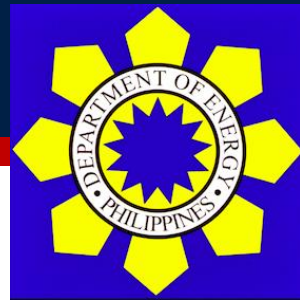


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# ENERGY EFFICIENCY & CONSERVATION

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**DIRECTOR PATRICK T. AQUINO, CESO III**  
*Energy Utilization Management Bureau (EUMB)*  
*Department of Energy*

REPUBLIC ACT 11285

# ENERGY EFFICIENCY AND CONSERVATION ACT

The EE&C Act institutionalizes energy efficiency and conservation, enhance the efficient use of energy, and grant incentives to energy efficiency and conservation projects.



# ISSUANCES BY THE PHILIPPINE DEPARTMENT OF ENERGY

## ISSUED POLICIES BY THE DOE



As of October 2021, the DOE have issued the following issuances

- 1** MEMORANDUM CIRCULAR (MC)
- 3** DEPARTMENT ORDERS (DO)
- 3** IAEECC RESOLUTIONS
- 5** IMPLEMENTING GUIDELINES (IG)
- 8** DEPARTMENT CIRCULARS (DC)

Title of Issuance	Date Signed and Date of Effectivity
<b>DC2019-11-0014:</b> Implementing Rules and Regulations of Republic Act No. 11285 (Energy Efficiency and Conservation Act)	Date Signed: November 22, 2019 Date of Effectivity: December 21, 2019
<b>DO2020-01-0001:</b> Organizing the Inter-Agency Energy Efficiency and Conservation Committee (IAEECC)	Date Signed and Effectivity: January 09, 2020
<b>DO2020-01-0002:</b> Operationalization of the Strengthening of the Energy Utilization Management Bureau (EUMB), Support Services and Field Offices in Accordance with Republic Act No. 11285 or the Energy Efficiency and Conservation Act (EEC Act)	Date Signed and Effectivity: January 28, 2020
<b>MC2020-05-001:</b> Directing All Designated Establishments Under Commercial, Industrial and Transport Sectors to Submit Energy Consumption Reports	Date Signed: May 13, 2020 Date of Effectivity: 11 June 2020
<b>DC2020-06-0015:</b> 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)	Date Signed: June 15, 2020 Date of Effectivity: July 01, 2020
<b>DC2020-06-0016:</b> Prescribing the Minimum Energy Performance for Products (MEPP) Covered by the Philippine Energy Labeling Program (PELP) for Compliance of Importers, Manufacturers, Distributors, Dealers and Retailers of Energy-Consuming Products (ECPs)	Date Signed: June 15, 2020 Date of Effectivity: July 01, 2020
<b>DC2020-09-0018:</b> Guidelines in the Administration, Classification of Energy Service Company (ESCO)	Date Signed: September 9, 2020 Date of Effectivity: 09 October 2020
<b>DC2020-10-0023:</b> Prescribing Policy Framework for the Development of the Fuel Economy Rating, Fuel Economy Performance, and Related Energy Efficiency and Conservation Policies for the Transport Sector and other Support Infrastructures	Date Signed: October 22, 2020 Date of Effectivity: December 12, 2020
<b>DC2020-12-0026:</b> Adoption of the Guidelines on Energy Conserving Design of Buildings	Date Signed: December 22, 2020 Date of Effectivity: 06 March 2021
<b>DC2021-01-0001:</b> Guidelines for the Qualifications, Assessments, Registration and Certification of Energy Conservation Officers (CECO), Energy Managers (CEM) and Energy Auditors (EA)	Date Signed: January 11, 2021 Date of Effectivity: 06 March 2021
<b>DC2021-05-0011:</b> Guidelines in the Endorsement of Energy Efficiency Projects to the Board of Investment for Fiscal Incentives	Date Signed: May 11, 2021 Date of Effectivity: June 17, 2021
<b>DC2021-09-0014:</b> Guidelines on Energy Efficiency Excellence Awards	Date Signed: September 2021



# DESIGNATED ESTABLISHMENTS

DEs refers to a private entity identified as energy intensive industries.



**Other DE**

At least 100,000 kWhE but less than 500,000 kWhE



**Type 1 DE**

500,001 kWhE but less than 4,000,000 kWhE



**Type 2 DE**

4,000,001 kWhE and above

## Sectors of Designated Establishments:



**Commercial**



**Industrial**



**Transport**

### Memorandum Circular No. MC2020-05-0001

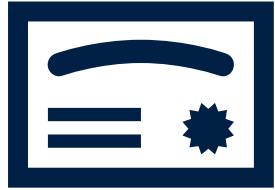
Directing All Designated Establishments under Commercial, Industrial and Transport Sectors to Submit Energy Consumption Reports

\*kWhE – to read as Kilowatt-Hour Equivalent

\* Combination of Fuel and Electricity



# IMPLEMENTATION OF THE ENERGY EFFICIENCY AND CONSERVATION ACT



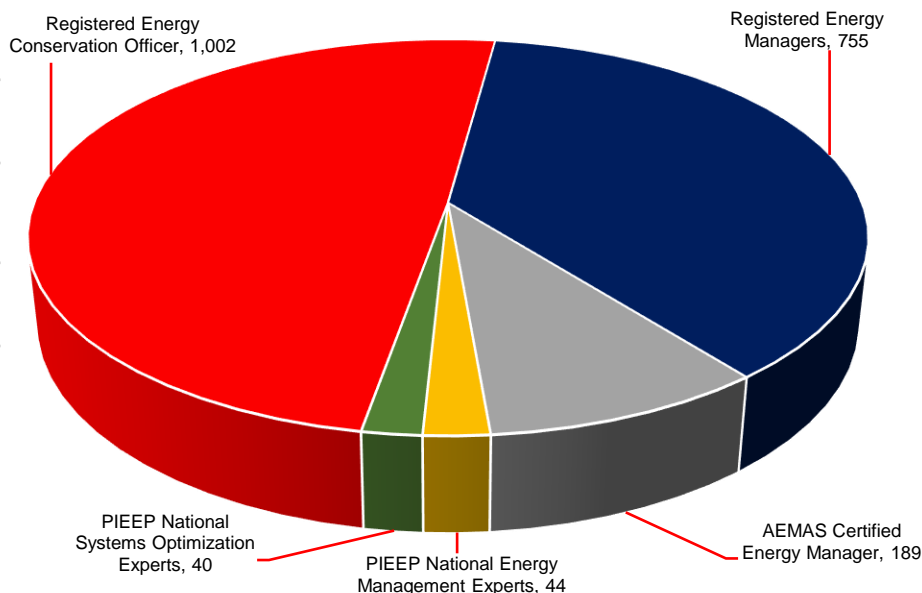
## CERTIFICATION OF ECO, EM, AND EA

**Department Circular No. DC2021-01-0001**  
*Guidelines for the Qualifications, Assessment, Registration, and Certification of Energy Conservation Officers (CECO), Energy Managers (CEM) and Energy Auditors (EA)*

Prescribes the guidelines for the assessment, registration, and certification of energy conservation officer, energy managers, and energy auditors.

### DATA ON ENERGY EFFICIENCY PRACTITIONERS

Registered Energy Conservation Officers	1,002
Registered Energy Managers	755
PIEEP National Systems Optimization Experts	40
PIEEP National Energy Management Experts	44
AEMAS Certified Energy Manager	189



As of October 2021, there are **2,030 Energy Efficiency Practitioners in the Philippines**



### Certified Energy Managers (CEM)

- Graduate of a four (4) year course, preferably engineering
- At least three (3) years of continuous hands-on experience in the installation, operation, and maintenance of energy-consuming machines and equipment in facilities with energy consumption for Type 2 Designated Establishments.



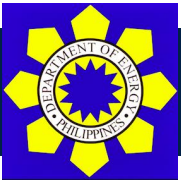
### Certified Energy Conservation Officer (CECO)

- At least two (2) years of continuous hands-on experience in the installation, operation, and maintenance of energy-consuming machines and equipment in facilities with energy consumption for Type 1 Designated Establishments.



### Energy Auditor (EA)

- An individual or entity with proven credibility and competence to conduct an energy audit.



# IMPLEMENTATION OF THE ENERGY EFFICIENCY AND CONSERVATION ACT

## DEVELOPMENT OF TRAINING REGULATIONS

The DOE, together with its partner agencies and stakeholders, is current developing the training regulations and core competencies for the Certification of ECO, EM, and EA.



Department of Energy (DOE)



Commission on Higher Education (CHED)



Department of Science and Technology (DOST)



Technical Education and Skills Development Authority (TESDA)



Energy Efficiency Practitioners Association of the Philippines (ENPAP 4.0)



Philippine Energy Efficiency Alliance (PE2)



PHILIPPINE INSTITUTE OF ENERGY MANAGEMENT PROFESSIONALS INC.

## Certification Process



Qualified Energy Conservation Officer/ Energy Manager/ Energy Auditor



DOE Recognized Training Institution



Training Institution

Validity of Certificate : **3 years (proposed)**

Continuing Qualifications



Issuance of Training Certificate



Registration to DOE as CEM, CECO, and CEA



## ENERGY SERVICE COMPANY (ESCO)

ESCOs are partners in compliance with the EEC Act, as they offer multi-technology services and goods towards developing and designing EE projects, delivering and guaranteeing energy savings, and ensuring cost-effective and optimal performance.

**Department Circular No. DC2020-09-0018**  
*Guidelines, Rules, and Procedures in the Administration, Classification, and Certification of Energy Service Companies*

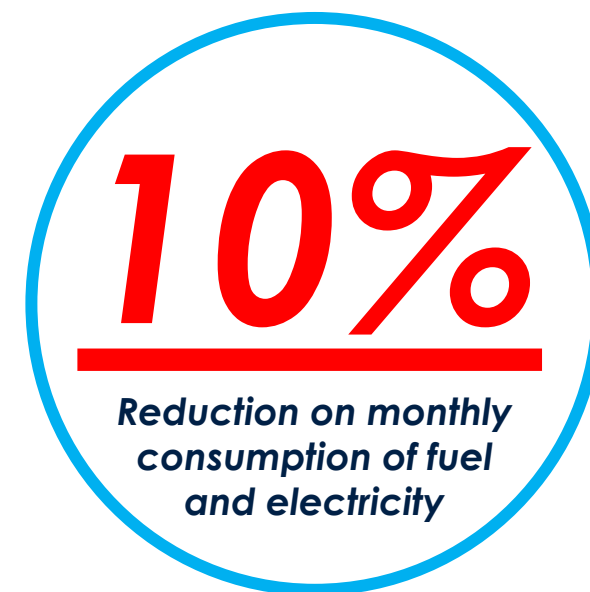
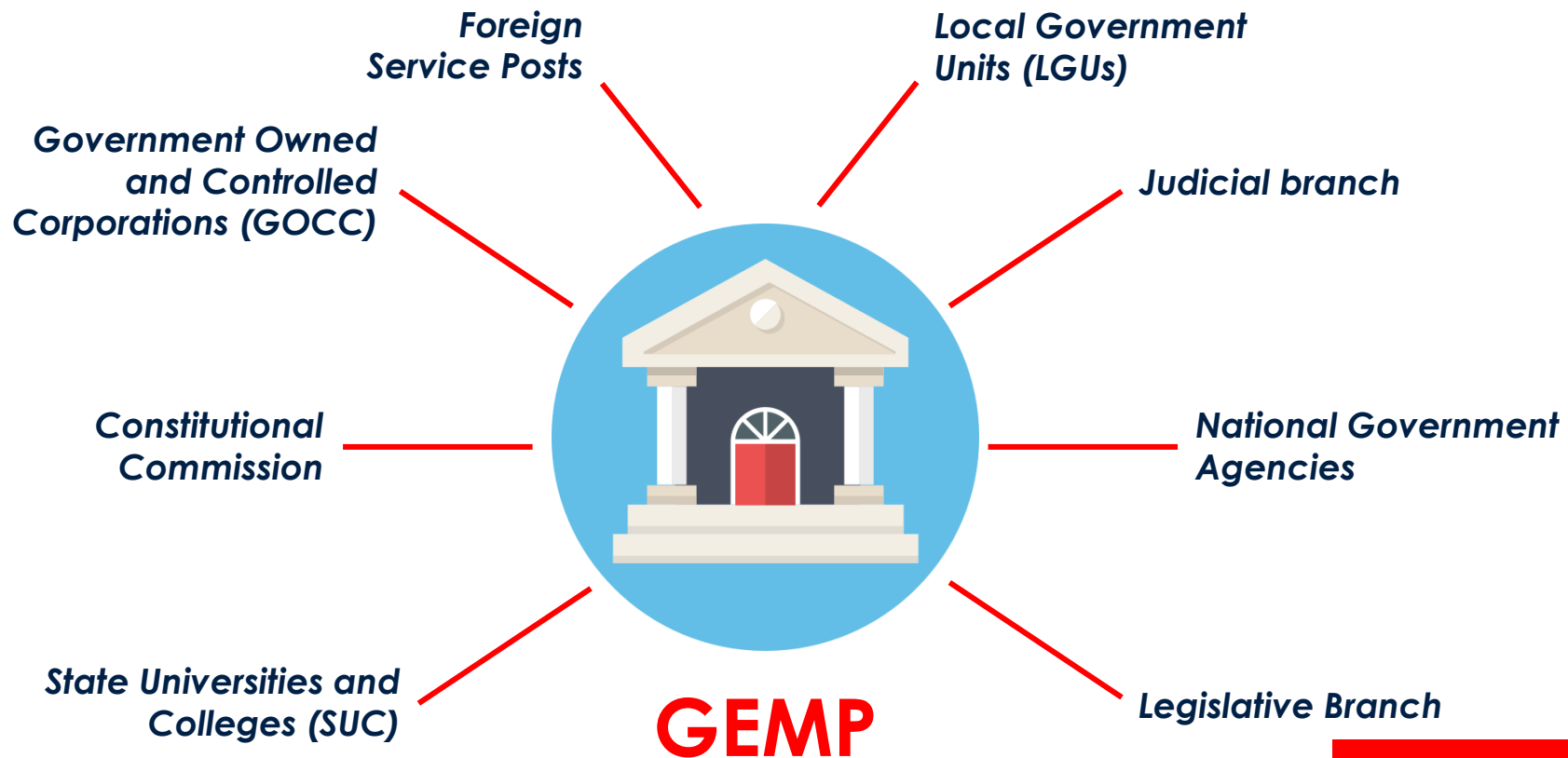
# 29

Registered ESCOs to DOE  
as of October 2021

1. Energy Integrated Systems and Support Services Inc
2. Tri-Sky Link Sales and Services, Inc.
3. Santos Knight Frank, Inc.
4. Engie Services (Philippines)
5. Design Science Inc.
6. Meralco Energy, Inc.
7. Tekno Centrix Corporation
8. Wisenergy, Inc.
9. Concepcion Carrier Air Conditioning Company – Alstra Division
10. Filairco, Inc/Trane Philippines
11. Beyond Energy Solutions & Techonology, Inc.
12. Total Renewable Energy Efficiency Solutions Corp.
13. Edward Marcs Philippines, Inc
14. Azbil Philippines Corporation
15. PNOC-Renewables Corporation
16. Eascorp Powerplant Services, Inc.
17. EconoServ Solutions International, Inc.
18. Upgrade Energy Philippines, Inc.
19. WESTCO Electrical & Equipment Corp.
20. Alpha Centauri Electrical Services
21. Exquis Electrical Services & Supplies Company
22. First Gen Energy Solutions
23. EP Solutions, Inc.
24. Enercon Systems International Philippines Corp.
25. Buskowitz Finance, Inc.
26. Greenergy Development Corporation
27. Renesons Energy Polillo, Inc.
28. Mase Power Corporation
29. Stratcon Power Services Philippines, Inc.



# GOVERNMENT ENERGY MANAGEMENT PROGRAM

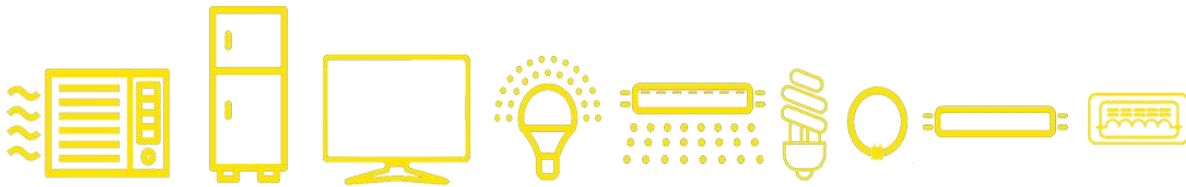


Pursuant to  
IAEECC Resolution No. 1






# PHILIPPINE ENERGY LABELING PROGRAM



- The Philippine Energy Labeling Program aims to initiate market transformation and promote energy efficiency and through the regulation of energy consuming products.
- Initial coverage includes air conditioners, refrigerating appliances, television sets and lighting products.

**ENERGY LABEL**  
**Air Conditioner**  
 Energy Efficiency Rating:  
**4.01** under test conditions




Issuance Year of Energy Rating:  
 Monthly Energy Consumption\*:  
 Brand Name:  
 Product Model: Refrigerant: Rxxxx (GWP xxx)  
 Cooling Capacity (kW): Power Input (W):

***“More stars and higher rating means more savings”***

\*based on 9-hour daily usage

For more information:




Energy Label issued under Section 15 of Republic Act No. 11285. Non-compliance, removal, defacing, or altering of the Energy Label is a violation under Section 30 and will be subject to the fines, penalties and criminal liability under Sections 32 and 33 of Republic Act No. 11285.

www.doe.gov.ph CN: PPP-CCCC-XXXXXX-MMY

**Department Circular No. DC2020-06-0015**  
 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



## COVERAGE OF PELP



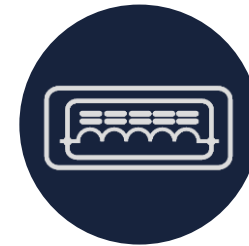
### **Air Conditioner**

- ✓ ACU - Cooling capacity: up to 50,000 kJ/hr or 14kW



### **Compact Fluorescent Lamps (CFL)**

- ✓ 3 - 60 W with E27 and E14 base



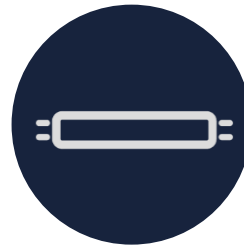
### **Lamp Ballasts (BAL)**

- ✓ Electromagnetic and electronic ballasts (up to two (2) lamps) for fluorescent lamps



### **\* Refrigerators**

- ✓ Net volume capacity of 113 liters up to 600 liters



### **Linear Fluorescent Lamp**

- ✓ 10 - 65 W (halophosphate), 14 - 65 W (Triphosphor), 14 - 35 W (Triphosphor T5)



### **Light Emitting Diode (LED) Lamps**

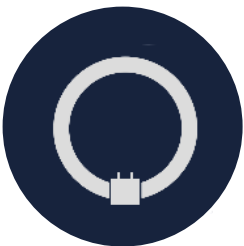
#### **Non-directional LED\***

- ✓ E27 and E14 base



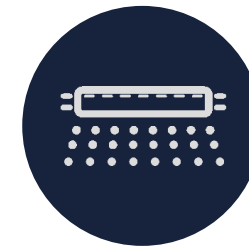
### **Televisions**

- ✓ Screen size up to 1,524 mm (60 inches) with tuner



### **Circular Fluorescent Lamp**

- ✓ 14 - 40 watts, 230 V



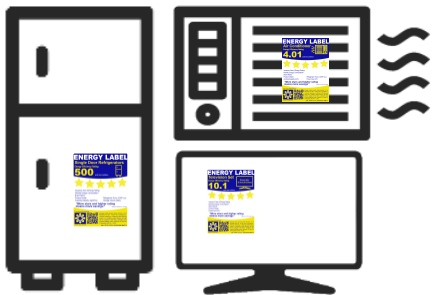
#### **Linear LED\***

- ✓ double-capped linear LED lamps with (1) G5 and G13 caps or (2) caps



# RESPONSIBILITIES

*(Manufacturers, Importers, Distributors and Retailers)*



**Attach Energy Label**



**Cooperate during the conduct of enforcement, monitoring, and verification activities.**



**Exhibit energy label in all publications**

*(e.g., TV and newspaper ads, leaflet/brochures, online trading activities, etc.)*



**Submit annually information on the inventory of sales of ECPs**



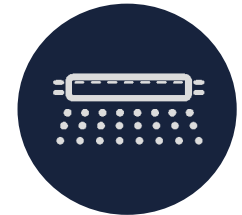
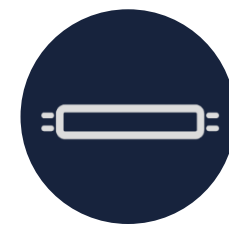
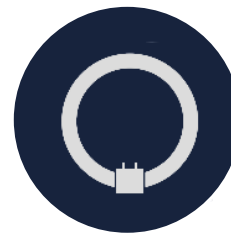
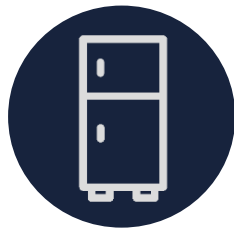
# MINIMUM ENERGY PERFORMANCE

## Department Circular No. DC2020-06-0016

*Prescribing the Minimum Energy Performance for Products (MEPP) covered by the Philippine Energy Labeling Program (PELP) for Compliance of Importers, Manufacturers, Distributors, Dealers and Retailers of Energy-Consuming Products*

## Obligations under MEP

*Sale, lease and import of MEP-compliant energy-consuming products*





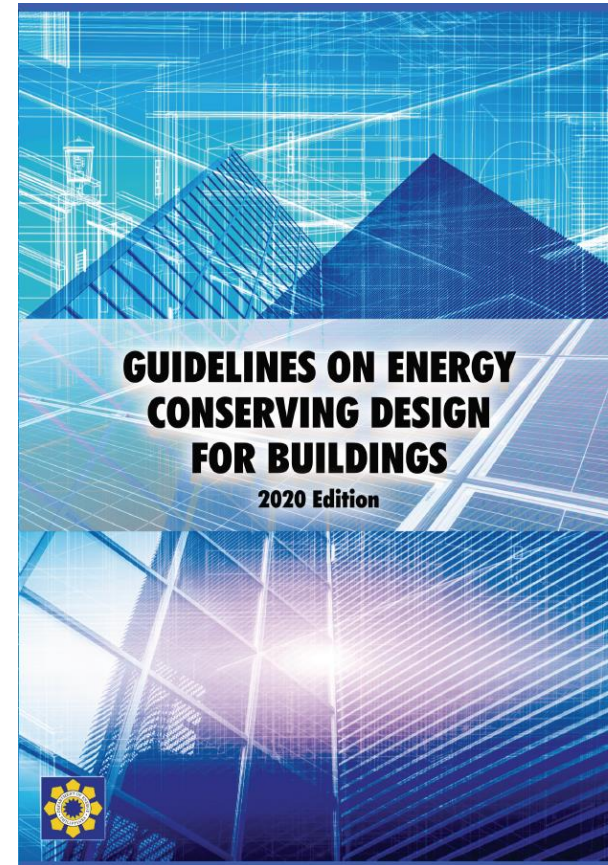
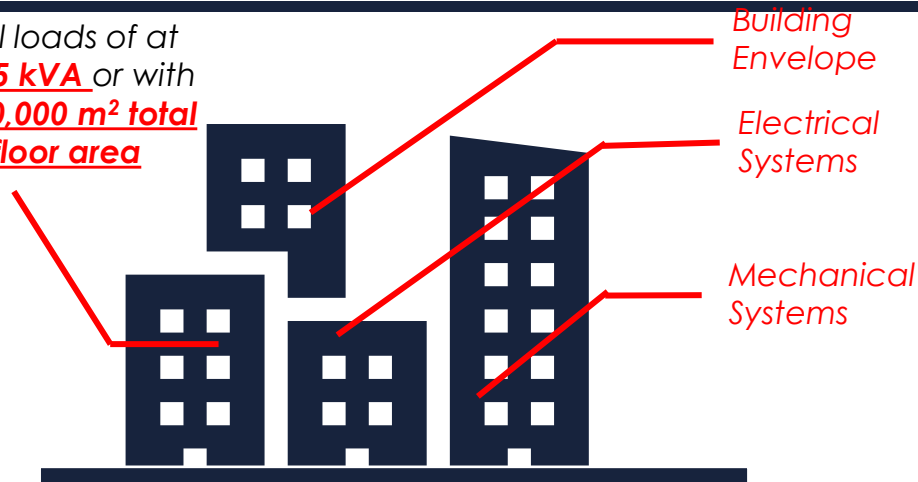
# IMPLEMENTATION OF THE ENERGY EFFICIENCY AND CONSERVATION ACT



# ENERGY CONSERVING DESIGN FOR BUILDINGS

To encourage and promote the energy conserving design of buildings and their services to reduce the use of energy with due regard to the cost effectiveness, building function, comfort, health, safety, and productivity of the occupants.

Electrical loads of at least **112.5 kVA** or with at least **10,000 m<sup>2</sup> total gross floor area**



## APPLICATION

New buildings and their systems and any expansion and/or modification of existing buildings or systems with designed connected electrical loads of at least 112.5 kVA or has at least 10,000 m<sup>2</sup> Total Gross Floor Area (TGFA)

## EXEMPTION

Areas with industrial/ manufacturing process

### DEPARTMENT CIRCULAR NO. DC2020-12-0026

Adoption of the Guidelines on Energy Conserving Design of Buildings

Energy Efficient Buildings will boost the demand for energy efficient materials and technologies that will help to meet the requirements under the guidelines.



# IMPLEMENTATION OF THE ENERGY EFFICIENCY AND CONSERVATION ACT

## UNDER FISCAL INCENTIVES

# ENDORSEMENT OF ENERGY EFFICIENCY PROJECTS TO BOARD OF INVESTMENT (BOI) FOR FISCAL INCENTIVES

This Department Circular shall establish the guidelines, rules and procedures in the endorsement of energy efficiency projects to the BOI for registration in order to grant fiscal incentives to the proponents for the said project.



### Department Circular No. DC2021-05-0011

Guidelines on the Endorsement of Energy Efficiency Projects to the Board of Investments (BOI) Fiscal Incentives

**EVALUATION CRITERIA.** EE projects should meet 15% savings threshold measured at the boundary in order to access the following rates of Income Tax Holiday (ITH).

<u>Annual Energy Savings at the Project Boundary</u>	<u>ESCO or TPPD Rate of ITH</u>	<u>Self-Financed Amount of ITH</u>
Less than 15%	0% but registration shall not be cancelled	None, but registration shall not be cancelled
15% to 20%	50%	30% of cost installed EE&C equipment
More than 20% and up to 25%	75%	40% of cost installed EE&C equipment
More than 25%	100%	50% of cost installed EE&C equipment



The EE Project must be able to meet the minimum 15% project boundary and a minimum Project Investment Cost of ₱ 10,000,000.00.

BOI MC 2021-001  
GENERAL POLICIES AND  
SPECIFIC GUIDELINES TO  
IMPLEMENT THE 2020  
INVESTMENT PRIORITIES  
PLAN



### Simple Energy Efficiency Projects



### Complex Energy Efficiency Projects

**All registered EEC projects shall be granted with Pioneer Incentives**, if the said EEC Project or Enterprise is registered as a Pioneer Project or Enterprise in accordance with E.O. 226.



## UNDER NON-FISCAL INCENTIVES



# ENERGY EFFICIENCY EXCELLENCE (EEE) AWARDS



### EEE Awards on Energy Management for Industries and Buildings

- Energy Management for Small, Medium, and Large Buildings
- Energy Management for Small, Medium, and Large Green Buildings
- Energy Management for Small, Medium, and Large Industry
- New, Existing, and Retrofitted Buildings
- Tropical Buildings



### EEE Awards for Outstanding Individual / Groups

- Energy Service Company (ESCO)
- Certified Energy Conservation Officer (CECO)
- Certified Energy Manager (CEM)
- Certified Energy Auditor (CEA)



### EEE Awards for Government

- National Government Agencies (NGA)
- State Universities and Colleges (SUC)
- Government-Owned and/or Controlled Corporations (GOCC)
- Local Government Units (LGU)



### Special Awards for EEE

- Innovative use of technology (including R&D projects)
- EE Projects Implemented and Other Best Practices

Road Transport Sector

# E-Mobility in the Philippines

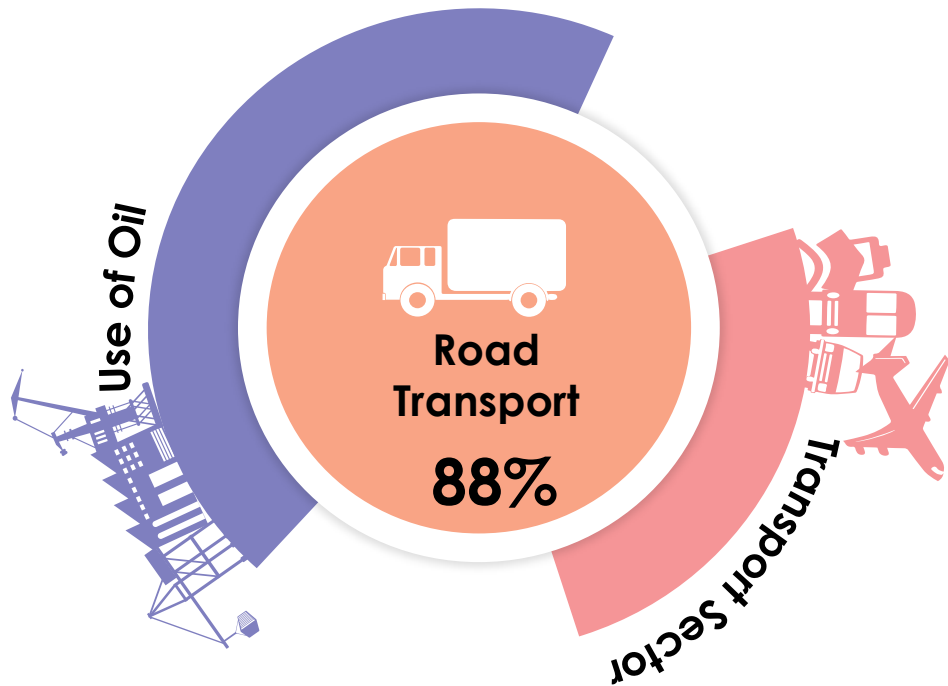
Promotion and mainstreaming of alternative fuels and advanced transportation technologies to contribute to the country's energy security





SITUATIONER

# ROAD TRANSPORT SECTOR



49%

Oil products consumption

36%

Transport Sector Fuel Consumption

28%

Greenhouse gas emission

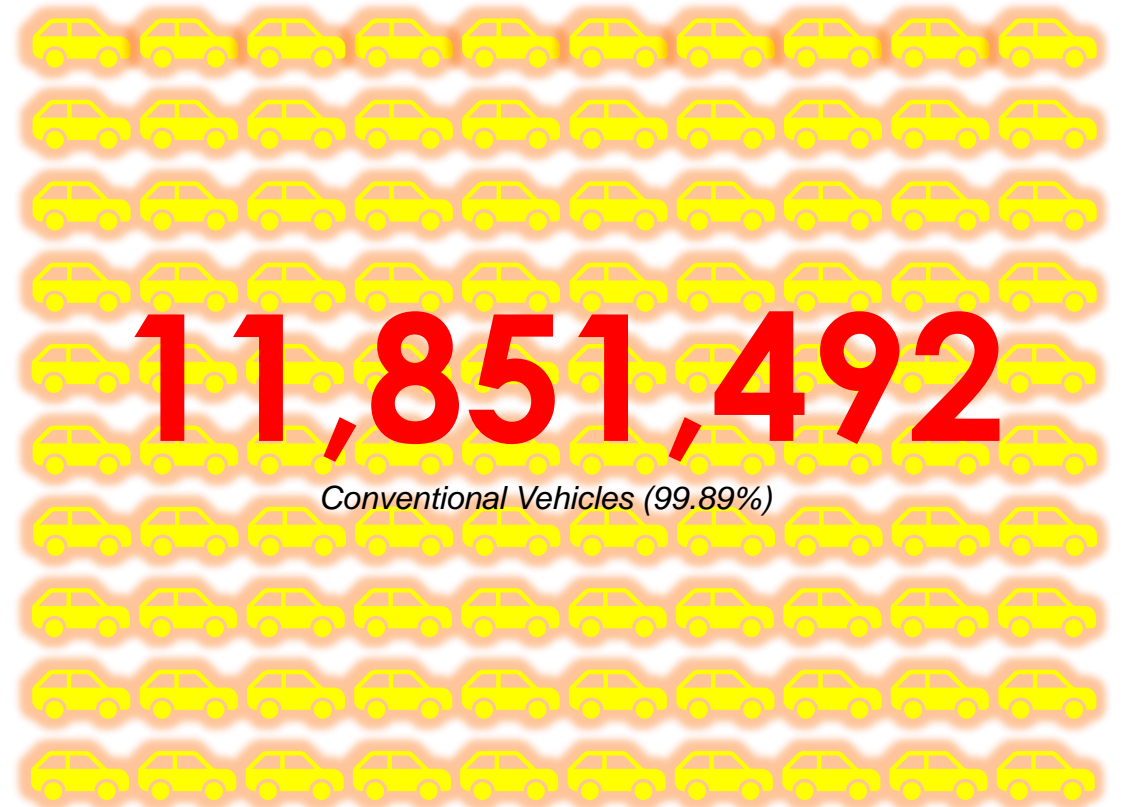


SITUATIONER

# ROAD TRANSPORT SECTOR

12,965

*Electric Vehicles (0.11%)*





# PROJECTS INITIATIVES

in the adoption of EV & EVCS2

1. Non-Project Grant Aid (NPGA) for the Introduction of Japanese Advanced Products and Its System (Next-Generation Vehicles Package)
2. Market Transformation through the Introduction of Energy Efficient Electric Vehicles (E-Trike) Project
  - 3000 Locally manufactured e-trikes
  - 37 LGUs and NGAs





## OTHER PROGRAMS

### Jumpstarting the adoption of electric vehicles and charging stations



#### **EV Chargers**

- ✓ *Demonstration of Fast EV Chargers*



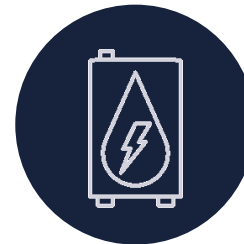
#### **Training Course Module**

- ✓ *Development of TESDA-aligned Electric Vehicle Technician Course Module*



#### **Emergency Response**

- ✓ *Development of Emergency Response Protocol for alternative fueled vehicles*



#### **Fuel celled vehicles**

- ✓ *Research and Development of fuel cell powered vehicles*



#### **Minimum Energy Performance**

- ✓ *Certification protocol for the Minimum Energy Performance (MEP) for EVCS*



#### **Promotional Activities**

- ✓ *Information, Education and Communication Campaign*

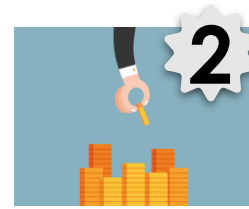


## ENERGY DEMAND-SIDE AND PRODUCTION TARGETS



**10%**

penetration rate for electric vehicles for road transport (motorcycles, cars, jeepneys) by 2040



**5%**

aggregate energy savings from oil and electricity by 2040



### Alternative Fuel Vehicles

deploy applicable AFET for transport and non-transport sector



# POLICIES AND ISSUANCES

*Covers activities related to the development, establishment, use, supply, distribution, and the operation of EVCS*

- EVCS classifications compliant to the requirements of PNS EVCS
- Dedicated Locations
- EVCS Energy Label and Marking Requirements
- Endorsement to the DTI-BOI for availment of fiscal incentives as provided under EO 226



### Reportorial Requirements

Notice Prior to Engagement in any Activity of Business in the operation and establishment of EVCS.



### EVCS Classification

Electric Vehicle Charging Station is classified Pursuant to DTI-BPS issued PNS.



### EVCS Operator

All interested EVCS operators are enjoined to coordinate and cooperate with the DU and with the respective LGU.

**Department Circular No. 2021-07-0023**

*Electric Vehicle Charging Stations Policy Guidelines*



# IMPLEMENTATION OF THE ENERGY EFFICIENCY AND CONSERVATION ACT

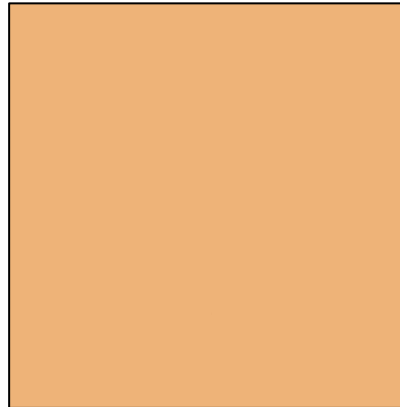
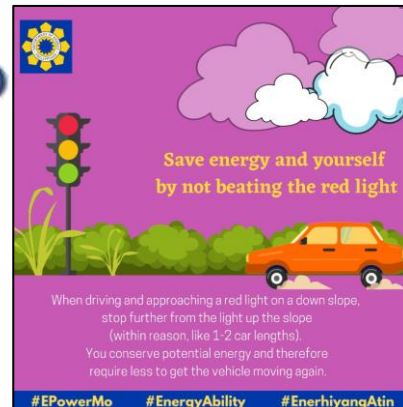
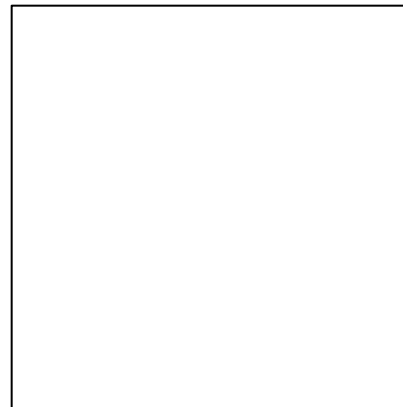


## DOE Information Campaign Activities



FOR ENERGY EFFICIENCY AND SECURITY

### Social Media Content



### EE&C Campaign Cycles



# THANK YOU

