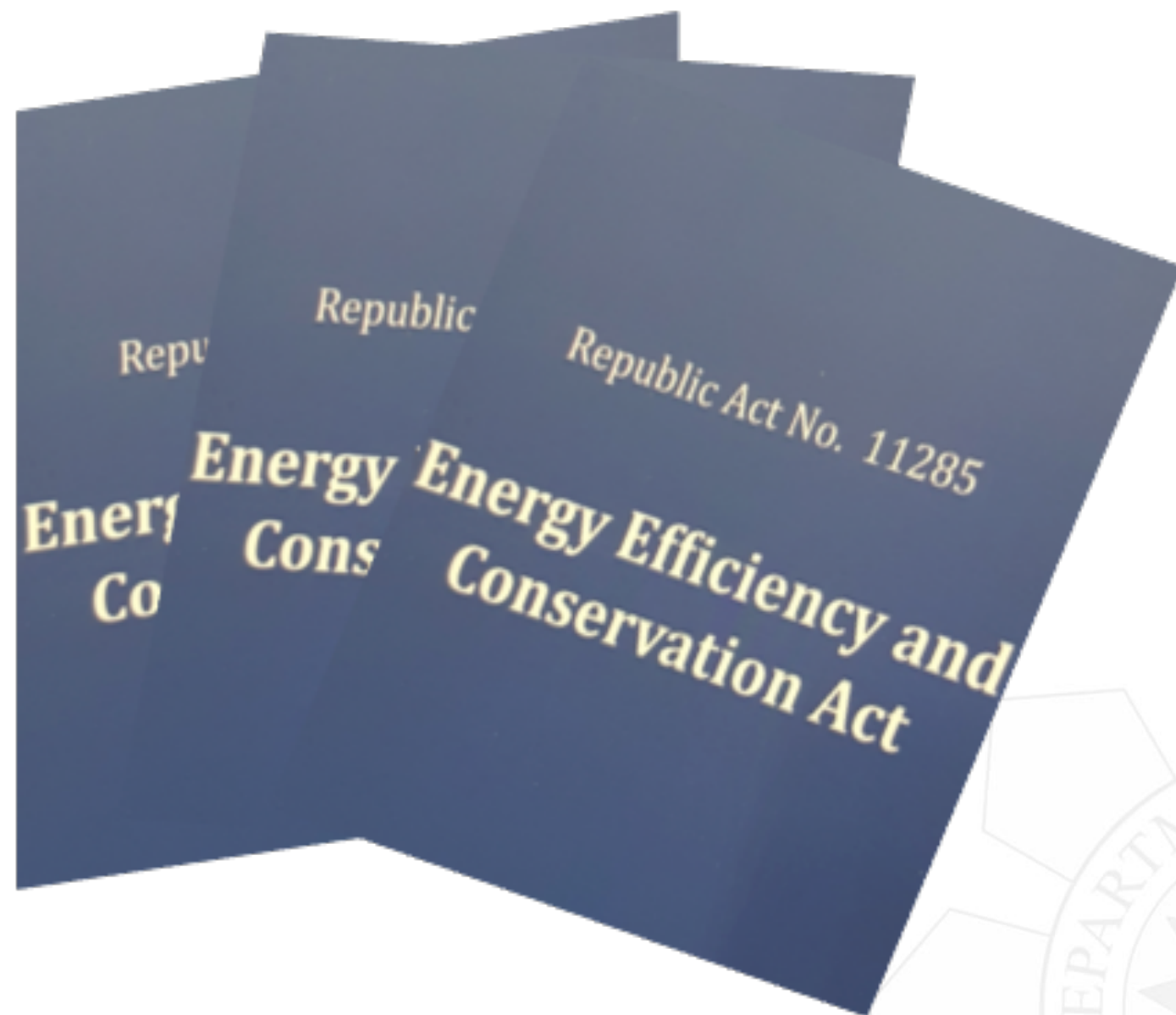




A.P. HABITAN
Division Chief,
Energy Efficiency & Conservation Division,
DOE



BACKGROUND

HISTORICAL DIRECTIVES AND ISSUANCES ON ENERGY CONSERVATION AND ENERGY EFFICIENCY

Ministry of Energy
(1977- 1986)

Office of Energy
Affairs
(1986-1992)

Department of Energy
(1992 -)

**Batas Pambansa 73 :
Energy Conservation Law
(1980-1990)**

EO 422 s.1990
EO 418 s.1990
MO 30 s.1990
MO 17 s.1990

AO 228 s. 2008
AO 183 s.2007
AO 110-A s.2006
MC 185 s. 2005
AO 117 s.2005
AO 126 s.2005
AO 110 s.2004
AO 103 s.2004
RA 9136 s.2001
EO 472 s. 1998
EO 123 s.1993
RA 7648 s.1993
RA 7638 s.1992

MC 2016-001
DC 2016-04-0005
DC 2014-08-0014
DC 2014-08-0014

**Energy
Efficiency and
Conservation
Act 2019**

1973-74

Oil Embargo
\$9.35/barrel

1979

Oil Crises
\$29.10/barrel

1980

Crude Oil
\$37.42/barrel

1986

Oil Glut
\$10/barrel

- 1986-1990
Revolutionary
Government
- BNPP not operated
- No Additional
Power Plant

1991

Oil Price Increase
\$20.20/barrel

- 1990's: >12hrs. Brownouts
- 1993 -...: IPP Contracts
- 1996 : DSM Framework (ERB)

2012

Highest Ave. Price
Increase
\$86.46/barrel

2018

Oil Price ave.
\$58.15/barrel

2019

OPEC Crude Oil Price ave.
for March 2019
\$66.37/barrel

(Source: [https://
countryeconomy.com/raw-materials/
opec](https://countryeconomy.com/raw-materials/opec))



BACKGROUND

COUNTRIES WITH ENERGY EFFICIENCY LAW

ASEAN Countries	Title of the Law
1. Philippines	<ul style="list-style-type: none"> Energy Efficiency and Conservation Act of 2019
2. Singapore	<ul style="list-style-type: none"> Energy Conservation Act of 2012
3. Vietnam	<ul style="list-style-type: none"> Economical and Efficient Use of Energy Law of 2010
4. Indonesia	<ul style="list-style-type: none"> Government Regulation No. 70/2009 on Energy Conservation
5. Thailand	<ul style="list-style-type: none"> Energy Conservation Promotion Act of 1992 (ENCON Act)
6. Malaysia	NONE
7. Brunei	
8. Cambodia	
9. Lao PDR	
10. Myanmar	

Other Countries	Title of the Law
1. Pakistan	<ul style="list-style-type: none"> National Energy Efficiency and Conservation Act of 2016
2. Australia	<ul style="list-style-type: none"> Energy Efficiency Opportunities Act of 2006
3. India	<ul style="list-style-type: none"> Energy Conservation Act of 2001
4. Japan	<ul style="list-style-type: none"> Rational Use of Energy Law (No. 49/1979)
5. China	<ul style="list-style-type: none"> Energy Conservation Law of the Peoples Republic of China (1997)
6. Germany	<ul style="list-style-type: none"> Energy Saving Act of 1976
7. USA	<ul style="list-style-type: none"> Energy Policy and Conservation Act of 1975



Most Energy Efficient Economies

by Ranking (source: ACEEE, 2016)

*-ACEEE- American Council for an Energy Efficient Economies

- | | |
|------------------|------------------|
| 1. Germany | 11. Poland |
| 2. Italy | 12. Taiwan |
| 3. France | 13. India |
| 4. UK | 14. Turkey |
| 5. China | 15. Australia |
| 6. Spain | 16. Russia |
| 7. South Korea | 17. Mexico |
| 8. United States | 18. Thailand |
| 9. Canada | 19. South Africa |
| 10. Netherland | 20. Brazil |
| | 21. Saudi Arabia |

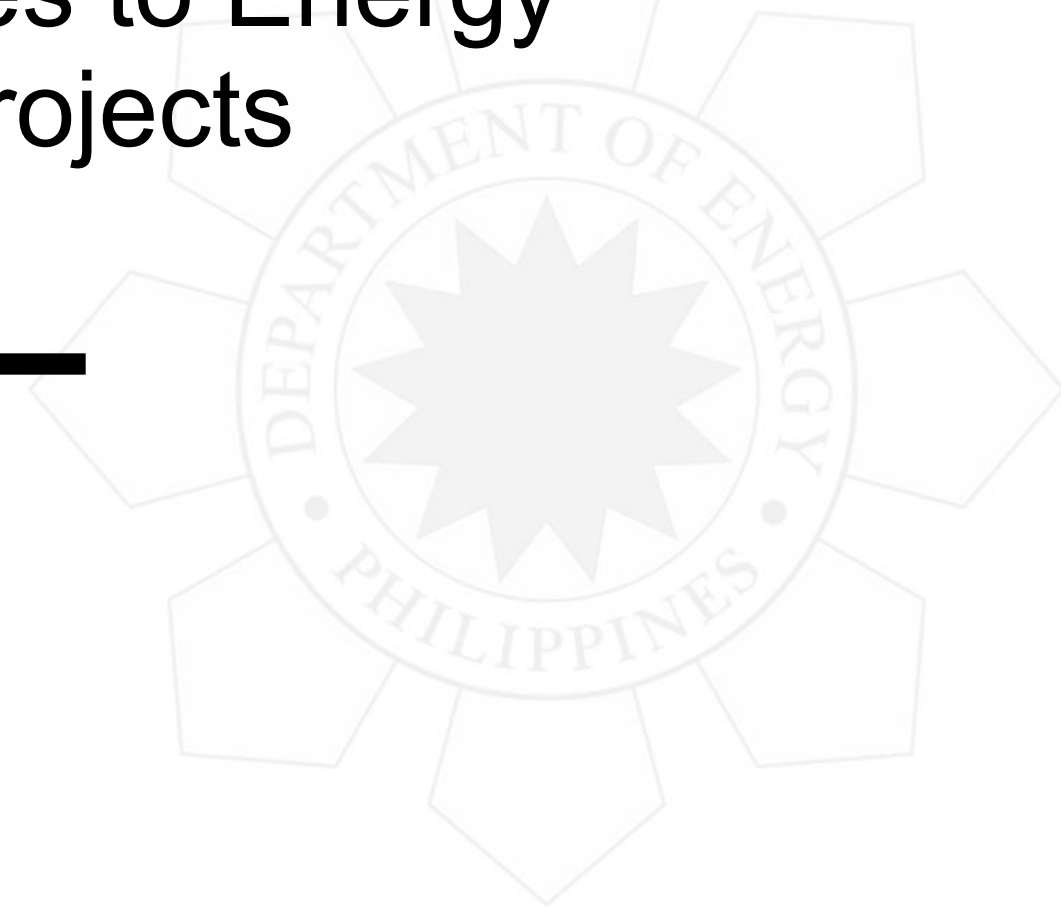


SALIENT FEATURES OF THE ENERGY EFFICIENCY AND CONSERVATION ACT 2019



Republic Act 11285

An Act Institutionalizing Energy Efficiency and Conservation, Enhancing the Efficient use of Energy, and Granting Incentives to Energy Efficiency and Conservation Projects



General Provisions

- Short Title
- Declaration of Policy
- Scope
- Definition of Terms



ROLES AND RESPONSIBILITIES OF THE 22 GOVERNMENT AGENCIES

NGAs	Specific Roles/Responsibilities
DOE	Lead agency to implement the EE&C Act
BOI	Fiscal incentives
CCC	Collaborate with DOE (targets, strategies, monitoring and recording of GHG)
COA	Recognize government EE&C projects
CHED	Integrate Energy Management into the curricula. Promote EE measures in SUCs; Certification and Assessment for Certified Energy Managers and Enercon Officers
DBM	Preference to funding government EE projects
DepEd	Promote EE&C practices in its curricula
DOF	Appropriate mechanism to implement Fiscal incentives
DENR	Guidelines for the characterization of waste (devices, equipment, end of life motor vehicles, etc)
DILG	Ensure compliance of all LGUs on EE&C
DPWH	Guidelines on Energy Conserving Design in Building and Utility System as an integral part of the National Building Code

NGAs	Specific Roles/Responsibilities
DOST	Strategic research and development programs on new and alternative energy efficient technologies
DTI	Minimum Energy performance and display of energy efficiency label on appliances, devices, and motor vehicles
DOTr	Energy efficiency label on motor vehicles
GCG (GOCCs)	EE&C as a factor in evaluating GOCCs performance
GFI	Lending funds for EE projects
IC	Availability of compatible guarantee products to mitigate credit risk
NEDA	Recognize the role of EE&C in national development
NCC	Focal point for private sector involvement in the implementation of EE&C measures
PSA	Institutionalize survey on energy consumption of household and establishments
TESDA	Develop training regulations for the certification of CEM
LGUs	Develop and implement Local Energy Efficiency and Conservation Plan (LEECP)



INTER-AGENCY ENERGY EFFICIENCY AND CONSERVATION COMMITTEE (IAEECC)

Composition of the Committee: (Secretary Level)

1. DOE – Chairperson
2. DBM
3. DOF
4. DTI
5. DOTr
6. DOST
7. DILG
8. DPWH
9. NEDA

IAEECC Secretariat: **DOE-EUMB**

Specific Functions of the Committee:

- a) Assessment of opportunities for energy cost reduction
- b) Review and Approval of proposed capital projects and energy cost operating budgets
- c) Technical and consultative assistance
- d) Recommend specific operations and maintenance procedures and modifications and capital projects
- e) Conduct survey, audit, technical analysis and other research or investigations
- f) Issue report on status of government energy efficiency projects
- g) Provide strategic direction in the implementation of GEMP
- h) Develop guidelines to aid IAEECC

GOVERNMENT ENERGY EFFICIENCY PROJECTS

- a) Different financial arrangements
- b) Following procedures under RA9184, RA 6957, RA7718, RA7160



DESIGNATED ESTABLISHMENTS

TYPE 1 Establishments

- Range: 500,000 to 4,000,000 Kwh Annual Energy Consumption
- Employ CECO (Sec.19 (h))

TYPE 2 Establishments

- Range: Above 4,000,000 Kwh Annual Energy Consumption
- Employ CEM (Sec.19 (h))

Other Establishments

- Range: 100,000 Kwh but Less than 500,000 Kwh Annual Energy Consumption

CECO – Certified Energy Conservation Officer
CEM – Certified Energy Manager

Note: Standard Energy Unit is Kwh

OBLIGATIONS OF DESIGNATED ESTABLISHMENTS

- a) Integrate an **Energy Management System Policy** into the business operation based on ISO 50001 framework or any similar framework
- b) Submit an **Annual Energy Consumption Report** and an **Annual Energy Conservation Report** to the DOE by the 15th day of April of every year
- c) Set up programs that promote energy efficiency, conservation, sufficiency and installation of RE Technologies
- d) Keep records on monthly energy consumption data
- e) Improve average SEC
- f) Employ CECO for Type 1 and CEM for Type 2 DE
- g) Duly notify DOE on the appointment of or separation of CECO or CEM from their service within 10 working days from the effectivity of these personnel action.



CERTIFICATION FOR PROFESSIONAL COMPETENCY AND ACCREDITATION FOR PROFESSIONAL SERVICES

A. Professional Competency

1) **Certified Energy Conservation Officer (CECO)**

- ✓ **Type 1** Designated Establishments:
0.5 Million Kwh to 4 Million Kwh Annual Consumption
- ✓ Certification to be issued by CHED

2) **Certified Energy Manager (CEM)**

- ✓ **Type 2** Designated Establishments:
above 4 Million Kwh Annual Consumption
- ✓ Certification to be issued by CHED

3) **Certified Energy Auditor** (Sec.4 (h))

- ✓ Certification to be issued by the DOE

Responsibilities of CECO and CEM

- a) Manage the energy consumption of facilities, equipment, and devices
- b) Administer the following:
 - i. Implementation and improvement of energy efficiency measures;
 - ii. Conduct of regular energy audit;
 - iii. Energy Monitoring and control; and
 - iv. Preparation of periodic energy consumption and energy conservation program reports.



CERTIFICATION FOR PROFESSIONAL COMPETENCY AND ACCREDITATION FOR PROFESSIONAL SERVICES

B. Accreditation for Professional Services

- **Certification for Energy Service Company (ESCO)**
 - ✓ Certification to be issued by the DOE

Energy Service Company (ESCO):

Offers multi-technology services and goods towards ensuring cost effective performance and guaranteeing energy saving.



ROLE OF THE LGUs

LGU to develop and implement the following:

- a) Development of the Local Energy Efficiency and Conservation Action Plan (LEECP)
- b) Designation of Local Energy Efficiency and Conservation Officer (LEEEO)
- c) Designate National Energy Efficiency and Conservation Coordinating Officer (NEECCO)
- d) Assist DOE in the monitoring of Designated Establishments compliance on sets of guidelines and regulations

BUILDING PERMITS.

For New Construction and Existing Buildings, LGUs shall implement the following measures in accordance with building permit and issuances:

- a) Minimum Requirements as specified in the ***Guidelines on Energy Conserving Design on Buildings issued by DOE.***
- b) Retrofit of building shall also comply with the same



ENERGY PERFORMANCE STANDARD AND LABELING REQUIREMENTS

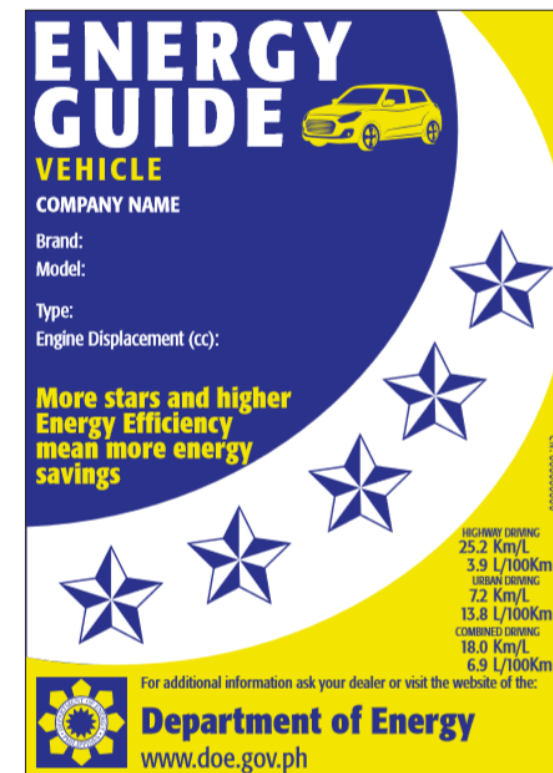
a. Minimum Energy Performance (MEP)

- Establish MEP for the **commercial, industrial** and **transport** sectors. It shall be developed by DOE with relevant stakeholders
- **MEP** is a unit of measurement of energy consumption per unit of floor area for buildings; product volume for manufacturing; and distance for motor vehicles

b. Energy Labeling for Products and Equipment

- DOE shall prescribe energy label for all energy consuming products, devices and equipment and motor vehicles
- DOE shall adopt the **Energy-Star Label**

c. Fuel Economy Performance for Transport Vehicles



MEP – Minimum Energy Performance



DEMAND SIDE MANAGEMENT

DSM PROGRAM FOR THE ELECTRIC POWER INDUSTRY

- a. **Reduction of energy consumption** through effective load management resulting to the **decrease of power demand** and the **migration of power demand** from peak to off-peak periods; or
- b. **Measures undertaken** by the distribution utilities to encourage end-users to properly manage their loads to achieve efficiency in the utilization of fixed infrastructure in the systems.



INCENTIVES

FISCAL INCENTIVES

- DOE to issue Certification to BOI on Energy Efficiency Projects of private entities in accordance with EO 226 otherwise known as the Omnibus Investment Code of 1987
 - i.e., Income Tax Holiday (ITH)

Note: Sunset provision of the Fiscal Incentive: 10 years

NON-FISCAL INCENTIVES

- Provision of [Awards and Recognition](#) for innovations in EE&C best practices, projects and products
- Provision of [technical assistance](#) from government agencies in the development and promotion of energy efficient technologies



MISCELLANEOUS PROVISIONS

STRENGTHENING OF THE DOE-EUMB

1. ALTERNATIVE FUELS AND ENERGY TECHNOLOGY DIVISION (AFETD)

- Formulate and develop, policies, plans and programs on alternative fuels and new and advanced energy technologies development

2. EE&C PROGRAM MANAGEMENT AND TECHNOLOGY PROMOTION DIVISION (PMTPD)

- Evaluate EE&C Technologies;
- Promote increase utilization of energy efficient products
- Prepare reports as required by law
- Develop and implement comprehensive IEC strategy for public awareness on EE&C programs and energy efficient products

3. EE&C PUBLIC SECTOR MANAGEMENT DIVISION (PSMD)

- Coordinate with the LGUs and the NEECCO
- Provide technical assistance to LGUs and other government agencies
- Enhance GEMP implementation
- Provide technical support to the IAEECC and acting as its Secretariat

4. EE&C PERFORMANCE REGULATION AND ENFORCEMENT DIVISION (PRED)

- Create and Operate the NEECD
- Formulate, develop and update MEP, Energy Labeling, and other programs of EUMB
- Enforce the programs such as MEPS and Energy Labeling

NEECD – National Energy Efficiency & Conservation Database

NEECCO – National Energy Efficiency & Conservation Coordinating Officer

IAEECC – Inter-Agency Energy Efficiency & Conservation Committee

GEMP – Government Energy Management Program



MAJOR PROVISIONS OF THE LAW

MAJOR PROVISIONS

- A. Certification for Professional Competency and Accreditation for Professional Services
- B. Energy Performance Standards and Labeling Requirements
- C. Designated Establishments
- D. Inter-Agency EE&C Committee
- E. Demand Side Management
- F. Role of LGUs
- G. Incentives



THANK YOU.

