

IMPLEMENTING GUIDELINES OF THE PHILIPPINE ENERGY LABELING PROGRAM FOR TELEVISION SETS

Pursuant to Section 9 of Department Circular No. 2020-06-0015, entitled “Prescribing the Guidelines of the Philippine Energy Labeling Program (PELP) for Compliance of Importers, Manufacturers, Distributors and Dealers of Electrical Appliances and Other Energy-Consuming Products (ECP)”, the Implementing Guidelines for Television Sets, including the Particular Product Requirements (PPR) and Code of Practice (COPE) are hereby issued for the information and guidance of all those concerned and for compliance by all manufacturers, importers, distributors, dealers, retailers and other key stakeholders.

1. Particular Product Requirement for Televisions Sets.

The PPR for Television Sets provides the requirements for Television Sets and other relevant information.

1.1 Scope

This PPR covers Television sets with screen size up to 1,524 mm (60 inches) and has a tuner.

1.2 Definition of Terms

For the purpose of this PPR, the following definitions shall apply:

Applicants – refers to Manufacturers / Importers / Distributors / Dealers

Basic Model / Type – a product model whose main component and other design components are distinct as to voltage rating, power input, frequency, light output, etc.

Emergency Warning Broadcast System (EWBS) – a system that shall be activated to alert and guide the public of an impending or ongoing emergency situation by delivering warning information through an audible sound.

Energy Efficiency Factor (EEF) – refers to the ratio of the viewing screen area or the luminous area in square meters to the total energy consumption in kWh.

$$EEF = \text{viewing screen size (m}^2\text{)} / \text{total energy consumption (kWh)}$$

Methodology for energy consumption measurement shall follow PNS IEC 62087 as stated in 1.3.

Energy Efficiency Performance Rating (EEPR) - product’s star rating, which is based on the EEF and is stated on the energy label.

Energy Efficiency Rating - as indicated in the energy label pertains to the rated EEF of Television sets.

Generic Models - refer to a range of models similar to the base model where all have the same major physical characteristics, construction, system design and other performance characteristics.

Luminous Area – refers to the measured viewing screen area determined by the length multiply by width of the luminous area with white pattern video input signal. The unit express in m².

Television Sets - an appliance for the display and possible reception of television broadcast and similar services for terrestrial, cable, satellite and broadband network transmission of analogue and/or digital signals.

1.3 Normative Reference

The Television Sets covered under this PPR shall be tested, as applicable, according, but not limited to the following standards and their future amendments.

PNS IEC 62087 – *“Methods of Measurement for the power consumption of audio, video and related equipment”* contains provisions, which through reference in this text form part of this national standard. At the time of publication of this standard, the edition indicated was valid.

PNS 378 - *“Television Receivers and Video Monitors – Viewing Screen Dimensions – Methods of Measurement”*

IEC 62301 - *“Standby Power Measurement”*

Considering the regular updating of standards, the latest edition of the PNS shall be used as reference. It is understood that future amendments of the PNS indicated in this PPR shall be applied after its promulgation. A transition period of one (1) year shall be provided to give ample time to all stakeholders to adjust and conform to the new requirements, if any.

1.4 Sampling Method for Verification Testing

1.4.1 A unit of base model or its generic model shall be randomly taken from the sampling location.

1.5 Specific Guidelines on the Conduct of Verification

1.5.1 Test methods to verify conformity to the claimed information in the label shall be as specified in 1.3.

1.5.2 Test method for measuring viewing screen size shall be in accordance with 1.3.

1.5.3 The luminous area shall be determined by multiplying the measured width and the measured height using a white pattern signal through radio frequency (RF) or baseband input. Measurements are in millimeters (mm). However, the final result of the luminous area should be in square meters (m²) rounded-off to the nearest 0.001 m².

1.5.4 Samples shall be tested at a standard test voltage of 230V \pm 1%, 60Hz \pm 1%.

1.5.5 Television sets must be reset to default settings, Home mode or the “Out-of-the-box” mode. The picture level settings, if it exists, shall be as originally set

as that of the manufacturer / importer. Other features such as Power Saving and Auto Brightness shall be turned off.

- 1.5.6** Power consumption test methods shall be in accordance with Po_broadcast: On (average) mode power consumption using dynamic broadcast content video signal according to the normative reference. The measurements shall be performed after the television set has achieved a stable condition with respect to power consumption. The full duration of the dynamic broadcast-content video signal issued for measuring TV power consumption when the television is used for viewing typical broadcast TV content. The measurement shall be the average power consumed over ten consecutive minutes.
- 1.5.7** Measurement of standby power shall be as specified in 1.3.
- 1.5.8** The ambient temperature in all tests shall be maintained at 23 °C ± 5.
- 1.5.9** The verification testing shall be conducted by DOE-LATD or a DOE-recognized testing laboratory.
- 1.5.10** Conformance shall be evaluated according to the cases shown in Table 1:

Table 1. Conformance Requirements

CASE CONDITION	1 ST SAMPLING	2 ND SAMPLING	3 RD SAMPLING	CONFORMANCE
Case 1	Passed	Not Applicable	Not Applicable	Passed
Case 2	Failed	Passed	Passed	Passed
Case 3	Failed	Passed	Failed	Failed
Case 4	Failed	Failed	Not Applicable	Failed

Note:

1. Applies both for tolerances and MEPP.
2. Replacement of defective units shall be allowed up to three (3) times only. If the unit is still defective after the 3rd replacement, the testing shall be considered as failed.

Table 2. Conformance Evaluation Matrix

Case Condition	Energy Efficiency	Power Consumption	Viewing Screen Dimension	Standby Power	Final Verdict	Remarks FCA
Case 1	P	P	P	P	P	
Case 2	P	P	P	F	F	
Case 3	P	P	F	P	F	FCA
Case 4	P	F	P	P	F	FCA
Case 5	F	P	P	P	F	FCA

Legend: F – Fail, P- Pass, FCA- For Corrective Action on claims according to Guidelines

Note:

1. The table above will depend on the Applicant's declaration.
2. Applies both for tolerance and MEPP

3. *Replacement of defective units (that cannot be properly tested) shall be allowed up to three (3) times only. If the unit is still defective after the 3rd replacement, the testing shall be considered as failed.*

1.6 Inspection of Generic Models

- 1.6.1 There is a difference in nameplate rating, type of display, power supply and viewing screen size dimension.
- 1.6.2 In case of doubt, DOE-EPRED shall require the inspected units to be subjected to performance testing.

1.7 Minimum Energy Performance

- 1.7.1 The measured standby power of the television sets shall not be more than 1.0 watt.

Note:

1. *Measured standby power shall be rounded-off to the nearest 0.1 watt. The rules of rounding-off shall be followed.*
2. *Verdict shall be based on the rounded-off value.*
3. *MEPP shall be subjected for review and upgrading every three (3) years or earlier as necessary.*
4. *There will be no MEPP for television sets with EWBS feature.*

1.8 Tolerances

The following tolerances shall apply:

- 1.8.1 The measured standby power shall not be more than 110% of the rated standby power of the test sample.

Note:

1. *Measured standby power shall be rounded-off to the nearest 0.1 watt. The rules of rounding-off shall be followed.*
2. *The measured standby power shall be rounded-off first before determining the tolerance.*
3. *Verdict shall be based on the rounded-off value.*

- 1.8.2 The measured EEF shall not be less than 90% of the rated EEF of the test sample.

Note:

1. *Measured EEF shall be rounded-off to the nearest 0.1 m²/kWh. The rules of rounding-off shall be followed.*
2. *Verdict shall be based on the rounded-off value.*
3. *The rated EEF shall be mathematically consistent.*

- 1.8.3 The measured energy consumption shall not be more than 110% of the rated energy consumption of the test sample.

Note:

1. *Measured energy consumption shall be rounded-off to the nearest 0.001kWh. The rules of rounding-off shall be followed.*
2. *Decision shall be based on the rounded-off value.*
3. *MEPP shall be subjected for review and upgrading every three (3) years or earlier as necessary.*

- 1.8.4 The measured viewing screen size shall not be less than 99% of the rated viewing screen size of the test sample.

Note:

Decision shall be made after rounding-off the percentage value to whole number.

1.9 Energy Efficiency Performance Rating (EEPR) for Television Sets

1.9.1 Television sets shall be classified based on rated EEPR of the product.

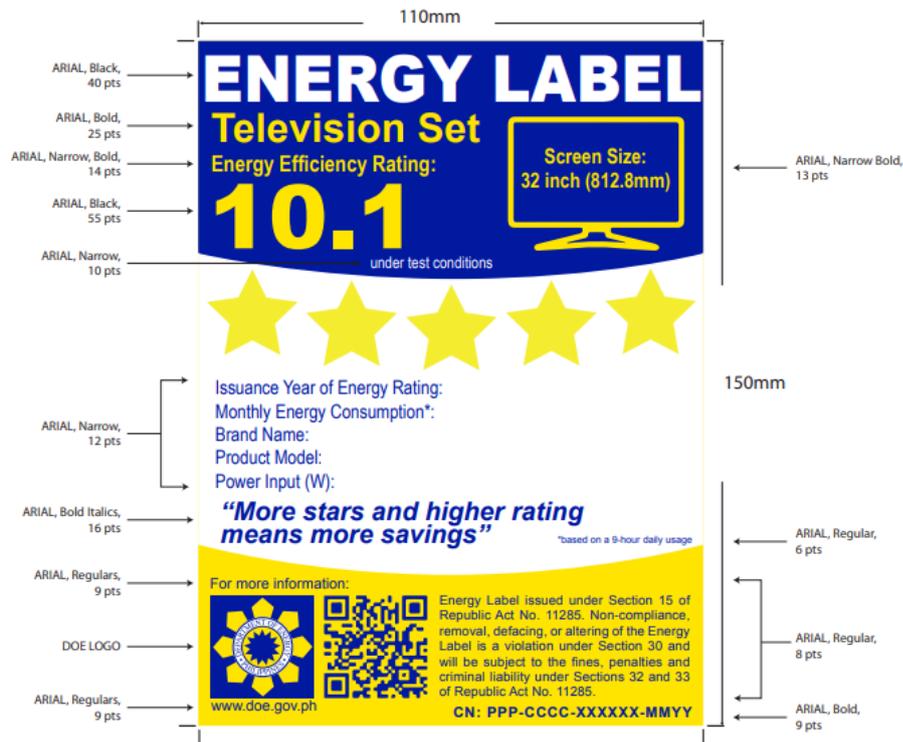
1.9.2 The classification shall be represented by stars with one star indicating the lowest range of EEPR while five stars shall represent the highest range of EEPR.

1.9.3 The rated EEPR of Television sets shall be classified in Table 3.

Table 3. Energy Efficiency Performance Rating (EEPR) for Television sets

Energy Efficiency Factor (EEF)	
EEPR	Range
One Star	1.9 and below
Two Star	2 to 4.9
Three Star	5 to 7.9
Four Star	8 to 9.9
Five Star	10 and above

1.10 Specifications and Dimensions of the Energy Label



1.10.1 Applicants shall place the energy label at the front of the unit for sale.

1.11 Presentation of Energy Labels



1.12 Correction of Performance Ratings

1.12.1 Applicant has the option to downgrade the claimed ratings to comply with the requirements of the standard based on the result of verification test.

1.12.2 New claims shall conform to the tolerances specified in 1.8.

2. Code of Practice on Energy Labeling of Products. Pursuant to Section 15 of the EEC Act, the COPE is calculated as follows:

2.1. The Television Energy Efficiency Performance Rating (EEPR) or the star rating shown in the DOE Energy Label is based on the **Energy Efficiency Factor (EEF)**, which is calculated as follows:

$$\text{Energy Efficiency Factor (EEF)} = \frac{\text{Viewing screen area or luminous area (m}^2\text{)}}{\text{Total energy consumption (kWh)}}$$

The EEPR reflected on the DOE Energy Label shall correspond to the EEF value shown in the product test report during product registration. The EEPR shall be adjusted accordingly (as needed) once the product has undergone verification testing.

2.2. For the estimation of **monthly energy kWh consumption** (based on a specified hour of daily usage), as shown in the DOE Energy Label, the calculation is as follows:

$$\text{Monthly kWh Consumption} = \text{Power Input} \times \text{Daily Operating Hours} \times 30$$

Where:

Power Input is the determined electrical power required by the equipment to operate normally and is expressed in kilowatts (kW)

Operating Hours is the assumed length of time that the equipment is operated in a day and is expressed in hours. With regards to the DOE Energy Label, this parameter is assumed to be 9 hours.

2.3 For the estimation of **monthly electricity cost**, the calculation is as follows:

$$\text{Monthly Electricity Cost} = \text{Monthly kWh Consumption} \times \text{Electricity Price}$$

Where:

Electricity Price is the prevailing peso per kWh, as indicated in the electricity bill issued by an electric power distribution company.

2.4 For the estimation of **monthly Greenhouse Gas (GHG) emission** due to monthly electricity consumption, the calculation is as follows:

$$\text{Monthly GHG emission} = \text{Monthly kWh Consumption} \times \text{Emission Factor}$$

Where:

Emission Factor is the Simple Operating Margin (OM) Emission Factor derived using the power grid statistics and is available in the DOE Website.

The unit of the calculated GHG emission shall be in kg CO₂.

3. Television Sets Product Registration. Only registered companies can proceed to the per-model PELP Online Product Registration applicable to both manufactured and imported institutional products using the Product Registration Form – Television Sets as shown below and available online.

Product Registration Form – Television Sets

Product	Television Sets
Particular Product	<input type="checkbox"/> Cathode-Ray Tube (CRT) <input type="checkbox"/> Liquid Crystal Display (LCD) <input type="checkbox"/> Light-Emitting Diode (LED) <input type="checkbox"/> Organic Light-Emitting Diode (OLED)
Brand Name	
Model Number/Code	
Year Model	
Country of Origin	
Original Equipment Manufacturer	
Is the product generic to a base model?	<input type="checkbox"/> Yes <input type="checkbox"/> No Please specify base model: _____
Viewing Screen Size (inches)	
Viewing Screen Size (mm)	
Luminous Area (m ²)	
Energy Consumption (kWh)	
Energy Efficiency Factor (EEF)	
Power Input (W)	
Stand-by Power Rating (W)	
No. of Stars	<input type="checkbox"/> ★ <input type="checkbox"/> ★★ <input type="checkbox"/> ★★★ <input type="checkbox"/> ★★★★ <input type="checkbox"/> ★★★★★
Other Parameters	

Note:

No. of samples tested for product registration purposes will be up to the Applicant. The validity of the test reports for television sets shall be valid for one (1) year.

- 4. Effectivity.** This TV IG shall take effect fifteen (15) days following its publication in at least two (2) newspapers of general circulation. Copies of this IG shall be filed with the University of the Philippines Law Center – Office of the National Administrative Register.

Issued at Energy Center, Bonifacio Global City, Taguig City.

Approved by:

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