH AFRICA

REVIEW OF SOUTH AFRICA'S APPLIANCE ENERGY CLASSES AND RECOMMENDED CHANGES TO EXISTING MINIMUM ENERGY PERFORMANCE STANDARDS

Stakeholder workshop

30 November 2018

Energy Efficient Strategies

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URBAN-ECON
Development Economists

Presentation structure

1. Scope of work and boundaries
2. High-level recommendations
3. Detailed level assessment
4. Q&A

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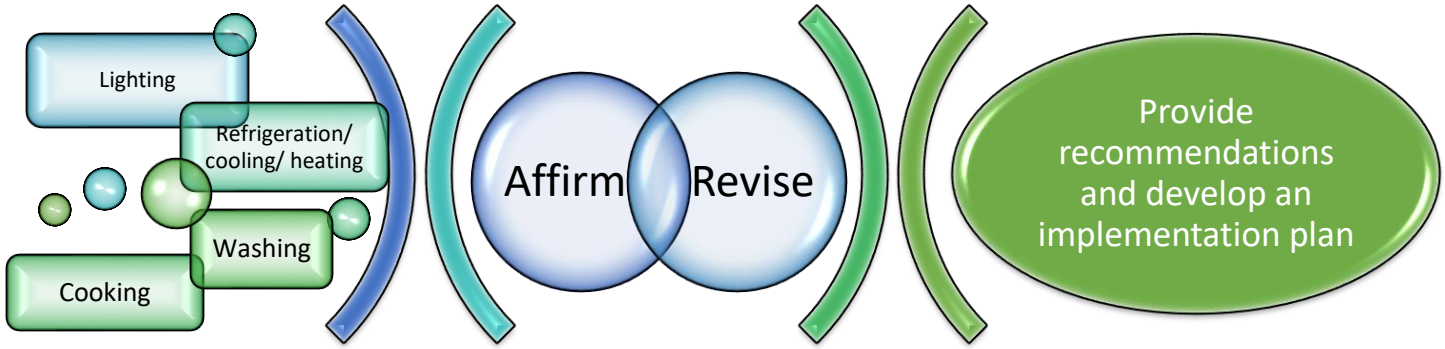
1. Scope and study boundary

Scope

1. Purpose:
   - Update and review existing information
   - Determine whether there is **scope for improvement** and **i**dentifying possible effects on testing capacities and the regulator
2. Data sources:
   - Euromonitor, 2017
   - AMPS data
   - In-house developed database of electric appliances (web crawling, brochures, etc.)
   - Interviews with the industry representatives
3. Approach:



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Study boundary and approach

Compulsory specification		Appliance type	Mandatory MEPS level	Study boundary and approach	
VC 9008	*Phase 1*	Audio and video equipment	Standby Power (<1 Watt)	✓	• Review what is adopted in other countries • Recommend reasonable level and additional items
	Phase 2	Washer-dryer combinations	Class A	✓	• Assess whether the existing Class A still stands • Advise on any action required
		Washing machines	Class A	✓	• Assess whether the existing Class A still stands • Advise on any action required
		Tumble dryers	Class D	✓	• Investigate improvement to Class C and Class B • Engage with industry participants to gauge their views
		Electric ovens	Class B – large Class A – s/m	✓	• Investigate if Class B for large EO can be improved to Class A and if Class A for s+m still stands • Engage with industry participants to gauge their views
		Freezers	Class C	✓	• Investigate improvement to Class B and Class A • Engage with industry participants to gauge their views
		Refrigerators	Class B	✓	• Investigate improvement to class A • Engage with industry participants to gauge their views
		Dishwashers	Class A	✓	• Assess whether the existing Class A still stands • Advise on any action required
	Phase 3	Air-conditioners and heat pumps	Class B	✓	• Detailed assessment of split AC units (incl res and com) • Determine potential to improve MEPS • Engage with distributors and determine barriers
VC 9091/VC 8043		Electric lamps	*tbc*	Excl	• No approved national standard
VC 9006		Electric water heaters	Class B	Excl	• Recently updated to Class B

2. High-level recommendations

Summary of recommendations to MEPS levels

Audio-Visual

Current: SBP 1 W

YES: reduce to .5W

Electric ovens

Sm/Med: Class A Large: Class B

NO: Small/Med - retain

YES: Class A for large by 2020

Dishwasher

Current: Class A

No: retain as is

Washer-Dryers

Current: Class A

No: Watch EU brief

Washing Machine

Current: Class A

YES: Class A+ by 2022

Tumble Dryers

Current: Class D

YES: Class C by 2020

Refrigerators

Current: Class B

YES: Class A by 2020 and A+ by 2026

Freezers

Current: Class C

YES: Class B by 2020, A by 2022, and A+ by 2026

Air conditioners

Current: Class B

YES: for split systems

Yes/No - **Proposed changes**

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Additional recommendations to non-affected EA

Dishwasher

Current: Class A

No: retain as is

- Specifying MEPS with a **benchmark for cleaning and drying performance** for new dishwashers
- Adopt a more **up to date test method** with the new reference machine and the measurement of low power modes
- **Realign labelling requirements** to include low power mode energy

Washer-Dryers

Current: Class A

No: Watch EU brief

- Investigate **ways to differentiate between heat pump and conventional washer-dryers**. Possible considerations could include the development of a programme that endorses heat pump washer-dryers.
- **Maintain a watching brief** on regulatory activities in Europe (re-grading back to A and G)

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3. Detailed level assessment

Refrigerators

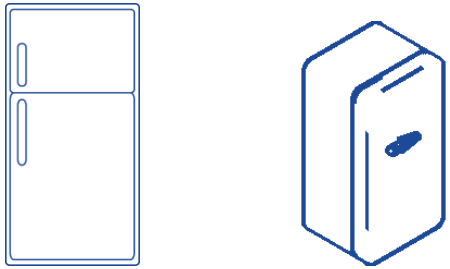
Current MEPS:

- **Class B**

Rationale:

- Market dominated by local assemblers (Class C and D)
- Imported appliances - Class A
- Local manufactures accepted the need to eliminate inefficient models

Regulated items:



- Fridges/single-door refrigerators
- Combined fridge-freezers

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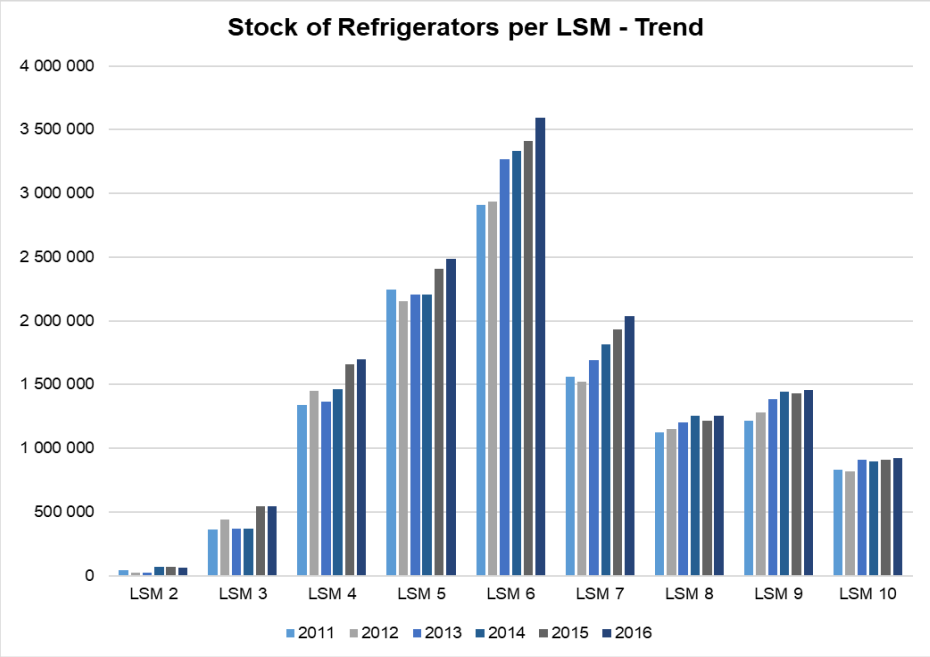
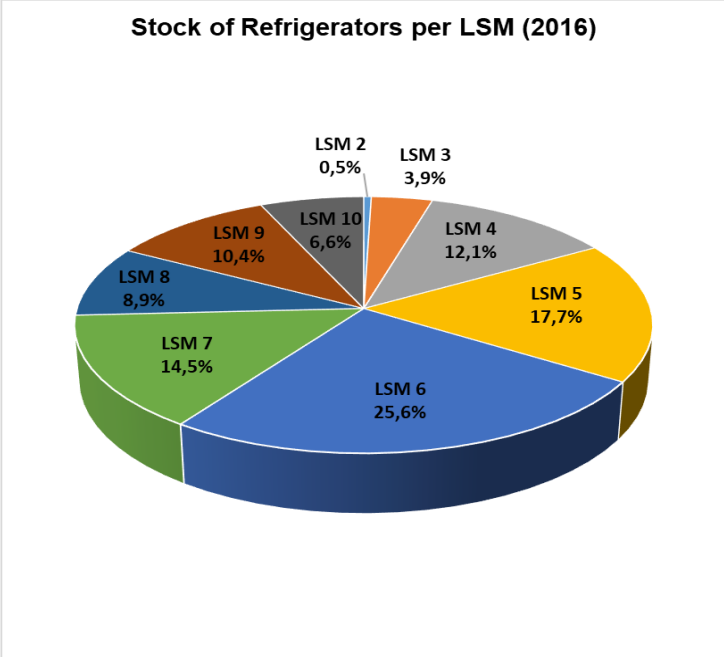
Market Description

- Fridge-freezer combos are considered essential
  - 70% penetration rate
  - 1.3 million units sold in 2017 (~R9 652m)
  - Steady growth projection, particularly among low to middle income HHs





Source: Analysis based on AMPS data, 2010-2016

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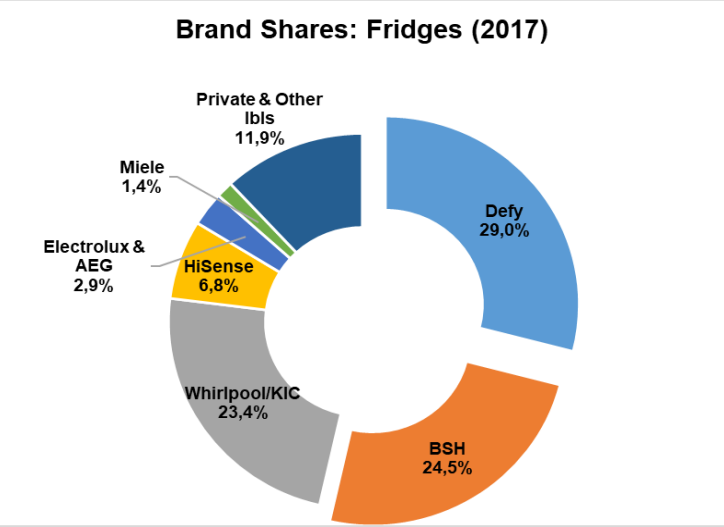
Market Composition

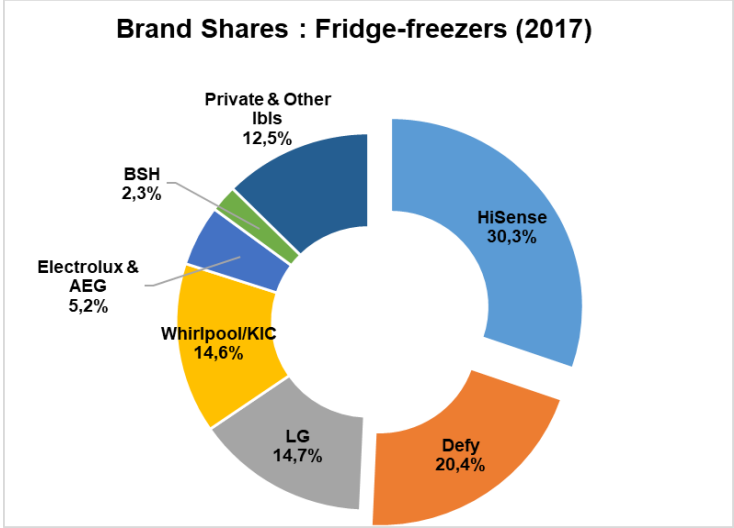
- Dominated by locally manufactured/assembled fridge-freezers

Appliance	Estimated annual inventory		Total units sold p.a.	Estimated value of the market (R'm)
	Imports	Locally manufactured or assembled		
Fridges	4 100	37 300	41 400	140
Fridge-freezers	208 900	671 200	1 301 300	9 651.8

Source: Euromonitor, 2017

- Market shares:





Source: Euromonitor, 2017

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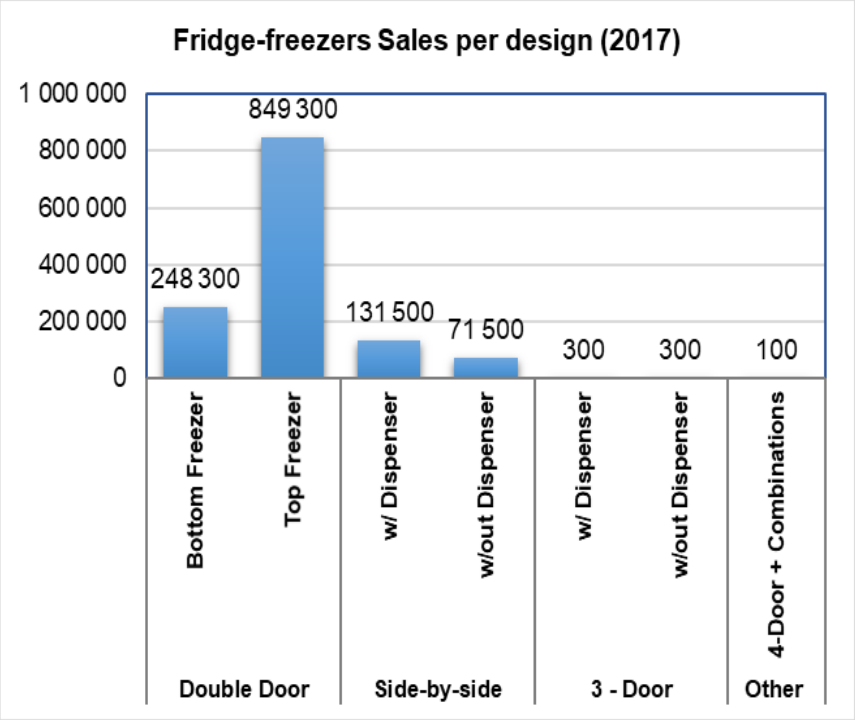
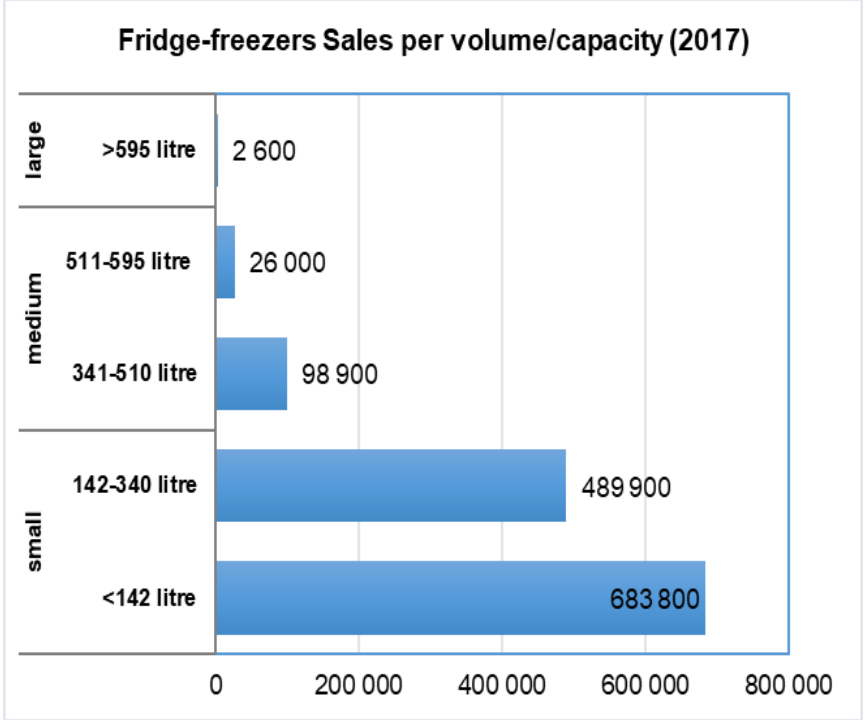
Most Popular Fridge – Freezer Combo

- Most common:
  - Top freezer
  - Small sizes of <142 l and 142-340 l





Source: Euromonitor, 2017

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Prices and Energy Efficiency

- Bulk of units available are of higher energy efficiency (Class A or better)
- Prices vary significantly:
  - Price = f(Size, Energy rating, Brand, Features)

Refrigerators

KIC: Model P; Top freezer, Reversible bottom shelf , G 216L / N 215L (Energy rating A)	R2 999
Defy : Model Q; Bottom freezer, Reversible doors, G 365L / N 350L (Energy rating A)	R6 499
Defy: Model R; Side by side , G 625L /N 559 L (Energy rating A)	R9 999
Samsung : Model S;Top freezer, with dispenser, G 629L G/ N 618L (Energy rating A+)	R14 999
LG : Model T; Bottom freezer, with dispenser G 496L / N 440L (Energy rating A++)	R15 799
HiSense: Model U; French door (3 door), with dispenser, G 720L/ N 536 L (Energy rating A+)	R15 999
Bosch: Model V; Side by side, with dispenser, G 608L/ N 530 L (Energy rating A+)	R16 899

Source: Web-crawling and retail store visits, Q2 2018

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MEPS Opportunities

- Most regulated product for energy efficiency globally
- Europe:
  - Class A in Europe was introduced in 2010
  - Europe took two years to increase from A to A+
  - Definitions for Class A+ tightened in 2014
- Europe tighter for smaller products, US – tighter for large products
- European markets are dominated by a wide range of high efficiency refrigerators and freezers, i.e. A+++

Impact Analysis

Fridge-freezer assumptions

Characteristics	MEPS level B	MEPS level A	MEPS level A+
Size	93 to 203 l	220 – 233 l	219 l
Annual electricity consumptions	247 kWh	236 kWh	121 kWh
Average prices	R2 759	R3 149	R3 799

Fridge-freezer savings and cost calculations

Characteristics	MEPS level B	MEPS level A	MEPS level A+
Cost difference	-	R390	R1 040
Electricity savings – per annum	-	11 kWh	126 kWh
Electricity savings - %		4%	51%
Electricity savings – Rand value		R14	R 160
Change in cost vs savings payback period	-	28 years	6 years
Appliance lifespan	14-17 years	14-17 years	14-17 years
		Marginal electricity savings	Significant electricity savings

- Nation-wide electricity savings of 9 -10 GWh per annum

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Recommendations

- Introduce Class A for refrigerators by 2020 and Class A+ by 2022
  - Option 2: Class A+ for 2021
- Review the calculation methodology by considering:
  - removal of the built-in, chiller and climate factors in the reference equation
  - reducing the frost-free factor
- Conduct a detailed review of refrigerator requirements
  - SA's requirements are not aligned with Europe
  - Europe considering a change to the new IEC test method and label re-grading by 2020

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Electric ovens

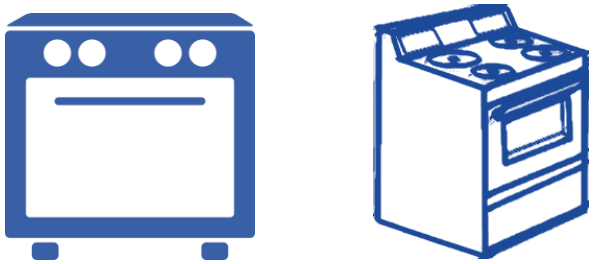
Current MEPS:

- **Small/Medium - Class B**
- **Large: Class C**

Rationale:

- Dominated by locally produced units (av. Class B)
- Imported product – Class A

Regulated items:



- Small oven: 12 litres - 35 litres
- Medium oven: 35 litres - 65 litres
- Large oven: cavity volume ≥ 65 litres

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Market Description and Composition

- The market is subdivided into built-in and free-standing (cooker) types
  - Cookers are the most common in SA
  - Ownership: 3 out of 4 households
- Collectively, 576 300 units were sold in 2017 (~R2 930.8m)
- Future growth:
  - Sales are expected to increase to 736 700 units in 2022
  - Cookers CAGR – 5.4%
  - Ovens CAGR – 4.2%
- Dominated by local manufacturers:

Appliance	Estimated annual inventory		Total units sold p.a.	Estimated value of the market (R'm)
	Imports	Locally manufactured or assembled		
Cookers	126 200	459 000	409 600	1 006.3
Ovens (Built-in)	42 400	158 200	162 800	1842.2
Range cookers	Unknown	Unknown	3 900	82.3

Source: Euromonitor, 2017

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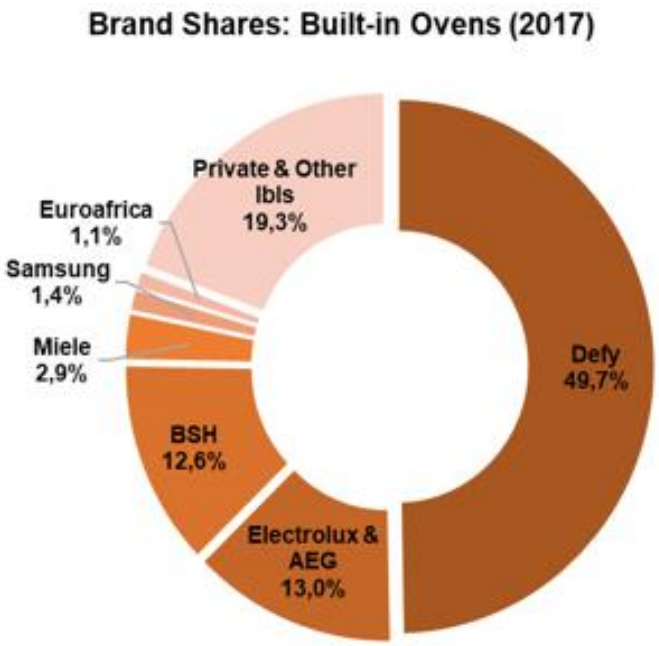
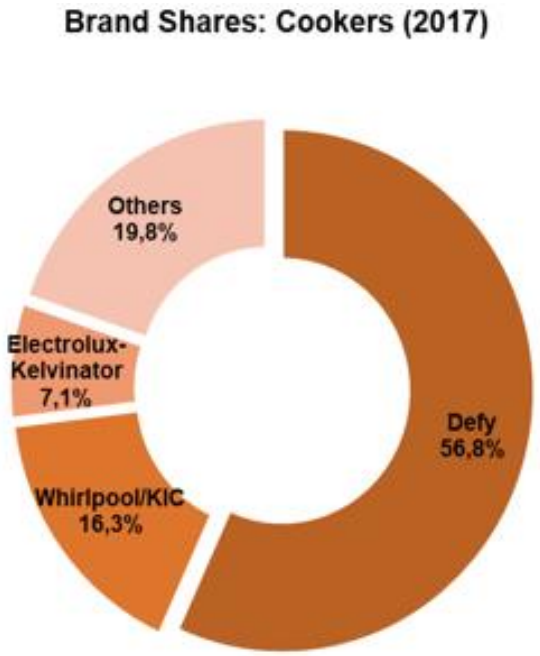
Market Composition

- Defy dominates both cookers and built-in ovens market





Source: Euromonitor, 2017

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Prices

- Cookers (R) > Built-in (R)
- Convection ovens (R) > Static configuration (R)

Oven

Defy: Model P; Freestanding, static oven, 57 L (Energy rating A)	R5 499
Sunbeam: Model Q; Freestanding, convection oven, 88 L (Energy rating unknown)	R7 999
Defy: Model R; Built-in, Static oven, with removable door 81L (Energy rating A)	R2 599
Whirlpool: Model S; Built-in, convection oven, 60 L (Energy rating A)	R2 999
Bosch: Model T;Built-in, eye-level, convection oven, 67 L (Energy rating A)	R2 999
AEG: Model U;Built-in, eye-level, thermic hot air cooking, 72 L (Energy rating A)	R6 099

Source: Web-crawling and retail store visits, Q2 2018

- Most large-size ovens – Class A

MEPS Opportunities

- Relatively few countries have MEPS for ovens
  - Brazil, Costa Rica, Israel, Switzerland, North America (Mexico, USA, Canada), Russia (outdated)
- European new MEPS timetable is as follows:
  - 20 February 2015: EEI < 146 (eliminates bottom half of Class C)
  - 20 February 2016: EEI < 121 (eliminates bottom half of Class B)
  - 20 February 2019: EEI < 96 (eliminates bottom half of Class A)
- In Europe, there are very few models that can achieve an efficiency significantly better than Class A

Impact Analysis

Large electric ovens assumptions

Characteristics	MELS level B	MEPS level A	MEPS level A+
Size	80 – 86 l	60 - 78 l	60 - 76 l
Annual electricity consumptions	221.2 kWh	156 kWh	143.5 kWh
Average prices	R5 932	R5 419	R10 549

Large electric ovens savings and costs calculations

Characteristics	MELS level B	MEPS level A	MEPS level A+
Cost difference	-	-R513	R4 617
Electricity savings – per annum	-	65 kWh	78 kWh
Electricity savings - %		29%	35%
Electricity savings – Rand value		R83	R99
Change in cost vs savings payback period	-	-	99 years
Appliance lifespan (years)	13-20	13-20	13-20

Already possible

Not feasible

- Nation-wide electricity savings of 11 to 13 GWh per annum

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Recommendations

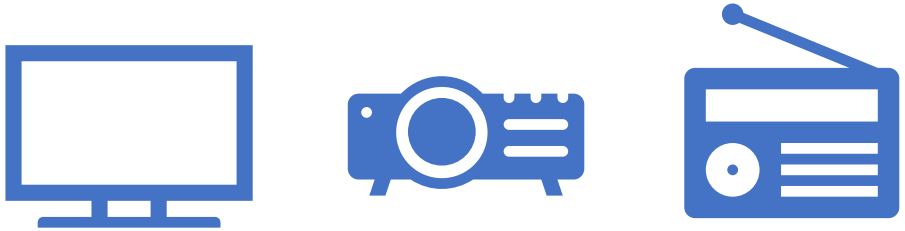
- Leave MEPS at Class A for small and medium ovens
- Increase MEPS for larger ovens to Class A by 2020
- Rectify the typo in oven sizes in VC 9008

Audio-visual Appliances

Current MEPS:

- **Audio & video equipment** (passive standby mode): **≤ 1 W**
- **Set top box** (passive stand by mode): **≤ 3 W**

Regulated items:



- TV sets
- Projectors
- Video recording equipment
- Simple set top boxes (SSTBs)
- Audio equipment
- Multi-function equipment for consumer use

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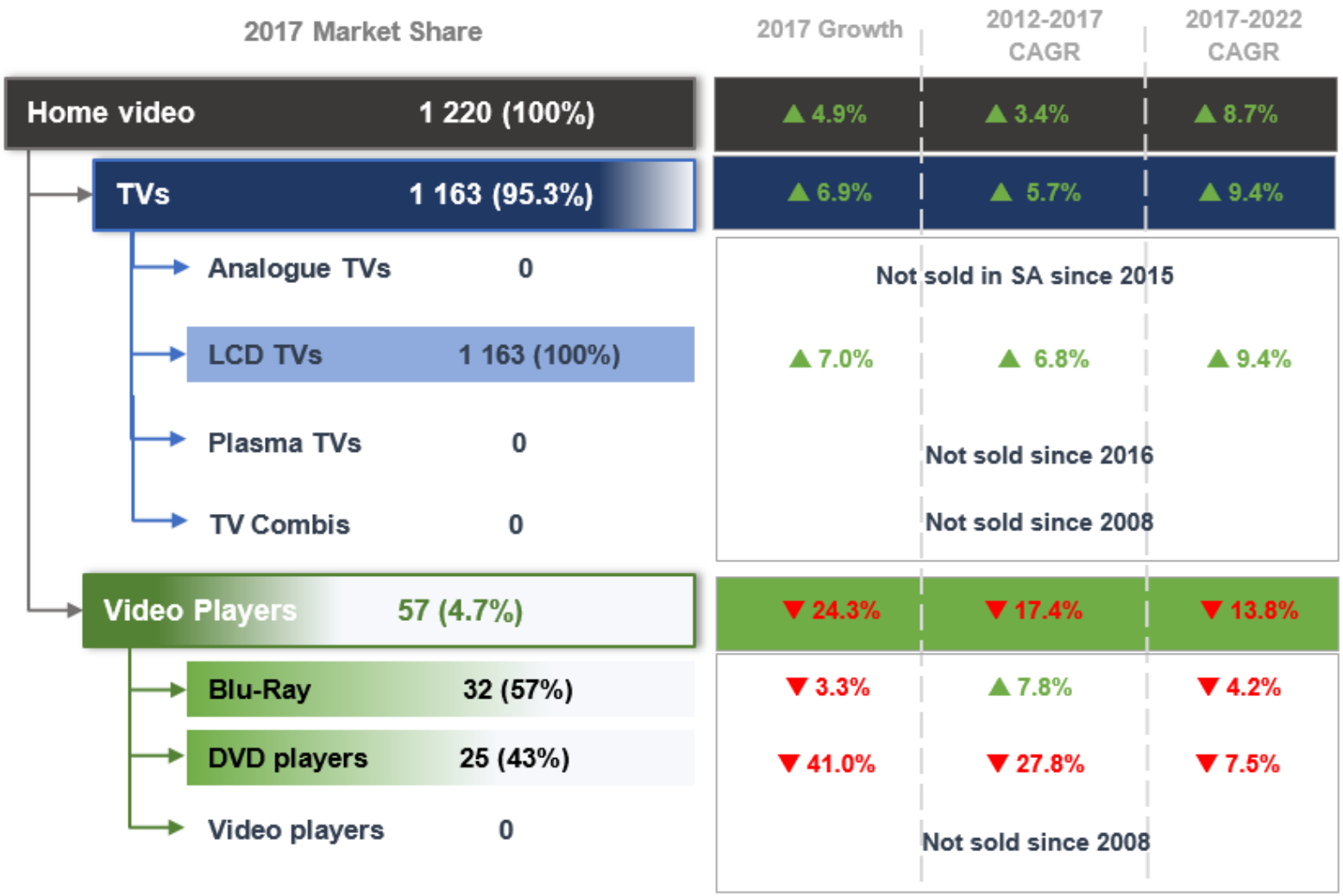
Sales of Home Video Equipment



Source: Euromonitor, 2017

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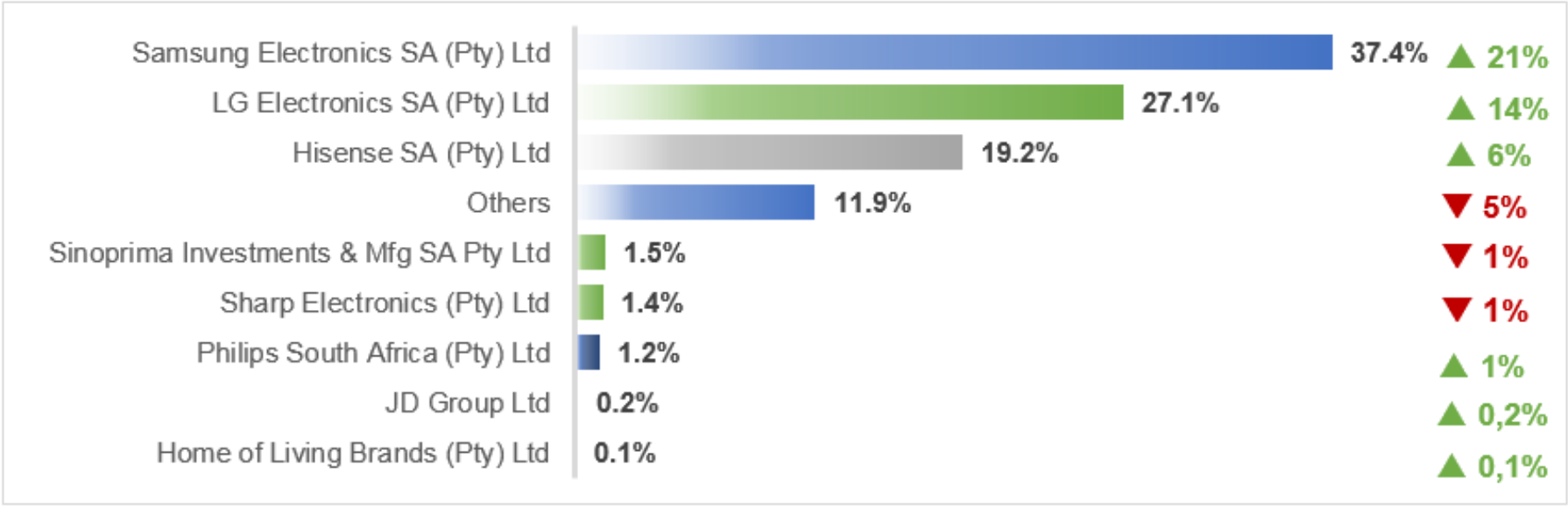
Market Shares (Home Video Suppliers)



Source: Euromonitor, 2017

- **The market is dominated by three global brands**
  - Samsung
  - LG
  - Hisense
- **The three top brands doubled their market share between 2008 and 2017**
  - 41.3% to 83.7% in 2017

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Distribution of LCD TVs by standby mode (sample of 61 models)

Standby mode	Number of models (LCD TVs)	Brands	% Breakdown
0.3 W	3	Panasonic, Sharp	5 %
0.45 W	1	Sharp	2 %
0.5 W	40	Samsung, LG, Telefunken, Sinotec, HiSense, Philips, Panasonic, Skyworth,Sansui	66 %
0.6 W	1	Sharp	2 %
1.0 W	16	HiSense, Blaupunkt	26 %

Source: Sample database compiled by project team, Q1-Q2 2018

MEPS Opportunities

- Most comprehensive regulations → Europe
  - @ 0.5W and looks at reducing to below 0.3
  - A comprehensive list of items:
    - Household appliances (14 types nominated)
    - Information technology equipment used in the domestic environment
    - Consumer equipment (primarily audio and visual equipment)
    - Toys, leisure and sports equipment.
- Most countries integrate low power mode energy consumption into their total energy consumption estimates (instead of having a separate requirement)
  - Europe, N. America, Japan, Australia

Recommendations

1. **Lower the current standby power level to 0.5 W by 2020**
2. **Align requirements for simple set top boxes with EC No 107/2009 by 2020**

Product and function where present	Standby mode	Active mode
Simple set top box	0.5 W	5.0 W
+ adder for display function	0.5 W	-
+ adder for hard disk	-	6.0 W
+ adder for second tuner	-	1.0 W
+ adder for decoding HD signals	-	1.0 W

3. **Consider expanding the scope of standby power limits to a wider range of products, for example:**
   - Kitchen appliances: microwaves; toasters; grinders, coffee machines and equipment for opening or sealing containers for packages; electric knives
   - Grooming and beauty: Appliances for hair cutting, tooth brushing, shaving, massage and other body care appliances; scales
   - Toys: Electric trains or car racing sets; hand-held video game consoles; and sports equipment with electric or electronic components

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Washing Machines

Current MEPS:

- **Class A**

Rationale:

- Market exclusively dominated by imports
- Average energy class of appliances was equivalent to proposed

Regulated items:

- Automatic washing machines for household use
  - Front loading
  - Top loading

  Excludes: Twin Tub

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Market Description & Composition

- Perceived as non-essential items in lower-income and some middle-income households, but high market penetration at middle to high income
  - LSM 6,7, and 9 show the greatest growth in use
- About 475 000 automatic washing machines sold in SA per annum
  - Sales anticipated to increase to 616 800 units in 2022
  - Front loading to top loading – 2 : 1 ratio
- Locally assembled machines dominate the market
  - Ratio of 7 : 2 (locally assembled versus imported)
- Most popular in SA: front loader (6-10kg)

Washing Machine

Bosch: Model X; 6kg capacity (Energy rating A+++)	R4 299
Samsung: Model Y, 7kg capacity (Energy rating A)	R5 999
LG : Model Z, 8kg capacity (Energy rating A+++)	R6 099

Source: Web-crawling and retail store visits, Q2 2018

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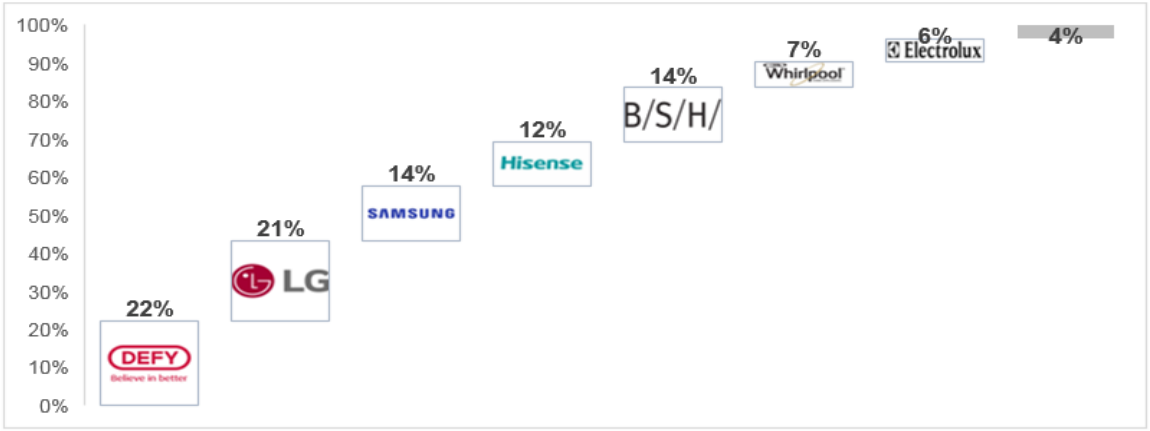
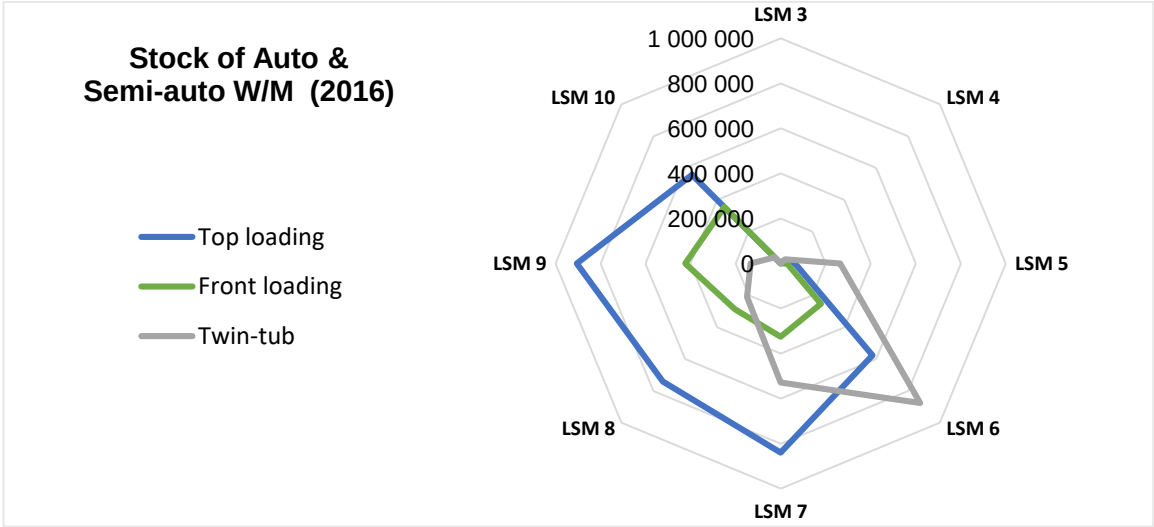
Market Shares and Stock

- **Most popular:**
  - Defy and LG
  - Samsung and BSH group



Source: Euromonitor, 2017

- **Stock:**
  - Top loaders – dominate the market
  - Dominated by LSM 7-10
  - Largest absolute growth: LSM 6, 7 and 9
  - Fastest growth: LSM 4-6



Source: Analysis based on AMPS data, 2010-2016

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MEPS Opportunities

- Over 20 countries have MEPS for washing machines
  - Countries like Australia and Japan have a labelling programme and not MEPS
- Majority of countries use European requirements
- Europe has the most stringent MEPS levels globally (2014)
  - A+ (EEI of <59) for machines with rated capacity ≥ 4kg

2015 European market share	
A+	**21%**
A++	**21%**
A+++	**55%**

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Recommendations

- SA MEPS level is comparable to most stringent level in countries with MEPS for washing machines
- Retain the current Class A for the next few years
  - Efficiency gains between A and A+ are about 13% (front loaders)
    - In SA this may be even lower – lower temperatures and smaller loads
  - Top loaders are less EE and an increase to A+ may take them off the market (and limit consumer choice)
- Increase the MEPS level to Class A+ by 2022 to align with current European requirements
- Monitor development in Europe regarding regrading (return to A to G)

Tumble dryers

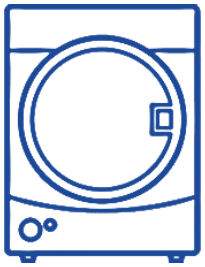
Current MEPS:

- **Class D**

Rationale:

- Market was saturated by locally produced tumble dryers with average MEPS of Class D
- Imports were at Class C
- Class D recommended to safeguard local industry

Regulated items:



- Tumble dryers for household use

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Market Description and Composition

- Tumble dryers are secondary to washing machines
  - Sales ratio of 1:6 (tumble dryer versus washing machine)
- Tumble dryers:
  - 82 100 tumble dryers sold in 2017 (~R624m)
  - Stock is expected to decay in the future (replaced by washer-dryer combo)
- The market is still dominated by local manufacturers/assemblers
  - Only 3.3% of annual stock is imported
- Prices:
  - Air ventilated < Condenser
  - Locally assembled < Imported
  - More EE approach costs of a washer-dryer combo

Defy: Model P; Air vented, 5kg capacity (Energy rating D)	R2 999
Bosch: Model Q; Condensing , 8kg capacity (Energy rating B)	R5 999
Samsung : Model R; Condensing, 8kg capacity (Energy rating B)	R10 099
LG : Model S; Condensing, 9kg capacity (Energy rating B)	R10 099

Source: Web-crawling and retail store visits, Q2 2018

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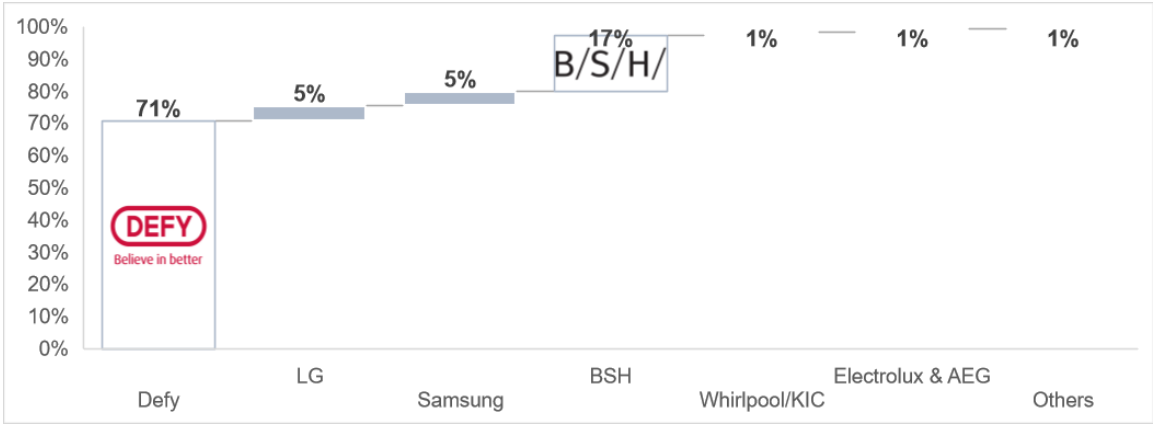
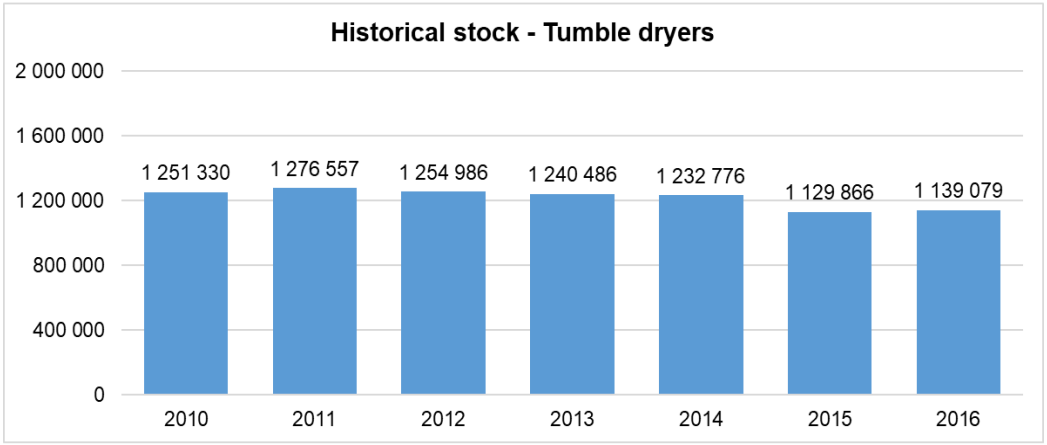
Market Shares and Stock

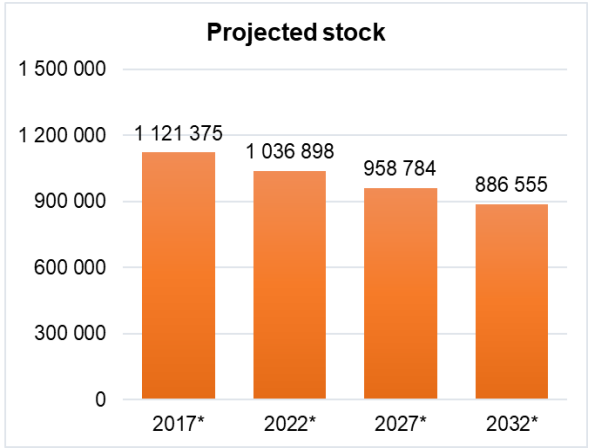
- **Most popular:**
  - Defy
  - BSH group
  - Samsung and LG



Source: Euromonitor, 2017

- **Stock:**





Source: Analysis based on AMPS data, 2010-2016

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MEPS Opportunities

- Tumble dryers rely mostly on resistance heating
  - Differences in energy consumption between resistance heating dryer models are generally small (and can only achieve up to Class B)
- Greater efficiency achieved with new technology – heat pumps
  - Invented in 1997 but was expensive
  - Widely used since 2009 with prices falling dramatically
- Heat pump dryers are more energy efficient than conventional resistance dryers
  - Heat pump dryers mostly A++ and above; resistance heating dryers - Class D to B
  - In Australia, revealed energy savings ~60%
- Few countries outside of Europe have MEPS levels for dryers
  - US has the most stringent MEPS level but their test method is somewhat questionable
  - Switzerland is the only country with a MEPS level that can only be met through heat pump dryers

Impact Analysis

Tumble dryer assumptions

Costs almost as much as WDC

Characteristics	MEPS level D	MEPS level C	MEPS level B
Size	5 kg	6-8 kg	7-9 kg
Energy usage per cycle	4.7125 kWh	-	4.7125 kWh
Annual electricity consumptions	754 kWh	635 kWh	567 kWh
Average prices	R3 249	R4 744	R8 899

Tumble dryer savings and costs calculation (without economies of scale cons.)

Characteristics	MEPS level D	MEPS level C	MEPS level B
Cost difference	-	R1 495	R5 650
Electricity savings – per annum	-	119 kWh	187 kWh
Electricity savings - %		16%	25%
Electricity savings – Rand value		R152	R 238
Change in cost vs savings payback period	-	10 years	24 years
Appliance lifespan	14 years	14 years	14 years

- Nation-wide electricity savings of 168 - 216 GWh per annum

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Recommendations

- Increase MEPS level from Class D to C
  - Technical efficiency among conventional resistance dryers is small
  - In Europe Class B since 2015
- Monitor heat pump tumble dryers market:
  - Other countries' approaches and trends
  - Introduction of this technology in SA
  - Revisit the MEPS levels accordingly
- Consider a supplementary programme to endorse heat pump technology tumble dryers

Freezers

Current MEPS:

- **Class C (domestic industry consulted and agreed)**

Rationale:

- Most freezers were manufactured locally
- Most freezers had low efficiency (F)
- Some were not even tested
- Proposed MEPS was set to afford manufacturers time to improve their plants and set up testing capabilities

Regulated items:

- Household freezers

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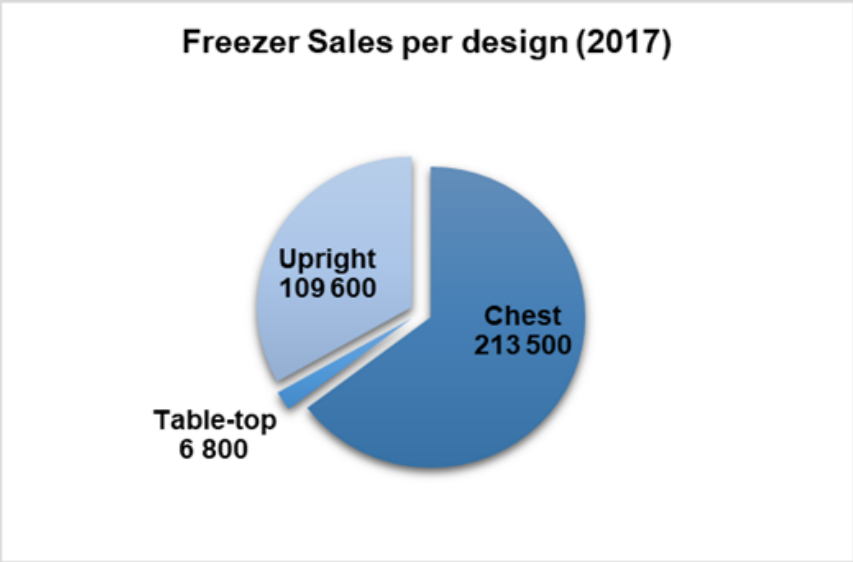
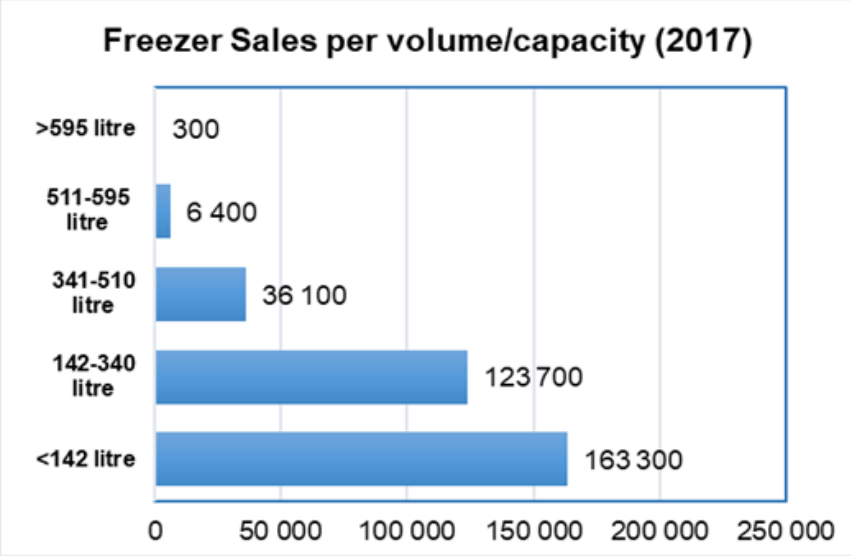
Market Description and Composition

- The freezer market is smaller than that for refrigerators
  - Low penetration of 28.7%
  - 329 000 units sold in 2017 (~R1.2bln)
  - Sales are projected to decline (325 600 units in 2022)
- The market is dominated by the chest freezer format (2:1 ratio)





Source: Euromonitor, 2017

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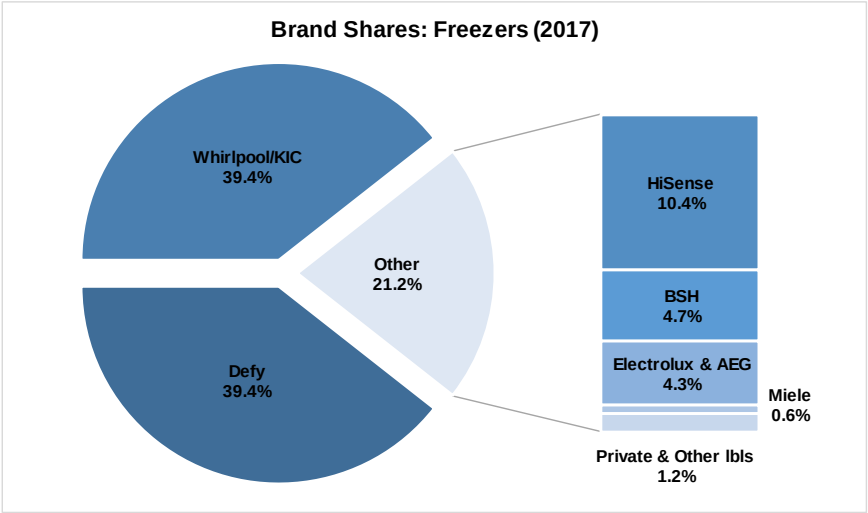
Market Description and Composition cont.

- Whirlpool/KIC and Defy supply most of the units
- Bulk of units - MEPS Class B or better
- Prices - relatively uniform for the same type
  - Upright (R) > Chest freezer (R)



Source: Euromonitor, 2017

Freezers

HiSense: Model P; Chest Freezer , G 130L/ N 100L (Energy rating A)	R2 199
KIC: Model Q; Chest Freezer, G 210L/ N 207L (Energy rating B)	R2 399
Defy : Model R; Chest Freezer, G 260L/ N 254 L(Energy rating A)	R3 899
Samsung: Model S; Upright, with Reversible door, G 306L/ N 277L (Energy rating A)	R13 099

Source: Web-crawling and retail store visits, Q2 2018

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Impact Analysis

Freezer assumptions (chest freezers)

Characteristics	MEPS level C	MEPS level B	MEPS level A
Size	Difficult to find on the market	194 – 292 l	130 – 330 l
Annual electricity consumptions		419.5 kWh	282.5 kWh
Average prices		R2 899	R3 032

Freezer savings and costs calculations

Characteristics	MEPS level B	MEPS level A
Cost difference	-	R133
Electricity savings – per annum	-	137 kWh
Electricity savings - %		33%
Electricity savings – Rand value		R174
Change in cost vs savings payback period	-	1 year
Appliance lifespan	12-20 years	12-20 years

- Nation-wide electricity savings of 46-54 GWh per annum

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Recommendations

- Introduce Class B by 2020, Class A by 2022, and Class A+ by 2026
  - Option 2: Class A by 2020 (can manufacturers adapt?)
- Consider adopting new IEC test method and eventual alignment with future European requirements from 2020 onwards
- Investigate new policy instruments once all appliances on the market are Class A and above
  - The role of energy label diminishes if consumers think Class A and above are all equally energy efficient

Air conditioners

Current MEPS:

- **Class B**
- **Window and Portable exempted**

Rationale:

- MEPS recommended based on BUENAS analysis

Regulated items:

- Wall mounted spilt air conditioners,
- Window air conditioners, and
- Portable air conditioners

with a cooling capacity of 7.1kW (24 000 btu/h)

and excludes ceiling mounted split-type air-conditioners of upto 7.1 kW

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Market Description and Composition

- Air-cons usage is still dominated by the high-end market
  - 745 000 in stock
  - LSM 9-10 are dominant customers
  - Expected CAGR – 6.4%
- Around 294 100 air conditioners were sold in 2017
  - 98% were wall mounted split type
    - With a penetration of 18.5%
  - The use of portable units is on the rise
  - Sales of window units are declining
    - 90% of these units are for commercial application

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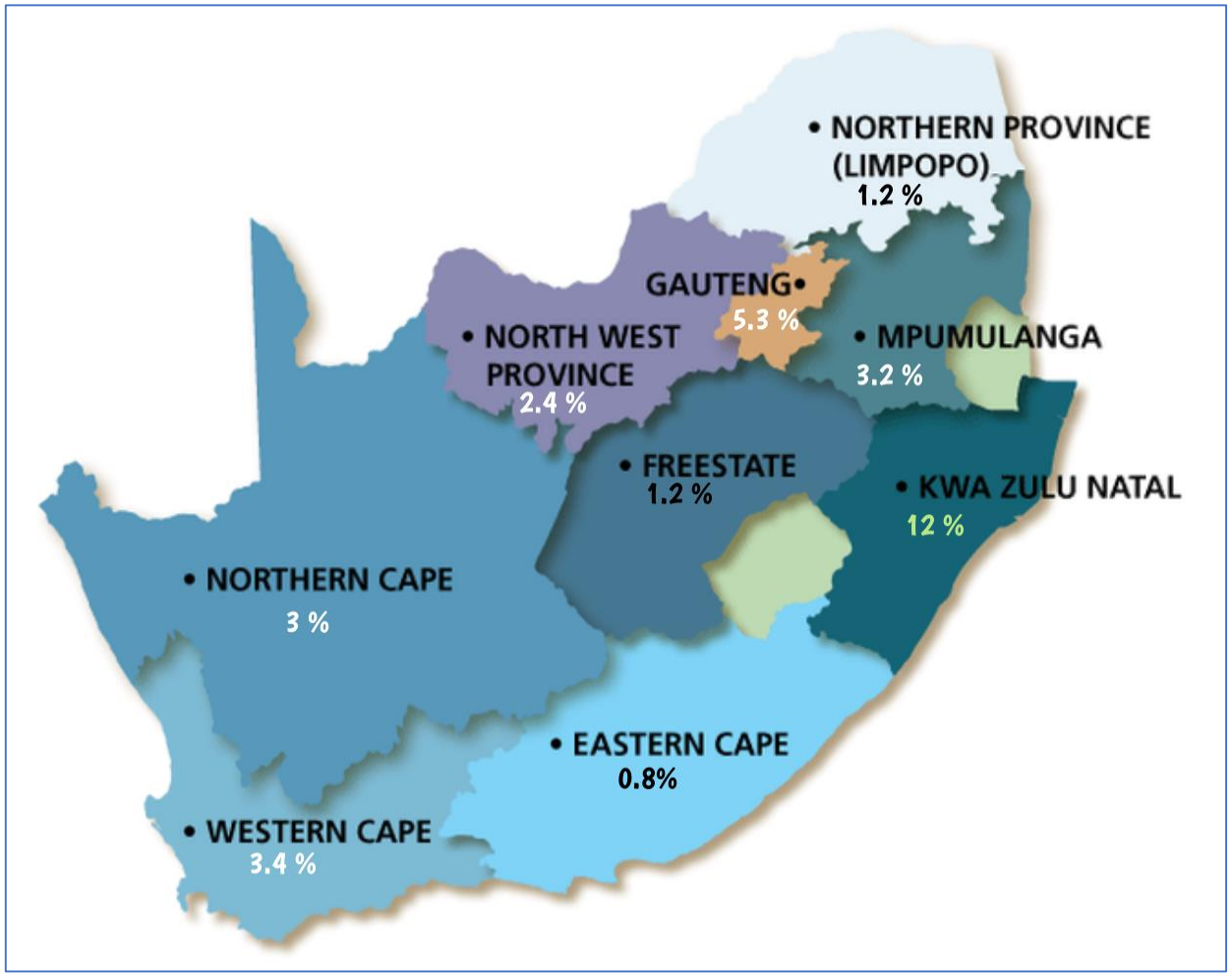
Spatial penetration

- Life span at the coast: 4-5 years
- Lifespan inland: 15-20 years



Source: Analysis based on AMPS data, 2010-2016

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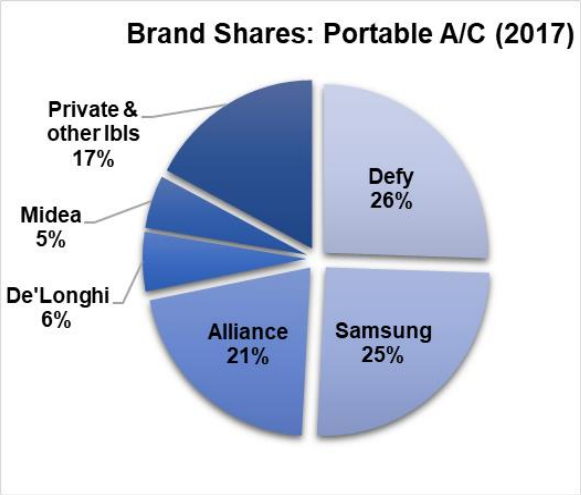
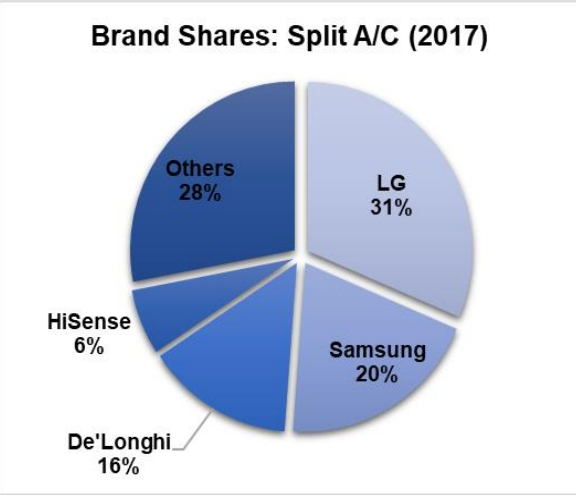
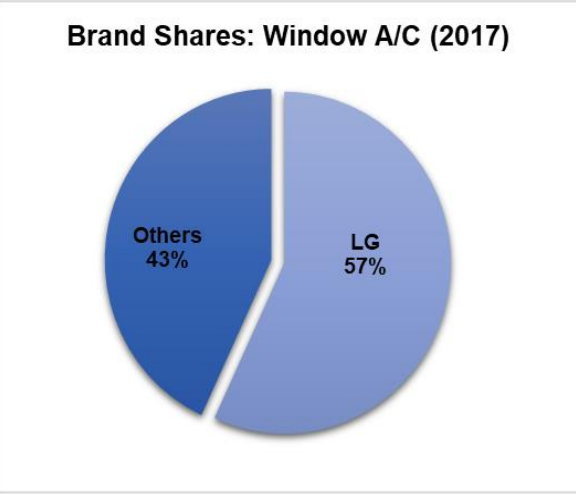
Market Description and Composition

- Local manufacturing of air conditioners was discontinued
- Suppliers are categorised into 3 main groups:
  - International brands (Samsung, LG, Daikin)
  - Representatives or agencies (MS Aircon, Airco, Fourways,etc)
  - Independent distributors (Midea, Alliance, GMC, Jet-Air, Aux) – very competitive market
- International brands dominate the market in general
  - LG has 31% and 57% market share within the split and window a/c markets respectively







Source: Euromonitor, 2017

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MEPS Opportunities

- Air-cons are widely regulated globally
- Korea had the most stringent MEPS levels in 2011 but it has now been surpassed by many countries – Europe, Australia
- Its difficult to compare MEPS levels in SA and Europe as most air-cons have MEPS defined i.t.o seasonal performance (SEER)

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Impact Analysis

Air-conditioners assumptions

Characteristics	MEPS level B	MEPS level A
Size	12 000 BTU	12 000 BTU
Energy usage	1.14 kW	1.06 kW
Annual electricity consumptions	591.7 kWh	550.14 kWh
Average prices	R5 797	R11 499

Air-conditioners savings and costs calculations

Characteristics	MEPS level B	MEPS level A
Cost difference	-	R5 702
Electricity savings – per annum	-	42 kWh
Electricity savings - %		7%
Electricity savings – Rand value		R53
Change in cost vs savings payback period	-	108 years
Appliance lifespan	15-20 years	15-20 years

Inverter technology and pricing strategies

- Nation-wide electricity savings of 12 - 15 GWh per annum

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Recommendations

- Increase MEPS levels for split systems from the current EER/COP of 3.0 (Class B) to a level of 3.2 (current Class A)
- Set up a local testing facility at the sea level
- Lift the exemption applied to window and portable systems
- Label grades should allocate an efficiency class based on an absolute EER/COP value across all air-conditioning types
- Include low power mode energy into the annual energy consumption value displayed on the energy label and adjust the operating EER and COP to give an annual value for rating purposes (to determine the MEPS class)
- Include heating energy for 500 hours use on the energy label for reverse cycle model
- Revise wording in the regulations to be inclusive of all split types

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4. Q&A

Comments submission

- **During a workshop:**
  - Verbal comments
  - Written comments (refer to the print outs)
- **By e-mail:**

  Marcia Lephera Marcia.Lephera@energy.gov.za

Summary of MEPS levels and GWh savings

Audio-Visual

SBP 1 W → 0.5W (2020)

Electric ovens

Large:
Class B → Class A (2020)
SA electricity savings:
11-13 GWh /a

Dishwasher

Current: Class A

No: retain as is

Washer-Dryers

Current: Class A

No: Watch EU brief

Washing Machine

Class A → Class A+ (2022)
SA electricity savings:
11-13 GWh /a

Tumble Dryers

Class D → Class C (2020)
SA electricity savings:
168 - 216 GWh /a

Refrigerators

Class B → Class A (2020) → Class A+ (2022)
SA electricity savings:
9-10 GWh /a

Freezers

Class C → Class B (2020) → Class A (2022) → Class A+
SA electricity savings:
46-54 GWh /a

Air conditioners

Split systems: EER/COP of 3.0 (B) → COP of 3.2 (A)
SA electricity savings:
12-15 GWh /a

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Thank you

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