

Consultation Document

**Initial Proposal on Inclusion of New Products under
Third Phase of Mandatory Energy Efficiency Labelling
Scheme**

March 2015

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Section 1

Mandatory Energy Efficiency Labelling Scheme

1. The Mandatory Energy Efficiency Labelling Scheme (“MEELS”) was introduced through the Energy Efficiency (Labelling of Products) Ordinance (Cap. 598) (“the Ordinance”), which was enacted on 9 May 2008. Under the Ordinance, energy labels are required to be shown on all prescribed products for supply in Hong Kong to inform consumers of their energy efficiency performance.
2. The MEELS was implemented in phases. The initial and second phases have been fully implemented since 9 November 2009 and 19 September 2011 respectively, covering five types of prescribed products, namely room air conditioners, refrigerating appliances, compact fluorescent lamps, washing machines and dehumidifiers. It is estimated that these five electrical products together altogether account for about 60% of the annual electricity consumption in the residential sector in 2012.
3. A Code of Practice on Energy Labelling of Products (“CoP”) is approved and issued under section 42 of the Ordinance. The CoP provides practical guidance for requirements under the Ordinance. The latest edition of the CoP is available at the website of the Electrical and Mechanical Services Department with the following link:

http://www.energylabel.emsd.gov.hk/en/doc/Integrated_Code_of_Practice_2014.pdf
4. In order to help the general public in choosing energy efficient appliances and capitalize further energy saving, it is considered advisable to include more products into the MEELS.
5. Sections 3 of this document outline the initial proposal of including televisions, washing machines (exceeding 7kg but not over 10kg), room air conditioners (heat pump), electric storage water heaters, electric rice cookers, induction cookers and microwave ovens into the MEELS.
6. Section 4 of this document invites views on the initial proposal of including televisions, washing machines ($7 \text{ kg} < \text{washing capacity} \leq 10\text{kg}$), room air conditioners (heat pump), electric storage water heaters, electric rice cookers, induction cookers and microwave ovens into the MEELS **on or before 30 June 2015**.

Section 2

Background information

7. It is estimated that the following types of household appliances account for about 18%¹ of the electricity consumption in the Hong Kong residential sector in 2012.
- (a) Televisions;
 - (b) Room air conditioners (heat pump);
 - (c) Washing machines (7 kg < washing capacity ≤ 10kg);
 - (d) Electric storage water heaters; and
 - (e) Electric cooking appliances (namely, electric rice cookers, induction cookers and microwave ovens).

Overseas Practice

8. The proposed products have been already covered in the mandatory labelling schemes of other overseas economies as shown below.

Potential Products	Mandatory Labelling Schemes in Other Overseas Economies						
	Australia	Canada	China	E.U.	Singapore	South Korea	U.S.
Televisions	Yes	--	Yes	Yes	Yes	Yes	Yes
Washing machines (7 kg < washing capacity ≤ 10kg)	Yes	Yes	Yes	Yes	--	Yes	Yes
Room air conditioners (heat pump)	Yes	--	Yes	Yes	--	Yes	Yes
Electric storage water heaters	--	--	Yes	Yes	--	--	Yes
Electric rice cookers	--	--	Yes	--	--	Yes	--
Induction cookers	--	--	Yes	--	--	--	--
Microwave ovens	--	--	Yes	--	--	--	--

¹ The four products (namely, televisions, washing machines (7 kg < washing capacity ≤ 10kg), room air conditioners (heat pump) and electric storage water heaters) account for over 14%. The three electric cooking appliances account for below 4%, which includes all types of electric cooking appliances.

Section 3

Proposals on Third Phase of MEELS for the Following Products

Section 3.1 - Televisions

9. Considerations for Inclusion into the MEELS

The following information has been taken into account in considering the inclusion of televisions into the MEELS:

(i) Overseas Practices:

- Televisions are widely covered in the mandatory labelling schemes of overseas economies (including Australia, China, the European Union, Singapore, South Korea and the United States).

(ii) Test Standards:

- International test standards are available for energy efficiency performance measurement of televisions at on-mode and standby operation, and are widely adopted by overseas economies.

(iii) Availability of Testing Laboratories:

- Accredited testing laboratories are available in Hong Kong for testing the energy efficiency performance of televisions.

(iv) Energy Saving Potential:

- It is roughly estimated that the potential energy saving is relatively high.

(v) Others:

- During the legislative process of the second phase of the MEELS in 2009, enquiry was raised on inclusion of televisions into the MEELS. However, televisions were not included into the second phase of the MEELS because the new test standard (IEC 62087) was just released and the test standard under Hong Kong voluntary energy efficiency labelling scheme (VEELS) only applied to standby mode instead of on-mode. There was also no accredited testing laboratory in Hong Kong to conduct on-mode test. Both test standard and accredited testing laboratory are now available.
- The Government has proposed to include televisions into the proposed mandatory producer responsibility schemes (PRS) on waste electrical and electronic equipment (WEEE) with coverage of televisions with a diagonal display screen size not exceeding 254 cm (100 inch).
- About 200 models have been registered under the VEELS.

Proposed Test Standards

10. Currently in Hong Kong, televisions are covered under the Voluntary Energy Efficiency Labelling Scheme (VEELS). The energy efficiency performance of television is measured and evaluated in accordance with IEC 62087:2008 (Edition 2.0) “*Methods of Measurement for the power consumption of audio, video and related equipment*” and the standby power of the television is measured in accordance with IEC 62301:2005 (First Edition) “*Household electrical appliances - Measurement of standby power*”.

Proposed Test Requirements

11. The following tests are required:
- On mode Power Consumption Test;
 - Standby mode Power Consumption Test; and
 - Visible Screen Dimensions Test.

Proposed Determination of Energy Efficiency Grading

12. With measured power consumption, an Energy Efficiency Index (EEI) is then calculated for determination of its energy efficiency grade. The determination of EEI of a television can be determined as below:

$$EEI = \frac{P}{P_{ref} A}$$

where $P_{ref} A = 20 \text{ Watts} + (A \div 100) \times 4.3224 \text{ Watts/ cm}^2$
 $P =$ on-mode power consumption measured in Watts
 $A =$ television visible screen area expressed in cm^2

13. The proposed energy label is “Grading Type” and similar to the current MEELS. There will be five energy efficiency grades, with Grade 1 being the most energy efficient and Grade 5 being the least.

Section 3.2 - Washing Machines (7kg < Washing Capacity ≤ 10kg)

14. Considerations for Inclusion into the MEELS

The following information has been taken into account in considering inclusion of washing machines (7kg < washing capacity ≤ 10kg) into the MEELS:

- (i) Overseas Practices:
 - Washing machines (7kg < washing capacity ≤ 10kg) are widely covered in the mandatory labelling schemes of overseas economies (including Australia, Canada, China, the European Union, South Korea and the United States).
- (ii) Test Standards:
 - International test standard is available for energy efficiency performance measurement of washing machines.
- (iii) Availability of Testing Laboratories:
 - Accredited testing laboratories are available in Hong Kong for testing the energy efficiency performance of washing machines.
- (iv) Energy Saving Potential:
 - It is roughly estimated that the potential energy saving is relatively medium.
- (v) Others:
 - About 100 models have been registered under the VEELS.
 - It is estimated that the sales quantity of washing machines (7kg < washing capacity ≤ 10kg) account for around 8% of total market sales.

Proposed test standards

15. Under the MEELS, washing machines (washing capacity ≤ 7kg) have been included. It is proposed to include washing machines (7 kg < washing capacity ≤ 10kg) in the third phase of the MEELS. The energy efficiency performance of a washing machine is measured and evaluated in accordance with different standards based on the types of washing machines:

- IEC 60456 for horizontal axis type washing machine, and
- JIS C 9606 for vertical axis type washing machine

Proposed Test Requirements

16. The following tests are required:

- Energy Consumption Test (kWh/kg/cycle);

- Water Consumption Test (litres/cycle);
- Washing Performance Test; and
- Water Extraction Performance Test.

Proposed Determination of Energy Efficiency Grading

17. Energy efficiency grading of a washing machine is evaluated by the Specific Energy Consumption (Esp), which can be calculated as below:

$$E_{sp} = \frac{E}{W_r}$$

where E_{sp} = Specific Energy Consumption (kWh/kg/cycle)
 E = Measured Energy Consumption per cycle (kWh/cycle)
 W_r = Rated Washing Capacity (kg)

18. The proposed energy label is “Grading Type” and similar to the current MEELS. There will be five energy efficiency grades, with Grade 1 being the most energy efficient and Grade 5 being the least.

Section 3.3 - Room Air Conditioners (Heat Pump)

19. Considerations for Inclusion into the MEELS

The following information has been taken into account in considering inclusion of room air conditioners (heat pump) into the MEELS:

(i) Overseas Practices:

- With increasing application of reverse cycle technology in air conditioning in recent years, it allows air conditioners to operate at reverse cycle, including cooling mode and heating mode (i.e. heat pump). Room air conditioners (heat pump) are covered in the mandatory labelling schemes of some overseas economies (including Australia, China, the European Union, South Korea and the United States).

(ii) Test Standards:

- International test standard is available for energy efficiency performance measurement of room air conditioners (heat pump).

(iii) Availability of Testing Laboratories:

- Accredited testing laboratories are available in Hong Kong for testing the energy efficiency performance of room air conditioners (heat pump).

(iv) Energy Saving Potential:

- It is roughly estimated that the potential energy saving is relatively medium.

(v) Others:

- Some economies (for example, China and the European Union) adopt one energy label to indicate both cooling and heating energy efficiency performance while some (for example, Australia) adopt two energy labels to separately indicate cooling and heating energy efficiency performance.
- In determining the heating energy efficiency performance of room air conditioners (heat pump), it is necessary to construct the bin temperature distribution and corresponding operating hours in accordance with the data to be obtained from the Hong Kong Observatory.
- Under the existing MEELS, there are about 400 listed models of room air conditioners which can operate at reverse cycle, including both cooling and heating functions. Currently, only their cooling functions are evaluated for energy efficiency grading under the MEELS.

Proposed Test Standards

20. Room air conditioner (heat pump) is not currently covered under VEELS. It is proposed to use “Heating Seasonal Performance Factor” (HSPF) for evaluation of the energy efficiency performance of room air conditioner (heat pump).
21. HSPF is briefly defined as “the ratio of total annual amount of heat that the equipment, including make-up heat, can add to the indoor air when operated for heating in active mode to the total annual amount of energy consumed by the equipment during the same period.” Therefore, it is an evaluation of the energy efficiency performance of a room air conditioner (heat pump) over a time period.
22. The energy efficiency test under the current MEELS for room air conditioners (cooling only) is conducted according to ISO 5151 “*Non-ducted air conditioners and heat pumps – Testing and rating for performance*” and ISO 16358-1 “*Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors (Part 1): Cooling seasonal performance factor*” for determination of the cooling mode energy performance. It is proposed to adopt international standard ISO 16358-2 “*Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors (Part 2): Heating seasonal performance factor*” to evaluate the heating performance of room air conditioners (heat pump).

Proposed Test Requirements

23. For determination of heating mode energy performance, the following test requirements for different types of room air conditioners are required in accordance with ISO 5151 and ISO 16358-2:
 - Fixed capacity room air conditioners (one test point at full load);
 - Inverter room air conditioners (two test points, one at full load and one at 50% full load); and
 - Maximum Heating Performance Test.

Determination of Energy Efficiency Grading

24. Based on the above proposal and the calculation method as specified in ISO 16358-2, the HSPF of a room air conditioner can be determined as below:

$$\text{HSPF} = \frac{\text{Heating Seasonal Total Load}}{\text{Heating Seasonal Energy Consumption}}$$

25. The proposed energy label is “Grading Type” and similar to the current MEELS. There will be five energy efficiency grades, with Grade 1 being the most energy efficient and Grade 5 being the least.

Section 3.4 - Electric Storage Water Heaters

26. Considerations for Inclusion into the MEELS

The following information has been taken into account in considering inclusion of electric storage water heaters into the MEELS:

- (i) Overseas Practices:
 - Electric storage water heaters are covered in the mandatory labelling schemes of some overseas economies (including China, the European Union and the United States).
- (ii) Test Standards:
 - International test standard is available for energy efficiency performance measurement of electric storage water heaters.
- (iii) Availability of Testing Laboratories:
 - Accredited testing laboratories are available in Hong Kong for testing the energy efficiency performance of electric storage water heaters.
- (iv) Energy Saving Potential:
 - It is roughly estimated that the potential energy saving is relatively medium.
- (v) Others:
 - About 160 models have been registered under the VEELS.
 - In accordance with the international test standard, only standing loss is measured to evaluate the energy efficiency performance of electric storage water heaters.

Proposed Test Standard

27. Currently in Hong Kong, electric storage water heaters are covered under the VEELS. The energy efficiency performance of electric storage water heaters is measured based on IEC 60379 “*Methods for measuring the performance of electric storage water heaters for household purposes*”. With measured power consumption, an Energy Efficiency Index (EEI) is then calculated for determination of its energy efficiency grade.

Proposed Test Requirements

28. The following tests are required:
- Energy Consumption due to Standing Loss (kWh/year);
 - Rated Capacity Test;

- Hot Water Output Test; and
- Reheating Time Test.

Determination of Energy Efficiency Grading

29. The proposed energy efficiency grade for electric storage water heater is determined as below:

$$\text{Energy Efficiency Index (} I_E \text{)} = (E_{st,var} / E_{st,av,var}) \times 100 \%$$

where

$E_{st,var}$ = the energy consumption of the tested heater due to standing loss (the variable component) per 24 hours (kWh/24h) , as given by equation (1) below

$E_{st,av,var}$ = the average appliance energy consumption due to the variable component of the standing loss, per 24 hours (kWh/24h) , as given by equation (2) below

The standing loss (the variable component) of an appliance,

$$E_{st,var} = E_{st,meas} - E_{st,fix} \dots\dots\dots \text{(eq. 1)}$$

where

$E_{st,meas}$ = the measured value of the standing loss per 24 hours (kWh/24h).

$E_{st,fix}$ = the average energy consumption due to fixed loss per 24 hours (kWh/24h), as given in Table A below

The average appliance energy consumption, due to variable standing loss, is given by:

$$E_{st,av,var} = E_{st,av} - E_{st,fix} \dots\dots\dots \text{(eq.2)}$$

where

$E_{st,av,var}$ = the average appliance energy consumption due to the variable component of the standing loss, per 24 hours (kWh/24h)

$E_{st,av}$ = the average energy consumption due to standing loss per 24 hours (kWh/24h), as given in Table A below

$E_{st,fix}$ = the average energy consumption due to fixed loss per 24 hours (kWh/24h), as given in Table A below

Table A: Average Energy Consumption due to Standing Loss and Fixed Loss

Appliance Category	Average Energy Consumption due to Standing Loss per 24 hours $E_{st,av}$ (kWh/24h)	Average Energy Consumption due to Fixed Loss per 24 hours $E_{st,fix}$ (kWh/24h)
1, 2 (small, unvented or open outlet)	$E_{st,av} = 0.13 + 0.0553 V^{2/3}$	$E_{st,fix} = 0.072$
3 (horizontal)	$E_{st,av} = 0.75 + 0.008 V$	$E_{st,fix} = 0.12$
4 (vertical)	$E_{st,av} = 0.2 + 0.051 V^{2/3}$	$E_{st,fix} = 0.12$

Remark: * V is the rated capacity in Litres

30. The proposed energy label is “Grading Type” and similar to the current MEELS. There will be five energy efficiency grades, with Grade 1 being the most energy efficient and Grade 5 being the least.

Section 3.5 - Electric Rice Cookers

31. Considerations for Inclusion into the MEELS

The following information has been taken into account in considering inclusion of electric rice cookers into the MEELS:

- (i) Overseas Practices:
 - Electric rice cookers are covered in the mandatory labelling schemes of some overseas economies (including China and South Korea).
- (ii) Test Standards:
 - There is no international test standard for energy efficiency performance measurement of electric rice cookers. In the schemes of China and South Korea, electric rice cookers are tested in accordance with their own national test standards.
- (iii) Availability of Testing Laboratories:
 - An accredited testing laboratory is available in Hong Kong for testing the energy efficiency performance of electric rice cookers in accordance with China's national test standard.
- (iv) Energy Saving Potential:
 - It is roughly estimated that the potential energy saving is relatively low.
- (v) Others:
 - The scheme in China does not cover induction heating (IH) type electric rice cookers. In China's national test standard, the energy efficiency performance of electric rice cookers is evaluated by measuring the energy consumption of the temperature rise of heating water. The China's national standard is planned to be revised in 2015.
 - The scheme in South Korea covers all types of electric rice cookers. In South Korea's national test standard, the energy efficiency performance of electric rice cookers is evaluated by measuring the energy consumption of cooking specified rice during a cooking cycle.
 - 6 models have been registered under the VEELS.

Proposed Test Standard

32. Currently in Hong Kong, electric rice cookers are covered under the VEELS. At present, under the VEELS, energy efficiency performance of electric rice cooker is measured based on GB 12021.6:2008 "*Minimum allowable values of energy efficiency and energy efficiency grades for automatic electric rice cookers*".

Proposed Test Requirements

33. The following tests are required:
- Heat Efficiency Test;
 - Warm-keeping Power Consumption Test;
 - Standby Power Consumption Test; and
 - Rated Capacity Test.

Determination of Energy Efficiency Grading

34. The proposed energy efficiency grade for electric rice cookers is determined by the heat efficiency through measurement of the temperature rise of water inside the pot. The heat efficiency is calculated as follows:

$$n = \frac{1.16 G (T2 - T1)}{E} \times 100$$

Where

- n = Heat Efficiency (%), accurate to one decimal place ;
G = water weight before test (kg);
T1 = initial water temperature (°C);
T2 = highest water temperature (°C);
E = energy consumption (W · h).

35. The proposed energy label is “Grading Type” and similar to the current MEELS. There will be five energy efficiency grades, with Grade 1 being the most energy efficient and Grade 5 being the least.

Section 3.6 - Induction Cookers

36. Considerations for Inclusion into the MEELS

The following information has been taken into account in considering inclusion of induction cookers into the MEELS:

- (i) Overseas Practices:
 - Induction cookers are covered in the mandatory labelling scheme of China only.
- (ii) Test Standards:
 - In the scheme of China, induction cookers are tested in accordance with its national test standard.
- (iii) Laboratories Availability:
 - An accredited testing laboratory is available in Hong Kong for testing the energy efficiency performance of induction cookers in accordance with China's national test standard.
- (iv) Energy Saving Potential:
 - It is roughly estimated that the potential energy saving is relatively medium.
- (v) Others:
 - 6 models have been registered under the VEELS.

Proposed Test standard

37. Currently in Hong Kong, induction cookers are covered under the VEELS. The energy efficiency performance of induction cookers is measured based on GB 21456 – 2008 *“Minimum Allowable values of energy efficiency and energy efficiency grades for household induction cookers”*.

Proposed Test Requirements

38. The following tests are required:
- Rated Wattage Test;
 - Thermal Efficiency Test; and
 - Standby Power Consumption Test.

Determination of Energy Efficiency Grading

39. The proposed energy efficiency grade for induction cookers is determined by thermal efficiency. The thermal efficiency is calculated as follows:

$$n = (c1 \times m1 + c2 \times m2) \times \Delta t \times 100\% / (3.6 \times 10^6 \times E)$$

Where

- n = Thermal Efficiency (%), accurate to one decimal place ;
- c1 = Heat capacity of water, 4.18 kJ/kg · K;
- m1 = Mass of water (kg);
- c2 = Heat capacity of pot body and lid, 0.46 kJ/kg · K;
- m2 = Total mass of pot body and lid (kg);
- E = Energy consumption (kWh);
- Δt = Temperature rise ($\Delta t = t_2 - t_1$), unit K.

Determination of Energy Efficiency Grading

40. The proposed energy label is “Grading Type” and similar to the current MEELS. There will be five energy efficiency grades, with Grade 1 being the most energy efficient and Grade 5 being the least.

Section 3.7 – Microwave Ovens

41. Considerations for Inclusion into the MEELS

The following information has been taken into account in considering inclusion of microwave ovens into the MEELS:

- (i) Overseas Practices:
 - Microwave ovens are covered in the mandatory labelling scheme of China only.
- (ii) Test Standards:
 - International test standard is available for energy efficiency performance measurement of microwave ovens.
- (iii) Availability of Testing Laboratories:
 - No accredited testing laboratory is available in Hong Kong for testing the energy efficiency performance of microwave ovens.
- (iv) Energy Saving Potential:
 - It is roughly estimated that the potential energy saving is relatively low.
- (v) Others:
 - There is so far no registration of models under the VEELS as the VEELS for microwave ovens was newly launched in December 2014.

Proposed Test Standards

42. Currently in Hong Kong, microwave ovens are covered under the VEELS. The energy efficiency performance of microwave ovens is measured based on IEC 60705 - 2010 Edition 4.0 “*Household microwave ovens – Methods for measuring performance*” and standby power is measure according to IEC 62301: 2011 Edition 2.0 “*Household electrical appliances – Measurement of standby power*”.

Proposed Test Requirements

43. The following tests are required:
- Rated Wattage Test;
 - Usable Volume and Dimension Test;
 - Energy Efficiency Test;
 - Uniformity by multi cup test;
 - Standby mode and Off mode Power Consumption Test; and
 - Grill mode Energy Consumption Test (if applicable).

44. The proposed energy efficiency grade for microwave is determined by the efficiency of oven. The efficiency of oven is calculated according to the following formula:

$$n = 100 \times P \cdot t / W$$

Where

n = Efficiency of oven (%)

P = Microwave power output (Watts)

t = Heating time (seconds) excluding the magnetron filament heating-up time

W = heating-up energy consumption (Watts) including magnetron filament heating-up energy consumption

Determination of Energy Efficiency Grading

45. The proposed energy label is “Grading Type” and similar to the current MEELS. There will be five energy efficiency grades, with Grade 1 being the most energy efficient and Grade 5 being the least.

Section 4

Collection of Views

46. We invite your views and comments on the proposed products for the third phase of the MEELS. Please send in your response form (**Annex A**) on or before **30 June 2015** by mail, email or facsimile to the following—

Address:	Energy Efficiency Office Electrical and Mechanical Services Department 3 Kai Shing Street Kowloon
Email address:	meels_review@emsd.gov.hk
Facsimile:	(852) 2890 6081

47. Please note that the Government would wish, either in discussion with others or in any subsequent report, whether privately or publicly, to be able to refer to and attribute views submitted in response to this document. Any request to treat all or part of a response in confidence will be respected. If no such request is made, it will be assumed that the response is not intended to be confidential.

Annex A

Energy Efficiency Office
Electrical and Mechanical Services Department
3 Kai Shing Street
Kowloon

Email: meels_review@emsd.gov.hk
Fax: (852) 2890 6081

Response Form: “New Products under Third Phase of MEELS”

My views on the following issues are set out below:

1. Please indicate the priority of product inclusion under third phase of the MEELS in the following table: (Top Priority = 1, Lowest Priority = 7)

Item	Televisions	Washing Machines (7 kg < washing capacity ≤ 10kg)	Room Air Conditioners (heat Pump)	Electric Storage Water Heaters	Electric Rice Cookers	Induction Cookers	Microwave Ovens
Order of Priority							

2. Any other product(s) should be included in the third phase of the MEELS?

Remark: please tick (✓) the appropriate box in each of the following questions 3 – 10:

3. For televisions to be included into the MEELS, if “Standby Power ≤ 1W” is required for evaluation of energy efficiency grading, which grade(s) should this requirement apply to?
 - Grade 1 & 2
 - Grade 1, 2 & 3
 - Grade 1, 2, 3 & 4

4. If television is included into the MEELS, what should the scope of coverage be?
 - diagonal display screen size ≤ 254 cm (100 inches)
 - others (diagonal display screen size range): _____

5. If the scope of washing machine is extended under the existing MEELS, what should the extended coverage be?
 - $7\text{kg} < \text{washing capacity} \leq 10\text{kg}$
 - $7\text{kg} < \text{washing capacity} \leq 13\text{kg}$
 - others (washing capacity range): _____

6. If room air conditioner (heat pump) is included into MEELS, what should the scope of coverage be?
 - rated heating capacity $\leq 7.5\text{kW}$
 - rated heating capacity $\leq 10\text{kW}$
 - others (rated heating capacity range): _____

7. If electric storage water heater is included into MEELS, what should the scope of coverage be?
 - rated storage capacity ≤ 300 Litres
 - rated storage capacity ≤ 500 Litres
 - others (rated storage capacity range): _____

8. If electric rice cooker is included into MEELS, what should the energy performance testing be?
 - apply water for the test and does not cover induction heating type rice cookers
 - apply rice for the test and does not cover induction heating type rice cookers
 - apply water for the test and include induction heating type rice cookers
 - apply rice for the test and include induction heating type rice cookers

9. For induction cookers to be included into the MEELS, if “Standby Power $\leq 1\text{W}$ ” is required for evaluation of energy efficiency grading, which grade(s) should this requirement apply to?
 - Grade 1 & 2
 - Grade 1, 2 & 3
 - Grade 1, 2, 3 & 4

