

South Africa S&L Programme Revision of MEPS

Stakeholder Workshop

14 November 2019

DoE (start 08h30)	Welcome and introduction	Theo and Maphuti	10 minutes
S&L	Project update, international developments & next phase	UNDP and LBNL	20 minutes
SABS Standards	Process to update standards and introduce new standards	Mogomotsi	15 minutes
SABS Testing	Update on Laboratories and training of test officials	Sihle	15 minutes
NRCS	Update on product registration database	Lance/Stephina	15 minutes
dti	Ministry's role and message to industry (manufacturing and importers)	Anna-Marie	15 minutes
	Discussion and Questions	all	20 minutes
Coffee Break (30 minutes)			
S&L	MEPS strengthening		
	1. Recap of industry consultation, recommendations & proposed approach	Theo	
	2. Response to issues raised by industry & any additional comments	All	
	3. Implementation approach (start date, existing and new LoA's, action on non-compliance and other)	Lance/Stephina	90 minutes
	4. Propose and approve an implementation approach	CLASP	
S&L	Revision of energy label		
	1. Motivation and approach	UNDP	
	2. EU directive	CLASP/UNDP	30 minutes
	3. Preliminary research findings	UNDP	
DoE	4. Discuss implementation options	UNDP	
DoE	Program structure post March 2020 (when UNDP / GEF funding ends)	DMRE	15 minutes
All	Final questions, next steps and closing	All	15 minutes
Lunch			



Proposed Revision of MEPS & Implementation Dates

Appliance	Existing	Recommendation	Start Date
Audio, Visual, Standby	1W	0.5W & expand to other appliances	2020
Electric Ovens	Large= B S/M= A	A No change	2021
Dishwasher	A	No change	N/A
Washer Dryers	A	No change	N/A
Washing Machine	A	A+	2022
Tumble Dryers	D	C	2020
Refrigerators	B	A A+	2020 2026
Freezers	C	B A+	2020 2024
AC	B	A	2021

Audio Visual

- SANS 941: Clause 4.2.2 - when tested (SANS 62087), AV equipment in passive standby mode shall have a power consumption not exceeding 1 W. Set top box not > 3W.

Research Findings:

- 22 Brands with > 350 models of TV's in the market. Similar for radios and video players. TV sales to increase while DVD/videos to decrease
- Most TV models (2/3) currently sold have a standby power not > 0.5W
- Current 1W is comparable to global requirements but set top boxes is weak

Recommendation:

- Lower the current standby power level to 0.5 W by 2020 ✓
- Expand the scope of standby power limits to a wider range of products ×
- Align requirements for standby power for simple set boxes with Europe by 2020 ×

Washing Machines

- SANS 941: Household clothes washing machines shall comply with the energy and water consumption requirements in SANS 1695. Unlike for some other products, the bibliography of SANS 941 does not mention any European directive for washing machines
- SANS 1695 is an identical adoption of EN 60456:2011 (Edition 2) – latest 2016

Research Findings:

- NRCS Approved LOA database, there are at least 148 models. 6-10kg front loader most popular
- Market size ~500 000 units / annum. Ratio of 2:7 imported versus locally manufactured
- EU has the most stringent MEPS but differences not large compared to other places, including China
- A recent conference paper showed that the market share of A+ in 2015 had fallen to 21%, with A++ at 21% and A+++ at 55%

Recommendation:

- Increasing the MEPS level to Class A+ to align with current European requirements by 2022 (this would represent a nine-year delay on European levels).
- Expand the labelling requirements to also apply to vertical axis machines (top loading) by 2022

Tumble Dryers

- Included in SANS 941 Tumble-dryers shall have a minimum energy efficiency rating of Class D
- SANS 61121:2015/ IEC 61121:2012: Tumble dryers for household use - latest 2013

Research Findings:

- In 2012, the market for tumble dryers was dominated by locally produced units, with Class 'D' being the average energy rating. Although a C level was recommended to protect local industry the MEPS was set at level D
- Market size <100 000 units / annum and sales declining. Still dominated by local manufacturing >95%
- Traditionally, TD used resistive heating elements to heat air. More recently a technology shift has seen heat pump (HP) dryers enter the market, whose energy consumption is significantly lower (up to 60%)
- Conventional dryers are unlikely to ever perform better than level B, whereas HP can reach A+++

Recommendation:

- Increase MEPS level for tumble dryers from Class D to Class C by 2020/21
- Monitor the other countries' approach to mandating of HP and revisit the MEPS levels accordingly
- Consider initiating a supplementary programme to endorse heat pump technology TD

Refrigerators

- Household refrigerators and freezers shall comply with the requirements for energy consumption in SANS 62552:2008 – latest IES is 2013

Research Findings:

- The current MEPS level for household refrigeration units is level B, which requires an EEI of <75
- There are at least 44 brand manufacturers, offering not less than 784 models Market split between local and imported. In 2012, local was at C / D while imported at A – hence level B, well below intl levels
- Annual sales ~1.4m per annum, with a penetration rate of 70% which is expected to grow
- Introduction of MEPS has significantly improved the efficiency of refrigerators sold in the market
- International research has shown that a shift to level A is unlikely to have a material impact on prices but energy savings will be limited. A shift to A+ will render significant savings for the HH – within 6 years, far before the appliance reaches its life span

Recommendation:

- Introduce class A for refrigerators by 2020 and class A+ by 2022

Freezers

- Household refrigerators and freezers shall comply with the requirements for energy consumption in SANS 62552:2008 – latest IES is 2013

Research Findings:

- The market is dominated by local manufacturing and in 2011 performance classes were as low as F. MEPS was set at level C to protect and give manufacturers the opportunity to restructure
- Market smaller than FF and annual sales are ~350k but have had a high sales volume growth 2012-2017
- Most retailers do not stock level C, suggesting market has organically shifted to B, making the introduction of Class B a necessity
- For a 4.5% increase in price, a consumer receives a 33% saving on electricity consumption
- MEPS levels in Europe have been at A+ for around four years and these appear to be feasible for a wide range of suppliers to achieve

Recommendation:

- Introduce Class B for freezers by 2020, Class A by 2022, and Class A+ by 2026
- Consider adopting the new IEC test method and eventual alignment with future European requirements from 2020 onwards

Ovens

- Small/medium electric ovens shall have a minimum energy efficiency rating of Class A Large electric ovens shall have a minimum energy efficiency rating of Class B
- SANS 60350-1 is an identical adoption of IEC 60350-1:2011 – Latest 2016

Research Findings:

- Level B was adopted for large ovens as there was significant local manufacturing who requested time to upgrade their production lines
- Annual sales of all three sizes and types is ~600k per annum
- There are fewer brands compared to other appliances and approximately 8.3 million ovens in use
- Globally level A is seen as an ambitious level

Recommendation:

- Leave MEPS at Class A for small and medium ovens
- Increase MEPS for larger ovens to Class A by 2020

Air Conditioners

- SANS 941 references SANS 54511-3/EN 14511-3 for AC

Research Findings:

- Three different types of air conditioners were earmarked for regulation in South Africa, with 'B' as the minimum energy rating. The MEPS level stipulated in VC9008 applies to all the window, portable and wall mounted split units which have a cooling capacity of 7.1kW (24 000btu/h), or lower.
- The wording in the regulation has created a loophole which industry is exploiting to exclude window, console, and portable air-conditioners from the MEPS and labelling regulations
- Market estimated to be ~300 000 units per annum and expected to grow at 6.4%
- 2014 CLASP study found that MEPS for AC for some key countries were typically around the level of EER/COP 2.9 to 3.2 (W/W), broadly comparable with current MEPS levels for split systems in SA
- Difficult to compare MEPS with other countries as SA does not use SEER

Recommendation:

- MEPS levels for split systems should be increased from the current EER/COP of 3.0 (Class B) to a level of 3.2 (current Class A), as this is a level that is widely used in many countries and could be easily achievable by most suppliers on the market
- Lift the exemption applied to window and portable systems
- The label grades should allocate an efficiency class based on an absolute EER/COP value across all types
- Include standby mode considerations in calculation of an annual EER and COP
- issue of general concern is the different EER/COP grades currently applied to different types of AC in South Africa.

Other Recommendations

Washer Dryers

- Investigate ways to differentiate between heat pump and conventional washer-dryers.

Dishwashers

- 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
- Labelling requirements should be realigned to include low power mode energy

Ovens

- Rectify typo in VC9008

Standby Power

- Consider expanding the scope of standby power limits to a wider range of products