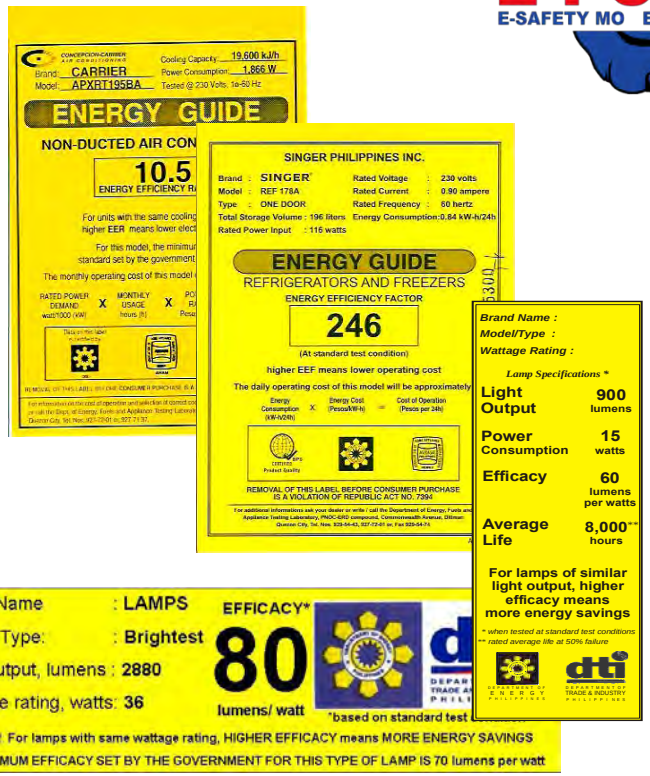
E-POWER MO
E-SAFETY MO E-SECURE MO E-DISKARTE MO



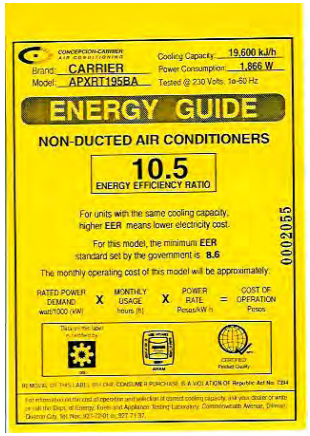

# E-POWER MO with ENERGY LABELS

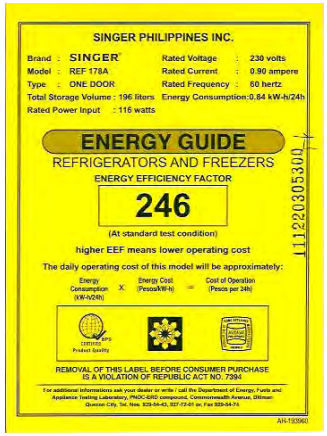
**Dir. Amelia M. de Guzman, CESO IV**
**Energy Research and Testing Laboratory Services**

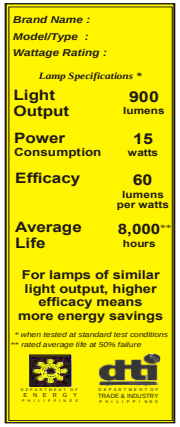
E-POWER MO – Towards an Energy Resilient Philippines
26 June 2018 | Department of Energy, Energy Center, BGC, Taguig City

# What is an Energy Label?

**ENERGY LABELS** or **Energy Guides** are yellow cards commonly seen with household appliances and lighting products. The number in Energy Labels indicates the efficiency of product in terms of electricity consumption.



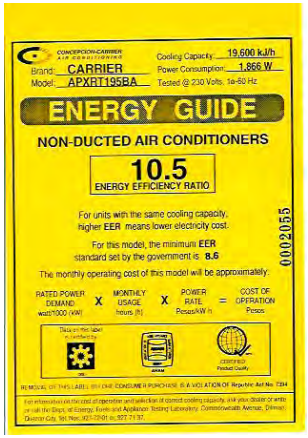


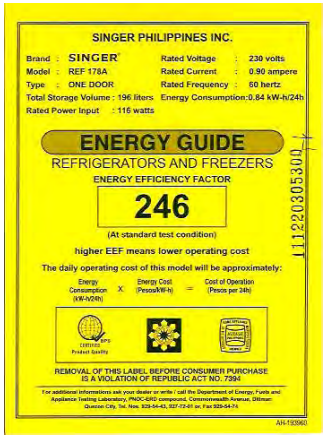
# What is an Energy Label?

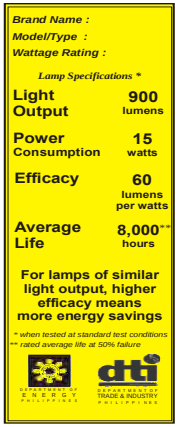
With **ENERGY LABELS**…

**The HIGHER** the efficiency rating,

**The LOWER** the appliance consumes electricity!





# Why is Energy Label is important?


- Consumers will patronize products that are **certified** and with **higher efficiency rating**
- **Maintains or lower** the consumption of electricity
- Helps the **environment**

# Which products have Energy Labels?

See energy labels on:

- **Air conditioners**
- **Refrigerators** (5-8 cu. ft)
- **Lamp ballasts**
- **Fluorescent lamps** (compact, linear, circular)

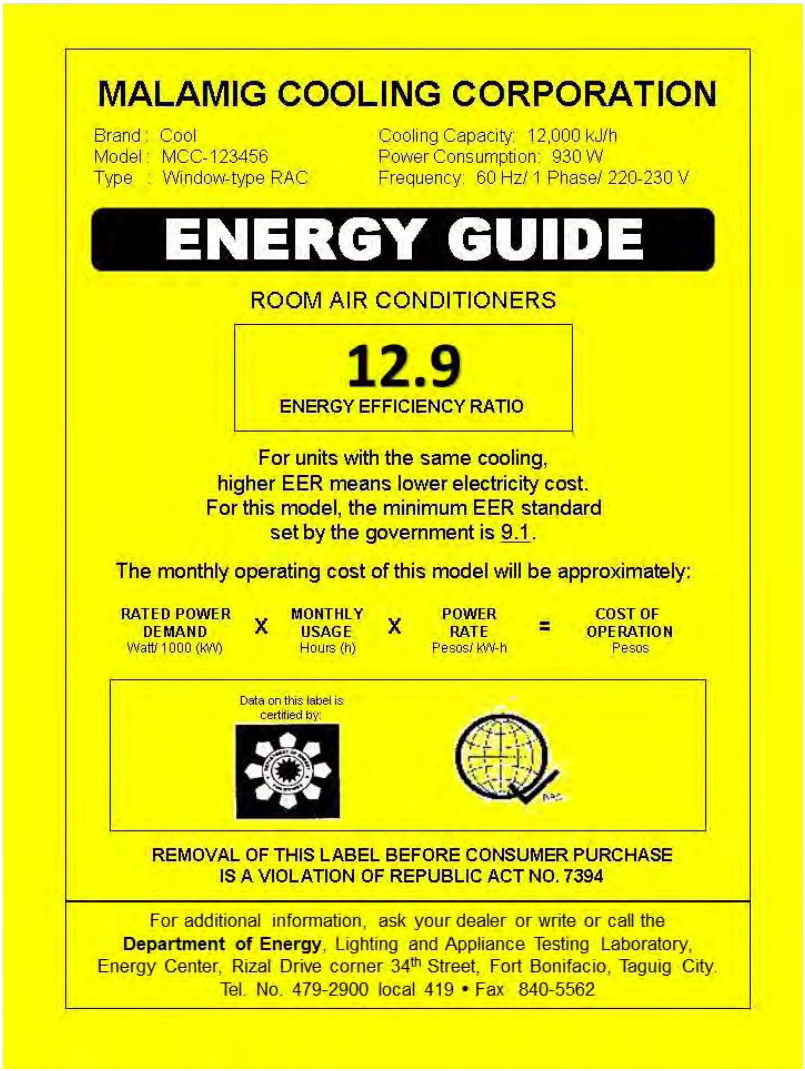
Coming soon with:

- ***TV***
- ***Washing machines***
- ***Small and large refrigerators***

# Energy Label on Air Conditioners

- Split- and window-type air conditioners
- **Cooling capacity** from **1,340 up to 36,000 kJ/h** (or equivalent to **0.5-13.0 Hp**)
- Look for **Energy Efficiency Ratio** or **EER**
- **The higher the EER, the lower the electricity consumption!**


# Energy Label on Air Conditioners



MALAMIG COOLING CORPORATION

Brand : Cool
Model : MCC-123456
Type : Window-type RAC

Cooling Capacity: 12,000 kJ/h
Power Consumption: 930 W
Frequency: 60 Hz/ 1 Phase/ 220-230 V

ENERGY GUIDE

ROOM AIR CONDITIONERS

12.9
ENERGY EFFICIENCY RATIO

For units with the same cooling,
higher EER means lower electricity cost.
For this model, the minimum EER standard
set by the government is 9.1.

The monthly operating cost of this model will be approximately:

| RATED POWER DEMAND (Watt/ 1000 (kW)) | X | MONTHLY USAGE (Hours (h)) | X | POWER RATE (Pesos/ kW-h | = | COST OF OPERATION (Pesos) |
|---|---|---|---|---|---|---|

Data on this label is certified by:

REMOVAL OF THIS LABEL BEFORE CONSUMER PURCHASE
IS A VIOLATION OF REPUBLIC ACT NO. 7394

For additional information, ask your dealer or write or call the **Department of Energy**, Lighting and Appliance Testing Laboratory, Energy Center, Rizal Drive corner 34th Street, Fort Bonifacio, Taguig City. Tel. No. 479-2900 local 419 • Fax 840-5562

**Specifications**

**EER or Energy Efficiency Ratio**

**MEPS or Minimum Energy Performance Standards**

**Operating Cost Computation**

**For more information**

# Energy Label on Air Conditioners

- Choosing the right size of air conditioner, it is important to know its **cooling capacity**
- **Cooling Capacity** is the ability of the air conditioner to cool a certain space in an hour
- ***Rough Estimate Method***: **C.C. = Floor area x 500**

## Comparison table of Air Conditioner Compressor Ratings

| Compressor Rating (Hp) | Cooling Capacity Equivalent (kJ/h) |
|---|---|
| 0.75 | 7,385 – 8,440 |
| 1.0 | 9,495 – 10,550 |
| 1.5 | 12,660 – 13, 290 |
| 2.0 | 18,990 – 20,045 |
| 2.5 | 25,320 – 26,580 |

# Use Air Conditioners Properly

- Position air conditioner in **appropriate place**

# Use Air Conditioners Properly

- Position air conditioner in appropriate place
- Ensure there is **enough insulation**

# Use Air Conditioners Properly

- Position air conditioner in appropriate place
- Ensure there is enough insulation
- Check **thermostat** of your unit

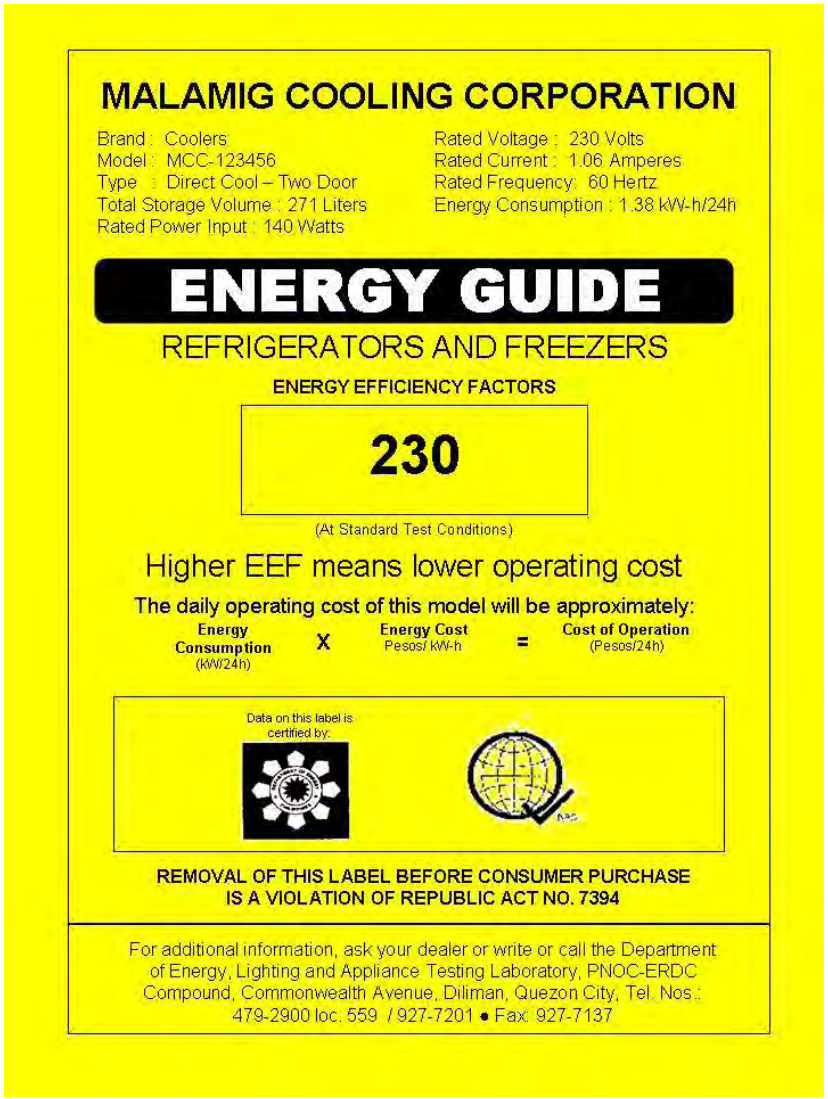
# Use Air Conditioners Properly

- Position air conditioner in appropriate place
- Ensure there is enough insulation
- Check thermostat of your unit
- **Always clean** your air conditioner

# Energy Label on Refrigerators

- Direct cooling and No frost cabinets
- From **5 up to 8 cu. ft.** (or equivalent to **141-227 liters**)
- Look for **Energy Efficiency Factor** or **EEF**
- **The higher the EEF, the lower** the energy consumption

# Energy Label on Refrigerators



**MALAMIG COOLING CORPORATION**

Brand : Coolers
Model : MCC-123456
Type : Direct Cool – Two Door
Total Storage Volume : 271 Liters
Rated Power Input : 140 Watts

Rated Voltage : 230 Volts
Rated Current : 1.06 Amperes
Rated Frequency: 60 Hertz
Energy Consumption : 1.38 kW-h/24h

**ENERGY GUIDE**

REFRIGERATORS AND FREEZERS

ENERGY EFFICIENCY FACTORS

**230**

(At Standard Test Conditions)

Higher EEF means lower operating cost

The daily operating cost of this model will be approximately:

Energy Consumption (kW/24h) X Energy Cost Pesos/ kW-h = Cost of Operation (Pesos/24h)

Data on this label is certified by:

REMOVAL OF THIS LABEL BEFORE CONSUMER PURCHASE IS A VIOLATION OF REPUBLIC ACT NO. 7394

For additional information, ask your dealer or write or call the Department of Energy, Lighting and Appliance Testing Laboratory, PNOC-ERDC Compound, Commonwealth Avenue, Diliman, Quezon City, Tel. Nos.: 479-2900 loc. 559 / 927-7201 • Fax: 927-7137

**Specifications**

**EEF or Energy Efficiency Factor**

**Operating cost computation**

**For more information**

# Use Refrigerators Properly


- **Use the right size** of refrigerator accordingly

# Use Refrigerators Properly

- Use the right size of refrigerator accordingly
- Place your unit in an **appropriate space** inside your home

# Use Refrigerators Properly

- Use the right size of refrigerator accordingly
- Place your unit in an appropriate space inside your home
- Avoid **frequent opening** of your refrigerator

# Use Refrigerators Properly

- Use the right size of refrigerator accordingly
- Place your unit in an appropriate space inside your home
- Avoid frequent opening of your refrigerator
- **Defrost and clean** your refrigerator regularly

# Use Refrigerators Properly

- Use the right size of refrigerator accordingly
- Place your unit in an appropriate space inside your home
- Avoid frequent opening of your refrigerator
- Defrost and clean your refrigerator regularly
- Check the magnetic **rubber gasket**

# Energy Label on Lamp Ballasts


**What does BALLAST do?**

- Serves as gateway to the light source
- Corrects the lamp voltage
- Matches line voltage to the operating voltage of the lamp
- Limits the flow of electricity in the lamp
- The ballast power should be the same with that of the *fluorescent lamp* being used

# Energy Label on Lamp Ballasts

- Two types: **magnetic** and **electronic**
- Look for **Ballast Efficacy Factor** or **BEF**

- **The higher the BEF, the lower the electricity it consumes!**

# Energy Label on CFLs

- **Compact fluorescent lamps or CFLs** are miniaturized fluorescent lamps as substitute to incandescent bulbs
- Includes **self-ballasted lamps** from **3 up to 65 watts**
- Look for the **Efficacy**
- The higher the **efficacy**, **the lower the electricity it consumes**

# Energy Label on CFLs

Brand Name: **MALIWANAG**
Model/Type: **2U15W**

*Lamp Specifications*[1]

| | |
|---|---|
| Light Output | 900 lumens |
| Power Consumption | 15 watt |
| Efficacy[3] | 60 lumens per watt |
| Average Life[2] | 8000 hours |

**For lamps of similar light output, higher efficacy means more energy saving**

[1] when tested at standard test condition
[2] rated average life at 50% failure
[3] The minimum efficacy set by the Government for this type of lamp is 57 lumens per watt.

**CTRL NO: 001021212PD15**

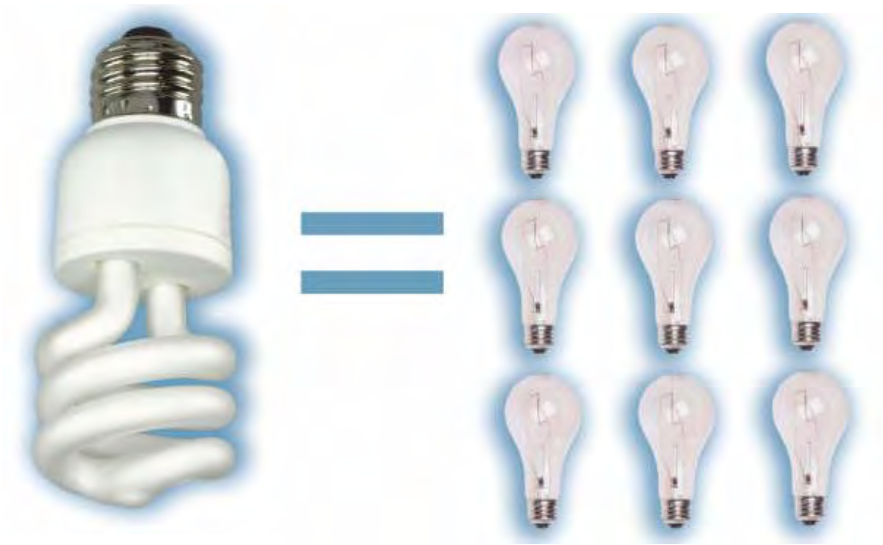
DEPARTMENT OF ENERGY PHILIPPINES

dti DEPARTMENT OF TRADE AND INDUSTRY PHILIPPINES

- **Lighting Output** total amount of light produce by the source
- **Power Consumption** total amount of electricity consume by the souce
- **Efficacy** indicated the efficiency in which the electricity is converted into light
- **Average Life** expected median value of lamp expectancy of lamps affected by burning hours

# Use CFLs Properly

- Use **CFL instead of incandescent bulb**



**25 W**

**500 lumens**

**25 W x 9 bulbs**

**500 lumens**

# Use CFLs Properly

- Use **CFL instead of incandescent bulb**
- Install CFL **vertical-base up**

# Use CFLs Properly

- Use **CFL instead of incandescent bulb**
- Install CFL **vertical-base up**
- **Use proper wattage** according to your needs

# Use CFLs Properly

- Use **CFL instead of incandescent bulb**
- Install CFL **vertical-base up**
- **Use proper wattage** according to your needs
- **Clean lamps and luminaires** regularly

# Use CFLs Properly

- Use **CFL instead of incandescent bulb**
- Install CFL **vertical-base up**
- **Use proper wattage** according to your needs
- **Clean lamps and luminaires** regularly
- Do not use **blinking** and **uncertified lamps**

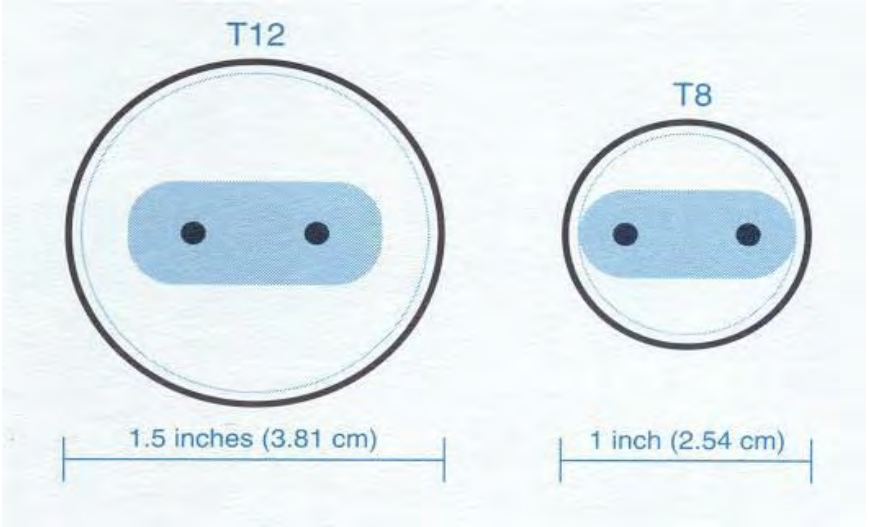
# Energy Label for Other Fluorescent Lamps

- Double-capped, **Triphospor** and **halophosphate linear and circular fluorescent lamps**
- Look for **Efficacy**
- **The higher the efficacy, the more efficient the fluorescent lamp us!**

# Energy Label for Other Fluorescent Lamps


# Use Fluorescent Lamps Properly

- Replace blinking lamps with **slimmer fluorescent lamp**




# Use Fluorescent Lamps Properly

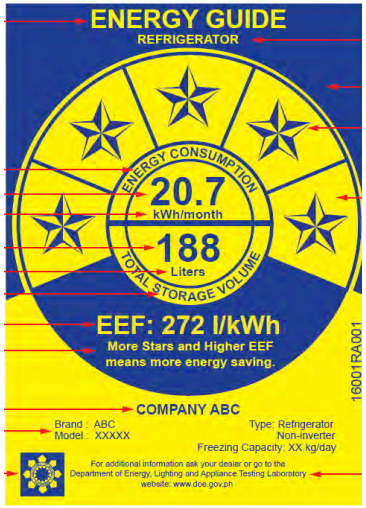
- Replace blinking lamps with **slimmer fluorescent lamp**
- **Dispose busted lamps** properly

# Use Fluorescent Lamps Properly

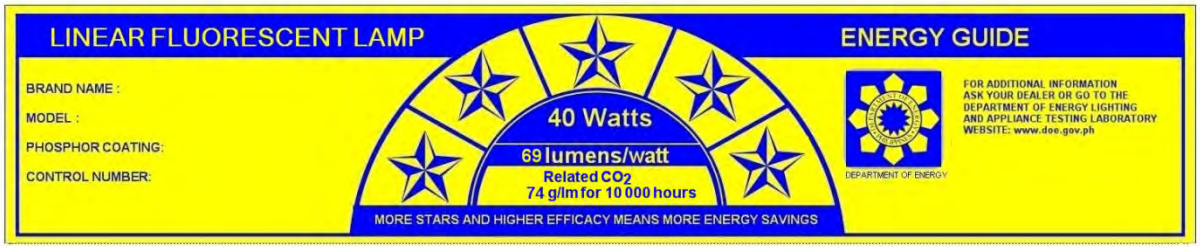
- Replace blinking lamps with **slimmer fluorescent lamp**
- **Clean lamps and luminaires** regularly
- Lighting products such as lamps, ballasts, and luminaires have **product warranties**

# The Future of Energy Labels







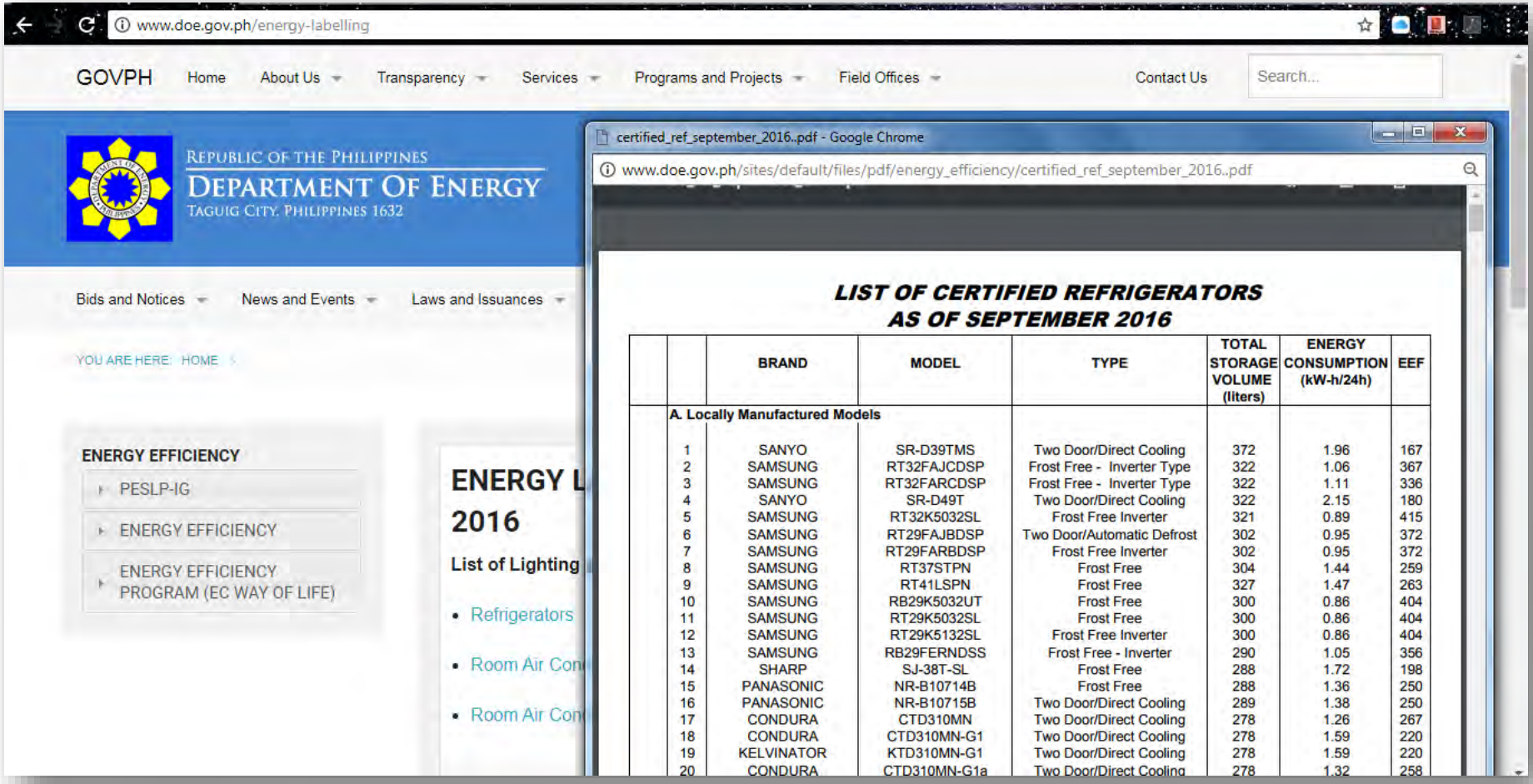

# Products with Energy Label has…

For our Proudly Philippine Made and has passed the Philippine National Standard

BPS
CERTIFIED
Product Quality

For imported items that has passed the Philippine National Standard

# Visit our website – www.doe.gov.ph




**LIST OF CERTIFIED REFRIGERATORS**
**AS OF SEPTEMBER 2016**

| | | BRAND | MODEL | TYPE | TOTAL STORAGE VOLUME (liters) | ENERGY CONSUMPTION (kW-h/24h) | EEF |
|---|---|---|---|---|---|---|---|
| A. Locally Manufactured Models | | | | | | | |
| | 1 | SANYO | SR-D39TMS | Two Door/Direct Cooling | 372 | 1.96 | 167 |
| | 2 | SAMSUNG | RT32FAJCDSP | Frost Free - Inverter Type | 322 | 1.06 | 367 |
| | 3 | SAMSUNG | RT32FARCDSP | Frost Free - Inverter Type | 322 | 1.11 | 336 |
| | 4 | SANYO | SR-D49T | Two Door/Direct Cooling | 322 | 2.15 | 180 |
| | 5 | SAMSUNG | RT32K5032SL | Frost Free Inverter | 321 | 0.89 | 415 |
| | 6 | SAMSUNG | RT29FAJBDSP | Two Door/Automatic Defrost | 302 | 0.95 | 372 |
| | 7 | SAMSUNG | RT29FARBDSP | Frost Free Inverter | 302 | 0.95 | 372 |
| | 8 | SAMSUNG | RT37STPN | Frost Free | 304 | 1.44 | 259 |
| | 9 | SAMSUNG | RT41LSPN | Frost Free | 327 | 1.47 | 263 |
| | 10 | SAMSUNG | RB29K5032UT | Frost Free | 300 | 0.86 | 404 |
| | 11 | SAMSUNG | RT29K5032SL | Frost Free | 300 | 0.86 | 404 |
| | 12 | SAMSUNG | RT29K5132SL | Frost Free Inverter | 300 | 0.86 | 404 |
| | 13 | SAMSUNG | RB29FERNDSS | Frost Free - Inverter | 290 | 1.05 | 356 |
| | 14 | SHARP | SJ-38T-SL | Frost Free | 288 | 1.72 | 198 |
| | 15 | PANASONIC | NR-B10714B | Frost Free | 288 | 1.36 | 250 |
| | 16 | PANASONIC | NR-B10715B | Two Door/Direct Cooling | 289 | 1.38 | 250 |
| | 17 | CONDURA | CTD310MN | Two Door/Direct Cooling | 278 | 1.26 | 267 |
| | 18 | CONDURA | CTD310MN-G1 | Two Door/Direct Cooling | 278 | 1.59 | 220 |
| | 19 | KELVINATOR | KTD310MN-G1 | Two Door/Direct Cooling | 278 | 1.59 | 220 |
| | 20 | CONDURA | CTD310MN-G1a | Two Door/Direct Cooling | 278 | 1.32 | 258 |

# Thank You!



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# For more information

- All information stated in this presentation are available online in the Department of Energy Philippines Website. www.doe.gov.ph.
- To learn more about the lighting products, consult *Manual of Practice on Efficient Lighting*. Printed by the Institute of Integrated Electrical Engineers of the Philippines, Inc. and the Department of Energy Philippines(2011).
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